#### PHILIPPINE BIDDING DOCUMENTS

(As Harmonized with Development Partners)

# Procurement of GOODS

Procurement of Equipment and Supplies for the DOST-PCIEERD Funded BatStateU Center for Technopreneurship & Innovation (Lot D)

**Batangas State University** 

#### REPUBLIC OF THE PHILIPPINES

#### **BATANGAS STATEUNIVERSITY**

BATANGASCITY

#### SECTION I INVITATION TO BID

# PROCUREMENT OF EQUIPMENT AND SUPPLIES FOR THE DOST-PCIEERD FUNDED BATSTATEU CENTER FOR TECHNOPRENEURSHIP & INNOVATION (LOT D)

- 1. The Batangas State University, intends to apply the sum of **Eight Hundred Six**Thousand **Eight Hundred Thirty-Four Pesos Only (Php 806,834.00)** being the Approved Budget for the Contract (ABC) to payments under the contract for **Procurement of Equipment and Supplies for the DOST-PCIEERD Funded**BatStateU Center for Technopreneurship & Innovation (Lot D). Bids received in excess of the ABC shall be automatically rejected at bid opening.
- 2. The Batangas State University now invites bids for **Procurement of Equipment and Supplies for the DOST-PCIEERD Funded BatStateU Center for Technopreneurship & Innovation (Lot D).** Bidders should have completed, within three (3) years from the date of submission and receipt of bids, a contract similar to the Project, equivalent to at least fifty percent (50%) of the ABC. The description of an eligible bidder is contained in the Bidding Documents, particularly, in **Section II Instruction to Bidders.**
- 3. Bidding will be conducted through open competitive bidding procedures using non-discretionary pass/fail criterion as specified in the Revised Implementing Rules and Regulations (IRR) of Republic Act 9184 (RA 9184).
- 4. Interested bidders may obtain further information from Batangas State University and inspect the Bidding Documents at the BAC Office, Ground Floor, ITE Building from 8:00 AM to 5:00 PM, or download it from PhilGEPS or from Batangas State University Website (<a href="http://www.batstate-u.edu.ph/">http://www.batstate-u.edu.ph/</a>) provided the bidders shall pay the fee for the bidding documents upon submission of their bids. A complete set of Bidding Documents may be acquired by interested Bidders from the above mentioned address starting April 8, 2016 until the deadline for submission and receipt of bids and upon submission of letter of intent and payment of a nonrefundable fee for the Bidding Documents in the amount of One Thousand Pesos Only (Php 1,000.00). Only those who have purchased the Bidding Documents shall be allowed to participate in the pre-bid conference and raise or submit queries or clarifications.
- The Batangas State University will hold a Pre-Bid Conference on April 15, 2016,
   2016, 2:00 PM, BAC Office, Ground Floor, CITE Building GPB Campus I which

shall beopen only to all interested parties who have purchased the Bidding Documents.

- 6. Bids must be delivered to the above mentioned address on **April 27, 2016, 1:00 2:00 PM. Opening of bids will be at 2:00 PM.** All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 18. Bids will be opened in the presence of the bidders' representatives who choose to attend at the address below. Late bids shall not be accepted.
- 7. The Batangas State University reserves the right to accept or reject any bid, to annul the bidding process, and to reject all bids at any time prior to contract award, without thereby incurring any liability to the affected bidder or bidders.

For further information, please refer to:

BAC Office, Ground Floor, CITE Building Batangas State University Main Campus

<u>ATTY. EDGARD E. VALDEZ</u> <u>BAC Chairman</u> Tel. No. 043-980-0385 local 1549

### SECTION II INSTRUCTION TO BIDDERS

#### **TABLE OF CONTENTS**

A.	GENE	RAL	3
	1.	Scope of Bid	3
	2.	Source of Funds	3
	3.	Corrupt, Fraudulent, Collusive, and Coercive Practices	3
	4.	Conflict of Interest	4
	5.	Eligible Bidders	5
	6.	Bidder's Responsibilities	7
	7.	Origin of Goods	8
	8.	Subcontracts	8
B.	CONTENTS OF BIDDING DOCUMENTS		8
	9.	Pre-Bid Conference	8
	10.	Clarification and Amendment of Bidding Documents	9
C.	PREP	ARATION OF BIDS	9
J.	11.	Language of Bid	9
	12.	Documents Comprising the Bid: Eligibility and Technical Components	10
	13.	Documents Comprising the Bid: Financial Component	11
	14.	Alternative Bids	12
	15.	Bid Prices	12
	16.	Bid Currencies	13
	17.	Bid Validity	14
	18.	Bid Security	14
	19.	Format and Signing of Bids	16
	20.	Sealing and Marking of Bids	16
D.	SUBM	IISSION AND OPENING OF BIDS	16
	21.	Deadline for Submission of Bids	17
	22.	Late Bids	17
	23.	Modification and Withdrawal of Bids	17
	24.	Opening and Preliminary Examination of Bids	18
E.	EVAL	UATION AND COMPARISON OF BIDS	19
	25.	Process to be Confidential	19
	26.	Clarification of Bids	19

	27.	Domestic Preference	19
	28.	Detailed Evaluation and Comparison of Bids	20
	29.	Post-Qualification	21
	30.	Reservation Clause	22
F.	AWARD OF CONTRACT		23
	31.	Contract Award	23
	32.	Signing of the Contract	24
	33.	Performance Security	24
	34.	Notice to Proceed	25

#### A. General

#### 1. Scope of Bid

- 1.1. The procuring entity named in the **BDS** (hereinafter referred to as the "Procuring Entity") wishes to receive bids for supply and delivery of the goods as described in Section VII-Technical Specifications (hereinafter referred to as the "Goods").
- 1.2. The name, identification, and number of lots specific to this bidding are provided in the **BDS**. The contracting strategy and basis of evaluation of lots is described in ITB Clause 28.

#### 2. Source of Funds

The Procuring Entity has a budget or has applied for or received funds from the Funding Source named in the **BDS**, and in the amount indicated in the **BDS**. It intends to apply part of the funds received for the Project, as defined in the **BDS**, to cover eligible payments under the contract.

#### 3. Corrupt, Fraudulent, Collusive, and Coercive Practices

- 3.1. Unless otherwise specified in the <u>BDS</u>, the Procuring Entity as well as the bidders and suppliers shall observe the highest standard of ethics during the procurement and execution of the contract. In pursuance of this policy, the Procuring Entity:
  - (a) defines, for purposes of this provision, the terms set forth below as follows:
    - (i) "corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves, others, or induce others to do so, by misusing the position in which they are placed, and includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; entering, on behalf of the government, into any contract or transaction manifestly and grossly disadvantageous to the same, whether or not the public officer profited or will profit thereby, and similar acts as provided in RA 3019.
    - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring Entity, and includes collusive practices among Bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the Procuring Entity of the benefits of free and open competition.
    - (iii) "collusive practices" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Procuring Entity, designed to establish bid prices at artificial, non-competitive levels.

- (iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;
- (v) "obstructive practice" is
  - deliberately destroying, falsifying, altering or concealing of evidence material to an administrative proceedings or investigation or making false statements to investigators in order to materially impede an administrative proceedings or investigation of the Procuring Entity or any foreign government/foreign or international financing institution into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the administrative proceedings or investigation or from pursuing such proceedings or investigation; or
  - (bb) acts intended to materially impede the exercise of the inspection and audit rights of the Procuring Entity or any foreign government/foreign or international financing institution herein.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in any of the practices mentioned in this Clause for purposes of competing for the contract.
- 3.2. Further, the Procuring Entity will seek to impose the maximum civil, administrative, and/or criminal penalties available under applicable laws on individuals and organizations deemed to be involved in any of the practices mentioned in ITB Clause 3.1(a).
- 3.3. Furthermore, the Funding Source and the Procuring Entity reserve the right to inspect and audit records and accounts of a bidder or supplier in the bidding for and performance of a contract themselves or through independent auditors as reflected in the GCC Clause **Error! Reference source not found.**

#### 4. Conflict of Interest

- 4.1. All Bidders found to have conflicting interests shall be disqualified to participate in the procurement at hand, without prejudice to the imposition of appropriate administrative, civil, and criminal sanctions. A Bidder may be considered to have conflicting interests with another Bidder in any of the events described in paragraphs (a) through (c) below and a general conflict of interest in any of the circumstances set out in paragraphs (d) through (f) below:
  - (a) A Bidder has controlling shareholders in common with another Bidder;
  - (b) A Bidder receives or has received any direct or indirect subsidy from any other Bidder;

- (c) A Bidder has the same legal representative as that of another Bidder for purposes of this bid;
- (d) A Bidder has a relationship, directly or through third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder or influence the decisions of the Procuring Entity regarding this bidding process. This will include a firm or an organization who lends, or temporarily seconds, its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for or implementation of the project if the personnel would be involved in any capacity on the same project;
- (e) A Bidder submits more than one bid in this bidding process. However, this does not limit the participation of subcontractors in more than one bid; or
- (f) A Bidder who participated as a consultant in the preparation of the design or technical specifications of the Goods and related services that are the subject of the bid.
- 4.2. In accordance with Section 47 of the IRR of RA 9184, all Bidding Documents shall be accompanied by a sworn affidavit of the Bidder that it is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), members of the Technical Working Group (TWG), members of the BAC Secretariat, the head of the Project Management Office (PMO) or the end-user unit, and the project consultants, by consanguinity or affinity up to the third civil degree. On the part of the Bidder, this Clause shall apply to the following persons:
  - (a) If the Bidder is an individual or a sole proprietorship, to the Bidder himself;
  - (b) If the Bidder is a partnership, to all its officers and members;
  - (c) If the Bidder is a corporation, to all its officers, directors, and controlling stockholders; and
  - (d) If the Bidder is a joint venture (JV), the provisions of items (a), (b), or (c) of this Clause shall correspondingly apply to each of the members of the said JV, as may be appropriate.

Relationship of the nature described above or failure to comply with this Clause will result in the automatic disqualification of a Bidder.

#### 5. Eligible Bidders

- 5.1. Unless otherwise provided in the **BDS**, the following persons shall be eligible to participate in this bidding:
  - (a) Duly licensed Filipino citizens/sole proprietorships;
  - (b) Partnerships duly organized under the laws of the Philippines and of which at least sixty percent (60%) of the interest belongs to citizens of the Philippines;

- (c) Corporations duly organized under the laws of the Philippines, and of which at least sixty percent (60%) of the outstanding capital stock belongs to citizens of the Philippines;
- (d) Cooperatives duly organized under the laws of the Philippines, and of which at least sixty percent (60%) of the interest belongs to citizens of the Philippines; and
- (e) Unless otherwise provided in the <u>BDS</u>, persons/entities forming themselves into a JV, *i.e.*, a group of two (2) or more persons/entities that intend to be jointly and severally responsible or liable for a particular contract: Provided, however, that Filipino ownership or interest of the joint venture concerned shall be at least sixty percent (60%).
- 5.2. Foreign bidders may be eligible to participate when any of the following circumstances exist, as specified in the **BDS**:
  - (a) When a Treaty or International or Executive Agreement as provided in Section 4 of the RA 9184 and its IRR allow foreign bidders to participate;
  - (b) Citizens, corporations, or associations of a country, included in the list issued by the GPPB, the laws or regulations of which grant reciprocal rights or privileges to citizens, corporations, or associations of the Philippines;
  - (c) When the Goods sought to be procured are not available from local suppliers; or
  - (d) When there is a need to prevent situations that defeat competition or restrain trade.
- 5.3. Government corporate entities may be eligible to participate only if they can establish that they (a) are legally and financially autonomous, (b) operate under commercial law, and (c) are not dependent agencies of the GOP or the Procuring Entity.
- 5.4. Unless otherwise provided in the **BDS**, the Bidder must have completed at least one contract similar to the Project the value of which, adjusted to current prices using the National Statistics Office consumer price index, must be at least equivalent to a percentage of the ABC stated in the **BDS**.
  - For this purpose, contracts similar to the Project shall be those described in the **BDS**, and completed within the relevant period stated in the Invitation to Bid and **ITB** Clause 12.1(a)(iii).
- 5.5. The Bidder must submit a computation of its Net Financial Contracting Capacity (NFCC) or a commitment from a Universal or Commercial Bank to extend a credit line in its favor if awarded the contract for this Project (CLC).

The NFCC, computed using the following formula, must be at least equal to the ABC to be bid:

NFCC = [(Current assets minus current liabilities) (K)] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract for this Project.

Where:

K = 10 for a contract duration of one year or less, 15 for a contract duration of more than one year up to two years, and 20 for a contract duration of more than two years.

The value of the bidder's current assets and current liabilities shall be based on the data submitted to the BIR, through its Electronic Filing and Payment System.

#### 6. Bidder's Responsibilities

- 6.1. The Bidder or its duly authorized representative shall submit a sworn statement in the form prescribed in Section VIII-Bidding Documents as required in **ITB** Clause 12.1(b)(iii).
- 6.2. The Bidder is responsible for the following:
  - (a) Having taken steps to carefully examine all of the Bidding Documents;
  - (b) Having acknowledged all conditions, local or otherwise, affecting the implementation of the contract;
  - (c) Having made an estimate of the facilities available and needed for the contract to be bid, if any;
  - (d) Having complied with its responsibility to inquire or secure Supplemental/Bid Bulletin(s) as provided under **ITB** Clause 10.3.
  - (e) Ensuring that it is not "blacklisted" or barred from bidding by the GOP or any of its agencies, offices, corporations, or LGUs, including foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the GPPB;
  - (f) Ensuring that each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
  - (g) Authorizing the Head of the Procuring Entity or its duly authorized representative/s to verify all the documents submitted;
  - (h) Ensuring that the signatory is the duly authorized representative of the Bidder, and granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the Bidder in the bidding, with the duly notarized Secretary's Certificate attesting to such fact, if the Bidder is a corporation, partnership, cooperative, or joint venture;
  - (i) Complying with the disclosure provision under Section 47 of RA 9184 in relation to other provisions of RA 3019; and
  - (j) Complying with existing labor laws and standards, in the case of procurement of services.

Failure to observe any of the above responsibilities shall be at the risk of the Bidder concerned.

6.3. The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents.

- 6.4. It shall be the sole responsibility of the Bidder to determine and to satisfy itself by such means as it considers necessary or desirable as to all matters pertaining to the contract to be bid, including: (a) the location and the nature of this Project; (b) climatic conditions; (c) transportation facilities; and (d) other factors that may affect the cost, duration, and execution or implementation of this Project.
- 6.5. The Procuring Entity shall not assume any responsibility regarding erroneous interpretations or conclusions by the prospective or eligible bidder out of the data furnished by the procuring entity.
- 6.6. The Bidder shall bear all costs associated with the preparation and submission of his bid, and the Procuring Entity will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 6.7. Before submitting their bids, the Bidder is deemed to have become familiar with all existing laws, decrees, ordinances, acts and regulations of the Philippines which may affect this Project in any way.
- 6.8. The Bidder should note that the Procuring Entity will accept bids only from those that have paid the nonrefundable fee for the Bidding Documents at the office indicated in the Invitation to Bid.

#### 7. Origin of Goods

Unless otherwise indicated in the <u>BDS</u>, there is no restriction on the origin of goods other than those prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, subject to **ITB** Clause 27.1.

#### 8. Subcontracts

- 8.1. Unless otherwise specified in the <u>BDS</u>, the Bidder may subcontract portions of the Goods to an extent as may be approved by the Procuring Entity and stated in the <u>BDS</u>. However, subcontracting of any portion shall not relieve the Bidder from any liability or obligation that may arise from the contract for this Project.
- 8.2. Subcontractors must comply with the eligibility criteria and the documentary requirements specified in the **BDS**. In the event that any subcontractor is found by the Procuring Entity to be ineligible, the subcontracting of such portion of the Goods shall be disallowed.
- 8.3. The Bidder may identify the subcontractor to whom a portion of the Goods will be subcontracted at any stage of the bidding process or during contract implementation. If the Bidder opts to disclose the name of the subcontractor during bid submission, the Bidder shall include the required documents as part of the technical component of its bid.

#### **B.** Contents of Bidding Documents

#### 9. Pre-Bid Conference

9.1. (a) If so specified in the **BDS**, a pre-bid conference shall be held at the venue and on the date indicated therein, to clarify and address the Bidders' questions on the technical and financial components of this Project.

- (b) The pre-bid conference shall be held at least twelve (12) calendar days before the deadline for the submission and receipt of bids. If the Procuring Entity determines that, by reason of the method, nature, or complexity of the contract to be bid, or when international participation will be more advantageous to the GOP, a longer period for the preparation of bids is necessary, the pre-bid conference shall be held at least thirty (30) calendar days before the deadline for the submission and receipt of bids, as specified in the **BDS**.
- 9.2. Bidders are encouraged to attend the pre-bid conference to ensure that they fully understand the Procuring Entity's requirements. Non-attendance of the Bidder will in no way prejudice its bid; however, the Bidder is expected to know the changes and/or amendments to the Bidding Documents discussed during the pre-bid conference.
- 9.3. Any statement made at the pre-bid conference shall not modify the terms of the Bidding Documents unless such statement is specifically identified in writing as an amendment thereto and issued as a Supplemental/Bid Bulletin.

#### 10. Clarification and Amendment of Bidding Documents

- 10.1. Bidders who have purchased the Bidding Documents may request for clarification on any part of the Bidding Documents for an interpretation. Such request must be in writing and submitted to the Procuring Entity at the address indicated in the **BDS** at least ten (10) calendar days before the deadline set for the submission and receipt of bids.
- 10.2. Supplemental/Bid Bulletins may be issued upon the Procuring Entity's initiative for purposes of clarifying or modifying any provision of the Bidding Documents not later than seven (7) calendar days before the deadline for the submission and receipt of bids. Any modification to the Bidding Documents shall be identified as an amendment.
- 10.3. Any Supplemental/Bid Bulletin issued by the BAC shall also be posted on the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity concerned, if available. It shall be the responsibility of all Bidders who secure the Bidding Documents to inquire and secure Supplemental/Bid Bulletins that may be issued by the BAC. However, Bidders who have submitted bids before the issuance of the Supplemental/Bid Bulletin must be informed and allowed to modify or withdraw their bids in accordance with **ITB** Clause 23.

#### C. Preparation of Bids

#### 11. Language of Bid

The bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring Entity, shall be written in English. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation in English certified by the appropriate embassy or consulate in the Philippines, in which case the English translation shall govern for purposes of interpretation of the bid.

#### 12. Documents Comprising the Bid: Eligibility and Technical Components

- 12.1. Unless otherwise indicated in the **BDS**, the first envelope shall contain the following eligibility and technical documents:
  - (a) Eligibility Documents -

#### Class "A" Documents:

- (i) Registration certificate from the Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives, or any proof of such registration as stated in the **BDS**;
- (ii) Mayor's permit issued by the city or municipality where the principal place of business of the prospective bidder is located;
- (iii) Statement of all its ongoing and completed government and private contracts within the period stated in the **BDS**, including contracts awarded but not yet started, if any. The statement shall include, for each contract, the following:
  - (iii.1) name of the contract;
  - (iii.2) date of the contract;
  - (iii.3) kinds of Goods;
  - (iii.4) amount of contract and value of outstanding contracts;
  - (iii.5) date of delivery; and
  - (iii.6) end user's acceptance or official receipt(s) issued for the contract, if completed.
- (iv) Audited financial statements, stamped "received" by the Bureau of Internal Revenue (BIR) or its duly accredited and authorized institutions, for the preceding calendar year, which should not be earlier than two (2) years from bid submission;
- (v) Annual Income Tax Returns filed through Electronic Filing and Payment System (EFPS) and stamped "received" by the Bureau of Internal Revenue (BIR) or its duly accredited and authorized institutions;
- (vi) NFCC computation in accordance with **ITB** Clause 5.5;
- (vii) Tax Clearance per Executive Order 398, Series of 2005, as finally reviewed and approved by the BIR; and

#### Class "B" Document:

(viii) If applicable, the JVA in case the joint venture is already in existence, or duly notarized statements from all the potential joint venture partners stating that they will enter into and abide

by the provisions of the JVA in the instance that the bid is successful.

- (b) Technical Documents -
  - (i) Bid security in accordance with **ITB** Clause 18. If the Bidder opts to submit the bid security in the form of:
    - (i.1) a bank draft/guarantee or an irrevocable letter of credit issued by a foreign bank, it shall be accompanied by a confirmation from a Universal or Commercial Bank; or
    - (i.2) a surety bond, it shall be accompanied by a certification by the Insurance Commission that the surety or insurance company is authorized to issue such instruments;
  - (ii) Conformity with technical specifications, as enumerated and specified in Sections VI and VII of the Bidding Documents; and
  - (iii) Sworn statement in accordance with Section 25.2(a)(iv) of the IRR of RA 9184 and using the form prescribed in Section VIII-Bidding Forms.

#### 13. Documents Comprising the Bid: Financial Component

- 13.1. Unless otherwise stated in the **BDS**, the financial component of the bid shall contain the following:
  - (a) Financial Bid Form, which includes bid prices and the bill of quantities and the applicable Price Schedules, in accordance with **ITB** Clauses 15.1 and 15.4;
  - (b) If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification from the DTI, SEC, or CDA issued in accordance with **ITB** Clause 27, unless otherwise provided in the **BDS**; and
  - (c) Any other document related to the financial component of the bid as stated in the **BDS**.
- 13.2. (a) Unless otherwise stated in the **BDS**, all bids that exceed the ABC shall not be accepted.
  - (b) Unless otherwise indicated in the **BDS**, for foreign-funded procurement, a ceiling may be applied to bid prices provided the following conditions are met:
    - (i) Bidding Documents are obtainable free of charge on a freely accessible website. If payment of Bidding Documents is required by the procuring entity, payment could be made upon the submission of bids.
    - (ii) The procuring entity has procedures in place to ensure that the ABC is based on recent estimates made by the responsible unit of the procuring entity and that the estimates reflect the quality, supervision and risk and inflationary factors, as well as prevailing

market prices, associated with the types of works or goods to be procured.

- (iii) The procuring entity has trained cost estimators on estimating prices and analyzing bid variances.
- (iv) The procuring entity has established a system to monitor and report bid prices relative to ABC and engineer's/procuring entity's estimate.
- (v) The procuring entity has established a system to monitor and report bid prices relative to ABC and procuring entity's estimate. The procuring entity has established a monitoring and evaluation system for contract implementation to provide a feedback on actual total costs of goods and works.

#### 14. Alternative Bids

Alternative Bids shall be rejected. For this purpose, alternative bid is an offer made by a Bidder in addition or as a substitute to its original bid which may be included as part of its original bid or submitted separately therewith for purposes of bidding. A bid with options is considered an alternative bid regardless of whether said bid proposal is contained in a single envelope or submitted in two (2) or more separate bid envelopes.

#### 15. Bid Prices

- 15.1. The Bidder shall complete the appropriate Price Schedules included herein, stating the unit prices, total price per item, the total amount and the expected countries of origin of the Goods to be supplied under this Project.
- 15.2. The Bidder shall fill in rates and prices for all items of the Goods described in the Bill of Quantities. Bids not addressing or providing all of the required items in the Bidding Documents including, where applicable, Bill of Quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a "0" (zero) for the said item would mean that it is being offered for free to the Government.
- 15.3. The terms Ex Works (EXW), Cost, Insurance and Freight (CIF), Cost and Insurance Paid to (CIP), Delivered Duty Paid (DDP), and other trade terms used to describe the obligations of the parties, shall be governed by the rules prescribed in the current edition of the International Commercial Terms (INCOTERMS) published by the International Chamber of Commerce, Paris.
- 15.4. Prices indicated on the Price Schedule shall be entered separately in the following manner:
  - (a) For Goods offered from within the Procuring Entity's country:
    - (i) The price of the Goods quoted EXW (ex works, ex factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable:

- (i.1) on the components and raw material used in the manufacture or assembly of Goods quoted ex works or ex factory; or
- (i.2) on the previously imported Goods of foreign origin quoted ex warehouse, ex showroom, or off-the-shelf and any Procuring Entity country sales and other taxes which will be payable on the Goods if the contract is awarded.
- (ii) The price for inland transportation, insurance, and other local costs incidental to delivery of the Goods to their final destination.
- (iii) The price of other (incidental) services, if any, listed in the **BDS**.
- (b) For Goods offered from abroad:
  - (i) Unless otherwise stated in the <u>BDS</u>, the price of the Goods shall be quoted DDP with the place of destination in the Philippines as specified in the <u>BDS</u>. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.
  - (ii) The price of other (incidental) services, if any, listed in the **BDS**.
- 15.5. Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation or price escalation on any account. A bid submitted with an adjustable price quotation shall be treated as non-responsive and shall be rejected, pursuant to **ITB** Clause 24.

All bid prices shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances. Extraordinary circumstances refer to events that may be determined by the National Economic and Development Authority in accordance with the Civil Code of the Philippines, and upon the recommendation of the Procuring Entity. Nevertheless, in cases where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other acts of the GOP, promulgated after the date of bid opening, a contract price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.

#### 16. Bid Currencies

- 16.1. Prices shall be quoted in the following currencies:
  - (a) For Goods that the Bidder will supply from within the Philippines, the prices shall be quoted in Philippine Pesos.
  - (b) For Goods that the Bidder will supply from outside the Philippines, the prices may be quoted in the currency(ies) stated in the **BDS**. However, for purposes of bid evaluation, bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.
- 16.2. If so allowed in accordance with **ITB** Clause 16.1, the Procuring Entity for purposes of bid evaluation and comparing the bid prices will convert the

amounts in various currencies in which the bid price is expressed to Philippine Pesos at the foregoing exchange rates.

16.3. Unless otherwise specified in the BDS, payment of the contract price shall be made in Philippine Pesos.

#### 17. Bid Validity

- 17.1. Bids shall remain valid for the period specified in the **BDS** which shall not exceed one hundred twenty (120) calendar days from the date of the opening of bids.
- 17.2. In exceptional circumstances, prior to the expiration of the Bid validity period, the Procuring Entity may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. The bid security described in **ITB** Clause 18 should also be extended corresponding to the extension of the bid validity period at the least. A Bidder may refuse the request without forfeiting its bid security, but his bid shall no longer be considered for further evaluation and award. A Bidder granting the request shall not be required or permitted to modify its bid.

#### 18. Bid Security

18.1. The bid security in the amount stated in the **BDS** shall be equal to the percentage of the ABC in accordance with the following schedule:

Form of Bid Security	Amount of Bid Security (Equal to Percentage of the ABC)
(a) Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	
(b) Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	Two percent (2%)
(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Five percent (5%)
(d) Any combination of the foregoing.	Proportionate to share of form with respect to total amount of security
(e) Bid Securing Declaration	No percentage required

For biddings conducted by LGUs, the Bidder may also submit bid securities in the form of cashier's/manager's check, bank draft/guarantee, or irrevocable letter of credit from other banks certified by the BSP as authorized to issue such financial statement.

The Bid Securing Declaration mentioned above is an undertaking which states, among others, that the bidder shall enter into contract with the procuring entity and furnish the performance security required under ITB Clause 33.2, from

receipt of the Notice of Award, and committing to pay the corresponding fine, and be suspended for a period of time from being qualified to participate in any government procurement activity in the event it violates any of the conditions stated therein as provided in the guidelines issued by the GPPB.

- 18.2. The bid security should be valid for the period specified in the **BDS**. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.
- 18.3. No bid securities shall be returned to bidders after the opening of bids and before contract signing, except to those that failed or declared as post-disqualified, upon submission of a written waiver of their right to file a motion for reconsideration and/or protest. Without prejudice on its forfeiture, bid securities shall be returned only after the bidder with the Lowest Calculated and Responsive Bid has signed the contract and furnished the performance security, but in no case later than the expiration of the bid security validity period indicated in **ITB** Clause 18.2.
- 18.4. Upon signing and execution of the contract pursuant to **ITB** Clause 32, and the posting of the performance security pursuant to **ITB** Clause 33, the successful Bidder's bid security will be discharged, but in no case later than the bid security validity period as indicated in the **ITB** Clause 18.2.
- 18.5. The bid security may be forfeited:
  - (a) if a Bidder:
    - (i) withdraws its bid during the period of bid validity specified in **ITB** Clause 17;
    - (ii) does not accept the correction of errors pursuant to **ITB** Clause 28.3(b);
    - (iii) fails to submit the requirements within the prescribed period or a finding against their veracity as stated in **ITB** Clause 29.2;
    - (iv) submission of eligibility requirements containing false information or falsified documents;
    - (v) submission of bids that contain false information or falsified documents, or the concealment of such information in the bids in order to influence the outcome of eligibility screening or any other stage of the public bidding;
    - (vi) allowing the use of one's name, or using the name of another for purposes of public bidding;
    - (vii) withdrawal of a bid, or refusal to accept an award, or enter into contract with the Government without justifiable cause, after the Bidder had been adjudged as having submitted the Lowest Calculated and Responsive Bid;
    - (viii) refusal or failure to post the required performance security within the prescribed time;

- (ix) refusal to clarify or validate in writing its bid during postqualification within a period of seven (7) calendar days from receipt of the request for clarification;
- (x) any documented attempt by a bidder to unduly influence the outcome of the bidding in his favor;
- (xi) failure of the potential joint venture partners to enter into the joint venture after the bid is declared successful; or
- (xii) all other acts that tend to defeat the purpose of the competitive bidding, such as habitually withdrawing from bidding, submitting late Bids or patently insufficient bid, for at least three (3) times within a year, except for valid reasons.
- (b) if the successful Bidder:
  - (i) fails to sign the contract in accordance with **ITB** Clause 32; or
  - (ii) fails to furnish performance security in accordance with **ITB** Clause 33.

#### 19. Format and Signing of Bids

- 19.1. Bidders shall submit their bids through their duly authorized representative using the appropriate forms provided in Section VIII-Bidding Forms on or before the deadline specified in the **ITB** Clauses 21 in two (2) separate sealed bid envelopes, and which shall be submitted simultaneously. The first shall contain the technical component of the bid, including the eligibility requirements under **ITB** Clause 12.1, and the second shall contain the financial component of the bid.
- 19.2. Forms as mentioned in **ITB** Clause 19.1 must be completed without any alterations to their format, and no substitute form shall be accepted. All blank spaces shall be filled in with the information requested.
- 19.3. The Bidder shall prepare and submit an original of the first and second envelopes as described in **ITB** Clauses 12 and 13. In the event of any discrepancy between the original and the copies, the original shall prevail.
- 19.4. The bid, except for unamended printed literature, shall be signed, and each and every page thereof shall be initialed, by the duly authorized representative/s of the Bidder.
- 19.5. Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the duly authorized representative/s of the Bidder.

#### 20. Sealing and Marking of Bids

- 20.1. Bidders shall enclose their original eligibility and technical documents described in **ITB** Clause 12 in one sealed envelope marked "ORIGINAL TECHNICAL COMPONENT", and the original of their financial component in another sealed envelope marked "ORIGINAL FINANCIAL COMPONENT", sealing them all in an outer envelope marked "ORIGINAL BID".
- 20.2. Each copy of the first and second envelopes shall be similarly sealed duly marking the inner envelopes as "COPY NO. \_\_\_ TECHNICAL COMPONENT" and

"COPY NO. \_\_\_ - FINANCIAL COMPONENT" and the outer envelope as "COPY NO. \_\_\_", respectively. These envelopes containing the original and the copies shall then be enclosed in one single envelope.

20.3. The original and the number of copies of the Bid as indicated in the **BDS** shall be typed or written in indelible ink and shall be signed by the bidder or its duly authorized representative/s.

#### 20.4. All envelopes shall:

- (a) contain the name of the contract to be bid in capital letters;
- (b) bear the name and address of the Bidder in capital letters;
- (c) be addressed to the Procuring Entity's BAC in accordance with **ITB** Clause 1.1;
- (d) bear the specific identification of this bidding process indicated in the ITB Clause 1.2; and
- (e) bear a warning "DO NOT OPEN BEFORE..." the date and time for the opening of bids, in accordance with **ITB** Clause 21.
- 20.5. If bids are not sealed and marked as required, the Procuring Entity will assume no responsibility for the misplacement or premature opening of the bid.

#### D. Submission and Opening of Bids

#### 21. Deadline for Submission of Bids

Bids must be received by the Procuring Entity's BAC at the address and on or before the date and time indicated in the **BDS**.

#### 22. Late Bids

Any bid submitted after the deadline for submission and receipt of bids prescribed by the Procuring Entity, pursuant to **ITB** Clause 21, shall be declared "Late" and shall not be accepted by the Procuring Entity.

#### 23. Modification and Withdrawal of Bids

- 23.1. The Bidder may modify its bid after it has been submitted; provided that the modification is received by the Procuring Entity prior to the deadline prescribed for submission and receipt of bids. The Bidder shall not be allowed to retrieve its original bid, but shall be allowed to submit another bid equally sealed, properly identified, linked to its original bid marked as "TECHNICAL MODIFICATION" or "FINANCIAL MODIFICATION" and stamped "received" by the BAC. Bid modifications received after the applicable deadline shall not be considered and shall be returned to the Bidder unopened.
- 23.2. A Bidder may, through a Letter of Withdrawal, withdraw its bid after it has been submitted, for valid and justifiable reason; provided that the Letter of Withdrawal is received by the Procuring Entity prior to the deadline prescribed for submission and receipt of bids.

- 23.3. Bids requested to be withdrawn in accordance with **ITB** Clause 23.1 shall be returned unopened to the Bidders. A Bidder may also express its intention not to participate in the bidding through a letter which should reach and be stamped by the BAC before the deadline for submission and receipt of bids. A Bidder that withdraws its bid shall not be permitted to submit another bid, directly or indirectly, for the same contract.
- 23.4. No bid may be modified after the deadline for submission of bids. No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Financial Bid Form. Withdrawal of a bid during this interval shall result in the forfeiture of the Bidder's bid security, pursuant to **ITB** Clause 18.5, and the imposition of administrative, civil and criminal sanctions as prescribed by RA 9184 and its IRR.

#### 24. Opening and Preliminary Examination of Bids

- 24.1. The BAC shall open the first bid envelopes of Bidders in public as specified in the **BDS** to determine each Bidder's compliance with the documents prescribed in **ITB** Clause 12. For this purpose, the BAC shall check the submitted documents of each bidder against a checklist of required documents to ascertain if they are all present, using a non-discretionary "pass/fail" criterion. If a bidder submits the required document, it shall be rated "passed" for that particular requirement. In this regard, bids that fail to include any requirement or are incomplete or patently insufficient shall be considered as "failed". Otherwise, the BAC shall rate the said first bid envelope as "passed".
- 24.2. Unless otherwise specified in the BDS, immediately after determining compliance with the requirements in the first envelope, the BAC shall forthwith open the second bid envelope of each remaining eligible bidder whose first bid envelope was rated "passed". The second envelope of each complying bidder shall be opened within the same day. In case one or more of the requirements in the second envelope of a particular bid is missing, incomplete or patently insufficient, and/or if the submitted total bid price exceeds the ABC unless otherwise provided in ITB Clause 13.2, the BAC shall rate the bid concerned as "failed". Only bids that are determined to contain all the bid requirements for both components shall be rated "passed" and shall immediately be considered for evaluation and comparison.
- 24.3. Letters of withdrawal shall be read out and recorded during bid opening, and the envelope containing the corresponding withdrawn bid shall be returned to the Bidder unopened. If the withdrawing Bidder's representative is in attendance, the original bid and all copies thereof shall be returned to the representative during the bid opening. If the representative is not in attendance, the bid shall be returned unopened by registered mail. The Bidder may withdraw its bid prior to the deadline for the submission and receipt of bids, provided that the corresponding Letter of Withdrawal contains a valid authorization requesting for such withdrawal, subject to appropriate administrative sanctions.
- 24.4. If a Bidder has previously secured a certification from the Procuring Entity to the effect that it has previously submitted the above-enumerated Class "A" Documents, the said certification may be submitted in lieu of the requirements enumerated in **ITB** Clause 12.1(a), items (i) to (v).

- 24.5. In the case of an eligible foreign Bidder as described in **ITB** Clause 5, the Class "A" Documents described in **ITB** Clause 12.1(a) may be substituted with the appropriate equivalent documents, if any, issued by the country of the foreign Bidder concerned.
- 24.6. Each partner of a joint venture agreement shall likewise submit the requirements in **ITB** Clauses 12.1(a)(i) and 12.1(a)(ii). Submission of documents required under **ITB** Clauses 12.1(a)(iii) to 12.1(a)(vi) by any of the joint venture partners constitutes compliance.
- 24.7. The Procuring Entity shall prepare the minutes of the proceedings of the bid opening that shall include, as a minimum: (a) names of Bidders, their bid price, bid security, findings of preliminary examination; and (b) attendance sheet. The BAC members shall sign the abstract of bids as read.

#### E. Evaluation and Comparison of Bids

#### 25. Process to be Confidential

- 25.1. Members of the BAC, including its staff and personnel, as well as its Secretariat and TWG, are prohibited from making or accepting any kind of communication with any bidder regarding the evaluation of their bids until the issuance of the Notice of Award, unless otherwise allowed in the case of **ITB** Clause 26.
- 25.2. Any effort by a bidder to influence the Procuring Entity in the Procuring Entity's decision in respect of bid evaluation, bid comparison or contract award will result in the rejection of the Bidder's bid.

#### 26. Clarification of Bids

To assist in the evaluation, comparison, and post-qualification of the bids, the Procuring Entity may ask in writing any Bidder for a clarification of its bid. All responses to requests for clarification shall be in writing. Any clarification submitted by a Bidder in respect to its bid and that is not in response to a request by the Procuring Entity shall not be considered.

#### 27. Domestic Preference

- 27.1. Unless otherwise stated in the **BDS**, the Procuring Entity will grant a margin of preference for the purpose of comparison of bids in accordance with the following:
  - (a) The preference shall be applied when (i) the lowest Foreign Bid is lower than the lowest bid offered by a Domestic Bidder, or (ii) the lowest bid offered by a non-Philippine national is lower than the lowest bid offered by a Domestic Entity.
  - (b) For evaluation purposes, the lowest Foreign Bid or the bid offered by a non-Philippine national shall be increased by fifteen percent (15%).
  - (c) In the event that (i) the lowest bid offered by a Domestic Entity does not exceed the lowest Foreign Bid as increased, or (ii) the lowest bid offered by a non-Philippine national as increased, then the Procuring Entity shall award the contract to the Domestic Bidder/Entity at the amount of the

lowest Foreign Bid or the bid offered by a non-Philippine national, as the case may be.

- (d) If the Domestic Entity/Bidder refuses to accept the award of contract at the amount of the Foreign Bid or bid offered by a non-Philippine national within two (2) calendar days from receipt of written advice from the BAC, the Procuring Entity shall award to the bidder offering the Foreign Bid or the non-Philippine national, as the case may be, subject to post-qualification and submission of all the documentary requirements under these Bidding Documents.
- 27.2. A Bidder may be granted preference as a Domestic Entity subject to the certification from the DTI (in case of sole proprietorships), SEC (in case of partnerships and corporations), or CDA (in case of cooperatives) that the (a) sole proprietor is a citizen of the Philippines or the partnership, corporation, cooperative, or association is duly organized under the laws of the Philippines with at least seventy five percent (75%) of its interest or outstanding capital stock belonging to citizens of the Philippines, (b) habitually established in business and habitually engaged in the manufacture or sale of the merchandise covered by his bid, and (c) the business has been in existence for at least five (5) consecutive years prior to the advertisement and/or posting of the Invitation to Bid for this Project.
- 27.3. A Bidder may be granted preference as a Domestic Bidder subject to the certification from the DTI that the Bidder is offering unmanufactured articles, materials or supplies of the growth or production of the Philippines, or manufactured articles, materials, or supplies manufactured or to be manufactured in the Philippines substantially from articles, materials, or supplies of the growth, production, or manufacture, as the case may be, of the Philippines.

#### 28. Detailed Evaluation and Comparison of Bids

- 28.1. The Procuring Entity will undertake the detailed evaluation and comparison of bids which have passed the opening and preliminary examination of bids, pursuant to **ITB** Clause 24, in order to determine the Lowest Calculated Bid.
- 28.2. The Lowest Calculated Bid shall be determined in two steps:
  - (a) The detailed evaluation of the financial component of the bids, to establish the correct calculated prices of the bids; and
  - (b) The ranking of the total bid prices as so calculated from the lowest to the highest. The bid with the lowest price shall be identified as the Lowest Calculated Bid.
- 28.3. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all bids rated "passed," using non-discretionary pass/fail criteria. Unless otherwise specified in the **BDS**, the BAC shall consider the following in the evaluation of bids:
  - (a) <u>Completeness of the bid.</u> Unless the ITB specifically allows partial bids, bids not addressing or providing all of the required items in the Schedule of Requirements including, where applicable, bill of quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is

indicated, the same shall be considered as non-responsive, but specifying a "0" (zero) for the said item would mean that it is being offered for free to the Procuring Entity; and

- (b) <u>Arithmetical corrections.</u> Consider computational errors and omissions to enable proper comparison of all eligible bids. It may also consider bid modifications, if allowed in the <u>BDS</u>. Any adjustment shall be calculated in monetary terms to determine the calculated prices.
- 28.4. Based on the detailed evaluation of bids, those that comply with the above-mentioned requirements shall be ranked in the ascending order of their total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, to identify the Lowest Calculated Bid. Total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, which exceed the ABC shall not be considered, unless otherwise indicated in the **BDS**.
- 28.5. The Procuring Entity's evaluation of bids shall only be based on the bid price quoted in the Financial Bid Form.
- 28.6. Bids shall be evaluated on an equal footing to ensure fair competition. For this purpose, all bidders shall be required to include in their bids the cost of all taxes, such as, but not limited to, value added tax (VAT), income tax, local taxes, and other fiscal levies and duties which shall be itemized in the bid form and reflected in the detailed estimates. Such bids, including said taxes, shall be the basis for bid evaluation and comparison.

#### 29. Post-Qualification

- 29.1. The Procuring Entity shall determine to its satisfaction whether the Bidder that is evaluated as having submitted the Lowest Calculated Bid (LCB) complies with and is responsive to all the requirements and conditions specified in **ITB** Clauses 5, 12, and 13.
- 29.2. Within a non-extendible period of three (3) calendar days from receipt by the bidder of the notice from the BAC that it submitted the LCB, the Bidder shall submit the following documentary requirements:
  - (a) Tax clearance per Executive Order 398, Series of 2005;
  - (b) Latest income and business tax returns in the form specified in the **BDS**;
  - (c) Certificate of PhilGEPS Registration; and
  - (d) Other appropriate licenses and permits required by law and stated in the **BDS**.

Failure of the Bidder declared as Lowest Calculated Bid to duly submit the requirements under this Clause or a finding against the veracity of such shall be ground for forfeiture of the bid security and disqualification of the Bidder for award.

29.3. The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted pursuant to **ITB** Clauses 12 and 13, as well as other information as the Procuring Entity deems necessary and appropriate, using a non-discretionary "pass/fail" criterion.

- 29.4. If the BAC determines that the Bidder with the Lowest Calculated Bid passes all the criteria for post-qualification, it shall declare the said bid as the Lowest Calculated Responsive Bid, and recommend to the Head of the Procuring Entity the award of contract to the said Bidder at its submitted price or its calculated bid price, whichever is lower.
- 29.5. A negative determination shall result in rejection of the Bidder's Bid, in which event the Procuring Entity shall proceed to the next Lowest Calculated Bid to make a similar determination of that Bidder's capabilities to perform satisfactorily. If the second Bidder, however, fails the post qualification, the procedure for post qualification shall be repeated for the Bidder with the next Lowest Calculated Bid, and so on until the Lowest Calculated Responsive Bid is determined for contract award.
- 29.6. Within a period not exceeding seven (7) calendar days from the date of receipt of the recommendation of the BAC, the Head of the Procuring Entity shall approve or disapprove the said recommendation. In the case of GOCCs and GFIs, the period provided herein shall be fifteen (15) calendar days.

#### 30. Reservation Clause

- 30.1. Notwithstanding the eligibility or post-qualification of a Bidder, the Procuring Entity concerned reserves the right to review its qualifications at any stage of the procurement process if it has reasonable grounds to believe that a misrepresentation has been made by the said Bidder, or that there has been a change in the Bidder's capability to undertake the project from the time it submitted its eligibility requirements. Should such review uncover any misrepresentation made in the eligibility and bidding requirements, statements or documents, or any changes in the situation of the Bidder which will affect its capability to undertake the project so that it fails the preset eligibility or bid evaluation criteria, the Procuring Entity shall consider the said Bidder as ineligible and shall disqualify it from submitting a bid or from obtaining an award or contract.
- 30.2. Based on the following grounds, the Procuring Entity reserves the right to reject any and all bids, declare a failure of bidding at any time prior to the contract award, or not to award the contract, without thereby incurring any liability, and make no assurance that a contract shall be entered into as a result of the bidding:
  - (a) If there is *prima facie* evidence of collusion between appropriate public officers or employees of the Procuring Entity, or between the BAC and any of the Bidders, or if the collusion is between or among the bidders themselves, or between a Bidder and a third party, including any act which restricts, suppresses or nullifies or tends to restrict, suppress or nullify competition;
  - (b) If the Procuring Entity's BAC is found to have failed in following the prescribed bidding procedures; or
  - (c) For any justifiable and reasonable ground where the award of the contract will not redound to the benefit of the GOP as follows:
    - (i) If the physical and economic conditions have significantly changed so as to render the project no longer economically,

financially or technically feasible as determined by the head of the procuring entity;

- (ii) If the project is no longer necessary as determined by the head of the procuring entity; and
- (iii) If the source of funds for the project has been withheld or reduced through no fault of the Procuring Entity.
- 30.3. In addition, the Procuring Entity may likewise declare a failure of bidding when:
  - (a) No bids are received;
  - (b) All prospective Bidders are declared ineligible;
  - (c) All bids fail to comply with all the bid requirements or fail post-qualification; or
  - (d) The Bidder with the Lowest Calculated Responsive Bid (LCRB) refuses, without justifiable cause to accept the award of contract, and no award is made.

#### F. Award of Contract

#### 31. Contract Award

- 31.1. Subject to **ITB** Clause 29, the Procuring Entity shall award the contract to the Bidder whose bid has been determined to be the LCRB.
- 31.2. Prior to the expiration of the period of bid validity, the Procuring Entity shall notify the successful Bidder in writing that its bid has been accepted, through a Notice of Award received personally or sent by registered mail or electronically, receipt of which must be confirmed in writing within two (2) days by the Bidder with the LCRB and submitted personally or sent by registered mail or electronically to the Procuring Entity.
- 31.3. Notwithstanding the issuance of the Notice of Award, award of contract shall be subject to the following conditions:
  - (a) Submission of the valid JVA, if applicable, within ten (10) calendar days from receipt by the Bidder of the notice from the BAC that the Bidder has the LCRB;
  - (b) Posting of the performance security in accordance with **ITB** Clause 33;
  - (c) Signing of the contract as provided in **ITB** Clause 32; and
  - (d) Approval by higher authority, if required.
- 31.4. At the time of contract award, the Procuring Entity shall not increase or decrease the quantity of goods originally specified in Section VI-Schedule of Requirements.

#### 32. Signing of the Contract

- 32.1. At the same time as the Procuring Entity notifies the successful Bidder that its bid has been accepted, the Procuring Entity shall send the Contract Form to the Bidder, which contract has been provided in the Bidding Documents, incorporating therein all agreements between the parties.
- 32.2. Within ten (10) calendar days from receipt of the Notice of Award, the successful Bidder shall post the required performance security and sign and date the contract and return it to the Procuring Entity.
- 32.3. The Procuring Entity shall enter into contract with the successful Bidder within the same ten (10) calendar day period provided that all the documentary requirements are complied with.
- 32.4. The following documents shall form part of the contract:
  - (a) Contract Agreement;
  - (b) Bidding Documents;
  - (c) Winning bidder's bid, including the Technical and Financial Proposals, and all other documents/statements submitted;
  - (d) Performance Security;
  - (e) Credit line in accordance with **ITB** Clause 5.5, if applicable;
  - (f) Notice of Award of Contract; and
  - (g) Other contract documents that may be required by existing laws and/or specified in the **BDS**.

#### 33. Performance Security

- 33.1. To guarantee the faithful performance by the winning Bidder of its obligations under the contract, it shall post a performance security within a maximum period of ten (10) calendar days from the receipt of the Notice of Award from the Procuring Entity and in no case later than the signing of the contract.
- 33.2. The performance security shall be denominated in Philippine Pesos and posted in favor of the Procuring Entity in an amount equal to the percentage of the total contract price in accordance with the following schedule:

Form of Performance Security	Amount of Performance Security (Equal to Percentage of the Total Contract Price)
(a) Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	Five percent (5%)

(b) Bank draft/guarantee or irrevocable letter of credit issued	
by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	Five percent (5%)
(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security; and/or	Thirty percent (30%)
(d) Any combination of the	Proportionate to share of form with
foregoing.	respect to total amount of security

33.3. Failure of the successful Bidder to comply with the above-mentioned requirement shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security, in which event the Procuring Entity shall initiate and complete the post qualification of the second Lowest Calculated Bid. The procedure shall be repeated until the LCRB is identified and selected for contract award. However if no Bidder passed post-qualification, the BAC shall declare the bidding a failure and conduct a re-bidding with re-advertisement.

#### 34. Notice to Proceed

- 34.1. Within three (3) calendar days from the date of approval of the contract by the appropriate government approving authority, the Procuring Entity shall issue its Notice to Proceed to the Bidder.
- 34.2. The contract effectivity date shall be provided in the Notice to Proceed by the Procuring Entity, which date shall not be later than seven (7) calendar days from the issuance of the Notice to Proceed.

## SECTION III BID DATA SHEETS

ITB Clause	
1.1	The Procuring Entity is Batangas State University
1.2	Not applicable
2	The Funding Source is:
	The Government of the Philippines (GOP) in the amount of <b>Eight Hundred Six Thousand Eight Hundred Thirty-Four Pesos Only (Php 806,834.00).</b>
	The name of the Project is <b>Procurement of Equipment and Supplies</b> for the DOST-PCIEERD Funded BatStateU Center for Technopreneurship & Innovation (Lot D).
	Theidentification number of the Project is BSU-Project No. 2016-122.
3.1	No further instructions.
5.1	No further instructions.
5.2	Bidding is restricted to eligible bidders as defined in ITB Clause 5.1.
5.4	Bidders should have completed, within three (3) years from the date of submission and receipt of bids, a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC.
5.5	No further instructions.
6.3	No further instructions.
7	No further instructions.
8.1	Subcontracting is not allowed.
8.2	Not applicable.
9.1	The Procuring Entity will hold a pre-bid conference for this Project on <i>April 15, 2016, 2:00 PM</i> .
	BAC Office Ground Floor, CITE Building Batangas State University, GPB Campus I Rizal Avenue Extension, BatangasCity
10.1	The Procuring Entity's address is:
	2 <sup>nd</sup> Floor, CITE Building, Batangas State University, GPB Campus I Rizal Avenue Extension, BatangasCity

	Dr. Tirso A. Ronquillo
	University President Tel. No.(043) 723-0339 / 980-0385 local 1546
12.1	No further instructions.
12.1(a)(i)	No other acceptable proof of registration is recognized.
12.1(a)(iii)	The statement "covers all ongoing and completed government and private contracts" shall include all such contracts within <i>three (3) years</i> prior to the deadline for the submission and receipt of bids, including contracts awarded but not yet started, if any. The value of the prospective Bidder's largest contract, adjusted to current price index must be at least fifty percent (50%) of the ABC/Sub ABC in order to be eligible to bid for the project.
13.1	No additional requirements.
13.2	The Total ABC is <b>Eight Hundred Six Thousand Eight Hundred Thirty-Four Pesos Only (Php 806,834.00)</b> .
	Any bid with a financial component exceeding this amount shall not be accepted.
15.4(a)(iii)	No incidental services are required.
15.4(a)(iii)	Not applicable
	No incidental services are required.
15.5	Bid Prices shall be fixed. Adjustable price proposals shall be treated as non-responsive and shall be rejected.
15.6	Extraordinary circumstances refer to events that may be determined by the National Economic and Development Authority in accordance with the Civil Code of the Philippines, and upon the recommendation of the Procuring Entity.
16.1(b)	The Bid prices for Goods supplied from outside of the Philippines shall be quoted in Philippine Pesos.
16.3	No further instructions.
17.1	Bid validity period is <i>One Hundred Twenty (120) calendar days</i> from the date of opening of bids.
18.1	The bid security shall be in the following amount:
	<ol> <li>Two (2%) of the ABC, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</li> </ol>
	2. <i>Five (5%) of the ABC</i> if bid security is in Surety Bond; or
	3. Any combination of the foregoing proportionate to the share

	of form with respect to total amount of security.
	4. Bid Securing Declaration (Use BatStateU Goods Form No. 5c)
18.2	The validity period for bid security is One Hundred twenty (120) calendar days from the date of opening of bid.
20.3	Each Bidder shall submit <i>one (1)</i> original and <i>two (2)</i> copies of the first and second components of its bid.
21	The address for submission of bids is
	BAC Office Ground Floor, CITEBuilding Batangas State University, GPB Campus I Rizal Avenue Extension, BatangasCity
	The deadline for submission of bids is 1:00 to 2:00 PM, April 27, 2016.
24.1	The place of bid opening is
	BAC Office Ground Floor, CITEBuilding Batangas State University, GPB Campus I Rizal Avenue Extension, BatangasCity
	The date and time of bid opening is 2:00PM, April 27, 2016.
24.2	No further instructions.
27.1	No further instructions.
28.3	The goods are grouped in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
28.3(b)	Bid modification in whatever form is not allowed.
28.3	No further instructions.
29.2(a)	No further instructions.
29.2(b)	Not applicable
29.2(d)	No other licenses required.
32.4(g)	No other contract documents needed.

# SECTION IV GENERAL CONDITIONS OF THE CONTRACT

#### **TABLE OF CONTENTS**

1.	DEFINITIONS	3
2.	CORRUPT, FRAUDULENT, COLLUSIVE, AND COERCIVE PRACTICES	3
3.	INSPECTION AND AUDIT BY THE FUNDING SOURCE	5
4.	GOVERNING LAW AND LANGUAGE	5
<b>5</b> .	NOTICES	5
6.	SCOPE OF CONTRACT	5
7.	SUBCONTRACTING	5
8.	PROCURING ENTITY'S RESPONSIBILITIES	6
9.	PRICES	6
<b>10.</b>	PAYMENT	6
11.	ADVANCE PAYMENT AND TERMS OF PAYMENT	7
<b>12.</b>	TAXES AND DUTIES	7
<b>13.</b>	PERFORMANCE SECURITY	7
14.	USE OF CONTRACT DOCUMENTS AND INFORMATION	8
<b>15.</b>	STANDARDS	8
<b>16.</b>	INSPECTION AND TESTS	8
<b>17.</b>	WARRANTY	9
18.	DELAYS IN THE SUPPLIER'S PERFORMANCE	.10
19.	LIQUIDATED DAMAGES	.10
20.	SETTLEMENT OF DISPUTES	.10
21.	LIABILITY OF THE SUPPLIER	.11
22.	Force Majeure	.11
23.	TERMINATION FOR DEFAULT	.11
24.	TERMINATION FOR INSOLVENCY	.12
25.	TERMINATION FOR CONVENIENCE	.12

26.	TERMINATION FOR UNLAWFUL ACTS	13
27.	PROCEDURES FOR TERMINATION OF CONTRACTS	13
28.	ASSIGNMENT OF RIGHTS	14
29.	CONTRACT AMENDMENT	14
30.	APPLICATION	14

#### 1. Definitions

- 1.1. In this Contract, the following terms shall be interpreted as indicated:
  - (a) "The Contract" means the agreement entered into between the Procuring Entity and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
  - (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
  - (c) "The Goods" means all of the supplies, equipment, machinery, spare parts, other materials and/or general support services which the Supplier is required to provide to the Procuring Entity under the Contract.
  - (d) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
  - (e) "GCC" means the General Conditions of Contract contained in this Section.
  - (f) "SCC" means the Special Conditions of Contract.
  - (g) "The Procuring Entity" means the organization purchasing the Goods, as named in the **SCC**.
  - (h) "The Procuring Entity's country" is the Philippines.
  - (i) "The Supplier" means the individual contractor, manufacturer distributor, or firm supplying/manufacturing the Goods and Services under this Contract and named in the **SCC**.
  - (j) The "Funding Source" means the organization named in the **SCC**.
  - (k) "The Project Site," where applicable, means the place or places named in the **SCC**.
  - (l) "Day" means calendar day.
  - (m) The "Effective Date" of the contract will be the date of receipt by the Supplier of the Notice to Proceed or the date provided in the Notice to Proceed. Performance of all obligations shall be reckoned from the Effective Date of the Contract.
  - (n) "Verified Report" refers to the report submitted by the Implementing Unit to the Head of the Procuring Entity setting forth its findings as to the existence of grounds or causes for termination and explicitly stating its recommendation for the issuance of a Notice to Terminate.

#### 2. Corrupt, Fraudulent, Collusive, and Coercive Practices

2.1. Unless otherwise provided in the <u>SCC</u>, the Procuring Entity as well as the bidders, contractors, or suppliers shall observe the highest standard of ethics during the procurement and execution of this Contract. In pursuance of this policy, the Procuring Entity:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
  - (i) "corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves, others, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; entering, on behalf of the Government, into any contract or transaction manifestly and grossly disadvantageous to the same, whether or not the public officer profited or will profit thereby, and similar acts as provided in Republic Act 3019.
  - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring Entity, and includes collusive practices among Bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the Procuring Entity of the benefits of free and open competition.
  - (iii) "collusive practices" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Procuring Entity, designed to establish bid prices at artificial, noncompetitive levels.
  - (iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;
  - (v) "obstructive practice" is
    - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to an administrative proceedings or investigation or making false statements to investigators in order to materially impede an administrative proceedings or investigation of the Procuring Entity or any foreign government/foreign or international financing institution into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the administrative proceedings or investigation or from pursuing such proceedings or investigation; or
    - (bb) acts intended to materially impede the exercise of the inspection and audit rights of the Procuring Entity or any foreign government/foreign or international financing institution herein.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in any of the practices mentioned in this Clause for purposes of competing for the contract.

2.2. Further the Funding Source, Borrower or Procuring Entity, as appropriate, will seek to impose the maximum civil, administrative and/or criminal penalties available under the applicable law on individuals and organizations deemed to be involved with any of the practices mentioned in **GCC** Clause 2.1(a).

#### 3. Inspection and Audit by the Funding Source

The Supplier shall permit the Funding Source to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the Funding Source, if so required by the Funding Source.

#### 4. Governing Law and Language

- 4.1. This Contract shall be interpreted in accordance with the laws of the Republic of the Philippines.
- 4.2. This Contract has been executed in the English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract. All correspondence and other documents pertaining to this Contract exchanged by the parties shall be written in English.

#### 5. Notices

- 5.1. Any notice, request, or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request, or consent shall be deemed to have been given or made when received by the concerned party, either in person or through an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile to such Party at the address specified in the **SCC**, which shall be effective when delivered and duly received or on the notice's effective date, whichever is later.
- 5.2. A Party may change its address for notice hereunder by giving the other Party notice of such change pursuant to the provisions listed in the **SCC** for **GCC** Clause 5.1.

#### 6. Scope of Contract

- 6.1. The GOODS and Related Services to be provided shall be as specified in **Error! Reference source not found.**
- 6.2. This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. Any additional requirements for the completion of this Contract shall be provided in the <u>SCC</u>.

#### 7. Subcontracting

7.1. Subcontracting of any portion of the Goods, if allowed in the **BDS**, does not relieve the Supplier of any liability or obligation under this Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants or workmen as fully as if these were the Supplier's own acts, defaults, or negligence, or those of its agents, servants or workmen.

7.2. Subcontractors disclosed and identified during the bidding may be changed during the implementation of this Contract, subject to compliance with the required qualifications and the approval of the Procuring Entity.

## 8. Procuring Entity's Responsibilities

- 8.1. Whenever the performance of the obligations in this Contract requires that the Supplier obtain permits, approvals, import, and other licenses from local public authorities, the Procuring Entity shall, if so needed by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.
- 8.2. The Procuring Entity shall pay all costs involved in the performance of its responsibilities in accordance with **GCC** Clause 6.

#### 9. Prices

- 9.1. For the given scope of work in this Contract as awarded, all bid prices are considered fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances and upon prior approval of the GPPB in accordance with Section 61 of R.A. 9184 and its IRR or except as provided in this Clause.
- 9.2. Prices charged by the Supplier for Goods delivered and/or services performed under this Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any change in price resulting from a Change Order issued in accordance with **GCC** Clause 29.

# 10. Payment

- 10.1. Payments shall be made only upon a certification by the Head of the Procuring Entity to the effect that the Goods have been rendered or delivered in accordance with the terms of this Contract and have been duly inspected and accepted. Except with the prior approval of the President no payment shall be made for services not yet rendered or for supplies and materials not yet delivered under this Contract. Ten percent (10%) of the amount of each payment shall be retained by the Procuring Entity to cover the Supplier's warranty obligations under this Contract as described in **GCC** Clause 17.
- 10.2. The Supplier's request(s) for payment shall be made to the Procuring Entity in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and/or Services performed, and by documents submitted pursuant to the <u>SCC</u> provision for GCC Clause 6.2, and upon fulfillment of other obligations stipulated in this Contract.
- 10.3. Pursuant to **GCC** Clause 10.2, payments shall be made promptly by the Procuring Entity, but in no case later than sixty (60) days after submission of an invoice or claim by the Supplier.
- 10.4. Unless otherwise provided in the SCC, the currency in which payment is made to the Supplier under this Contract shall be in Philippine Pesos.

## 11. Advance Payment and Terms of Payment

- 11.1. Advance payment shall be made only after prior approval of the President, and shall not exceed fifteen percent (15%) of the Contract amount, unless otherwise directed by the President or in cases allowed under Annex "D" of RA 9184.
- 11.2. For Goods supplied from abroad, the terms of payment shall be as follows:
  - (a) On Contract Signature: Ten percent (10%) of the Contract Price shall be paid within sixty (60) days from signing of the Contract and upon submission of a claim and a bank guarantee for the equivalent amount valid until the Goods are delivered and in the form provided in Section VIII. Bidding Forms.
  - (b) On Delivery: Seventy percent (70%) of the Contract Price shall be paid to the Supplier within sixty (60) days after the date of receipt of the Goods and upon submission of the documents (i) through (vi) specified in the <u>SCC</u> provision on Delivery and Documents.
  - (c) On Acceptance: The remaining twenty percent (20%) of the Contract Price shall be paid to the Supplier within sixty (60) days after the date of submission of the acceptance and inspection certificate for the respective delivery issued by the Procuring Entity's authorized representative. In the event that no inspection or acceptance certificate is issued by the Procuring Entity's authorized representative within forty five (45) days of the date shown on the delivery receipt the Supplier shall have the right to claim payment of the remaining twenty percent (20%) subject to the Procuring Entity's own verification of the reason(s) for the failure to issue documents (vii) and (viii) as described in the SCC provision on Delivery and Documents.
- 11.3. All progress payments shall first be charged against the advance payment until the latter has been fully exhausted.

#### 12. Taxes and Duties

The Supplier, whether local or foreign, shall be entirely responsible for all the necessary taxes, stamp duties, license fees, and other such levies imposed for the completion of this Contract.

## 13. Performance Security

- 13.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any the forms prescribed in the **ITB** Clause 33.2.
- 13.2. The performance security posted in favor of the Procuring Entity shall be forfeited in the event it is established that the winning bidder is in default in any of its obligations under the contract.
- 13.3. The performance security shall remain valid until issuance by the Procuring Entity of the Certificate of Final Acceptance.

- 13.4. The performance security may be released by the Procuring Entity and returned to the Supplier after the issuance of the Certificate of Final Acceptance subject to the following conditions:
  - (a) There are no pending claims against the Supplier or the surety company filed by the Procuring Entity;
  - (b) The Supplier has no pending claims for labor and materials filed against it: and
  - (c) Other terms specified in the **SCC**.
- 13.5. In case of a reduction of the contract value, the Procuring Entity shall allow a proportional reduction in the original performance security, provided that any such reduction is more than ten percent (10%) and that the aggregate of such reductions is not more than fifty percent (50%) of the original performance security.

#### 14. Use of Contract Documents and Information

- 14.1. The Supplier shall not, except for purposes of performing the obligations in this Contract, without the Procuring Entity's prior written consent, disclose this Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring Entity. Any such disclosure shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.
- 14.2. Any document, other than this Contract itself, enumerated in **GCC** Clause 14.1 shall remain the property of the Procuring Entity and shall be returned (all copies) to the Procuring Entity on completion of the Supplier's performance under this Contract if so required by the Procuring Entity.

#### 15. Standards

The Goods provided under this Contract shall conform to the standards mentioned in the **Error! Reference source not found.**; and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the institution concerned.

# 16. Inspection and Tests

- 16.1. The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring Entity. The <u>SCC</u> and <u>Error!</u> Reference source not found. shall specify what inspections and/or tests the Procuring Entity requires and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 16.2. If applicable, the inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at the goods' final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the

- Procuring Entity. The Supplier shall provide the Procuring Entity with results of such inspections and tests.
- 16.3. The Procuring Entity or its designated representative shall be entitled to attend the tests and/or inspections referred to in this Clause provided that the Procuring Entity shall bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 16.4. The Procuring Entity may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Procuring Entity, and shall repeat the test and/or inspection, at no cost to the Procuring Entity, upon giving a notice pursuant to **GCC** Clause 5.
- 16.5. The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Procuring Entity or its representative, shall release the Supplier from any warranties or other obligations under this Contract.

#### 17. Warranty

- 17.1. The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials, except when the technical specifications required by the Procuring Entity provides otherwise.
- 17.2. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 17.3. In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier for a minimum period specified in the SCC. The obligation for the warranty shall be covered by, at the Supplier's option, either retention money in an amount equivalent to at least ten percent (10%) of the final payment, or a special bank guarantee equivalent to at least ten percent (10%) of the Contract Price or other such amount if so specified in the SCC. The said amounts shall only be released after the lapse of the warranty period specified in the SCC; provided, however, that the Supplies delivered are free from patent and latent defects and all the conditions imposed under this Contract have been fully met.
- 17.4. The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, within the period specified in the **SCC** and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the Procuring Entity.
- 17.5. If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in **GCC** Clause 17.4, the Procuring Entity may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring Entity may have against the Supplier under the Contract and under the applicable law.

## 18. Delays in the Supplier's Performance

- 18.1. Delivery of the Goods and/or performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring Entity in **Section VI-Schedule of Requirements**.
- 18.2. If at any time during the performance of this Contract, the Supplier or its Subcontractor(s) should encounter conditions impeding timely delivery of the Goods and/or performance of Services, the Supplier shall promptly notify the Procuring Entity in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, and upon causes provided for under **GCC** Clause 22, the Procuring Entity shall evaluate the situation and may extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of Contract.
- 18.3. Except as provided under **GCC** Clause 22, a delay by the Supplier in the performance of its obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to **GCC** Clause 19, unless an extension of time is agreed upon pursuant to **GCC** Clause 29 without the application of liquidated damages.

# 19. Liquidated Damages

Subject to **GCC** Clauses 18 and 22, if the Supplier fails to satisfactorily deliver any or all of the Goods and/or to perform the Services within the period(s) specified in this Contract inclusive of duly granted time extensions if any, the Procuring Entity shall, without prejudice to its other remedies under this Contract and under the applicable law, deduct from the Contract Price, as liquidated damages, the applicable rate of one tenth (1/10) of one (1) percent of the cost of the unperformed portion for every day of delay until actual delivery or performance. The maximum deduction shall be ten percent (10%) of the amount of contract. Once the maximum is reached, the Procuring Entity shall rescind the Contract pursuant to **GCC** Clause 23, without prejudice to other courses of action and remedies open to it.

# 20. Settlement of Disputes

- 20.1. If any dispute or difference of any kind whatsoever shall arise between the Procuring Entity and the Supplier in connection with or arising out of this Contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- 20.2. If after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Procuring Entity or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.
- 20.3. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under this Contract.

- 20.4. In the case of a dispute between the Procuring Entity and the Supplier, the dispute shall be resolved in accordance with Republic Act 9285 ("R.A. 9285"), otherwise known as the "Alternative Dispute Resolution Act of 2004."
- 20.5. Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and the Procuring Entity shall pay the Supplier any monies due the Supplier.

# 21. Liability of the Supplier

- 21.1. The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines, subject to additional provisions, if any, set forth in the **SCC**.
- 21.2. Except in cases of criminal negligence or willful misconduct, and in the case of infringement of patent rights, if applicable, the aggregate liability of the Supplier to the Procuring Entity shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

# 22. Force Majeure

- 22.1. The Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that the Supplier's delay in performance or other failure to perform its obligations under the Contract is the result of a *force majeure*.
- 22.2. For purposes of this Contract the terms "force majeure" and "fortuitous event" may be used interchangeably. In this regard, a fortuitous event or force majeure shall be interpreted to mean an event which the Contractor could not have foreseen, or which though foreseen, was inevitable. It shall not include ordinary unfavorable weather conditions; and any other cause the effects of which could have been avoided with the exercise of reasonable diligence by the Contractor. Such events may include, but not limited to, acts of the Procuring Entity in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 22.3. If a *force majeure* situation arises, the Supplier shall promptly notify the Procuring Entity in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring Entity in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the *force majeure*.

#### 23. Termination for Default

- 23.1. The Procuring Entity shall terminate this Contract for default when any of the following conditions attends its implementation:
  - (a) Outside of *force majeure*, the Supplier fails to deliver or perform any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Procuring Entity pursuant to a request

- made by the Supplier prior to the delay, and such failure amounts to at least ten percent (10%) of the contact price;
- (b) As a result of *force majeure*, the Supplier is unable to deliver or perform any or all of the Goods, amounting to at least ten percent (10%) of the contract price, for a period of not less than sixty (60) calendar days after receipt of the notice from the Procuring Entity stating that the circumstance of force majeure is deemed to have ceased; or
- (c) The Supplier fails to perform any other obligation under the Contract.
- 23.2. In the event the Procuring Entity terminates this Contract in whole or in part, for any of the reasons provided under **GCC** Clauses 23 to 26, the Procuring Entity may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Procuring Entity for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of this Contract to the extent not terminated.
- 23.3. In case the delay in the delivery of the Goods and/or performance of the Services exceeds a time duration equivalent to ten percent (10%) of the specified contract time plus any time extension duly granted to the Supplier, the Procuring Entity may terminate this Contract, forfeit the Supplier's performance security and award the same to a qualified Supplier.

## 24. Termination for Insolvency

The Procuring Entity shall terminate this Contract if the Supplier is declared bankrupt or insolvent as determined with finality by a court of competent jurisdiction. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring Entity and/or the Supplier.

#### 25. Termination for Convenience

- 25.1. The Procuring Entity may terminate this Contract, in whole or in part, at any time for its convenience. The Head of the Procuring Entity may terminate a contract for the convenience of the Government if he has determined the existence of conditions that make Project Implementation economically, financially or technically impractical and/or unnecessary, such as, but not limited to, fortuitous event(s) or changes in law and national government policies.
- 25.2. The Goods that have been delivered and/or performed or are ready for delivery or performance within thirty (30) calendar days after the Supplier's receipt of Notice to Terminate shall be accepted by the Procuring Entity at the contract terms and prices. For Goods not yet performed and/or ready for delivery, the Procuring Entity may elect:
  - (a) to have any portion delivered and/or performed and paid at the contract terms and prices; and/or
  - (b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed and/or performed goods and for materials and parts previously procured by the Supplier.

25.3. If the Supplier suffers loss in its initial performance of the terminated contract, such as purchase of raw materials for goods specially manufactured for the Procuring Entity which cannot be sold in open market, it shall be allowed to recover partially from this Contract, on a *quantum meruit* basis. Before recovery may be made, the fact of loss must be established under oath by the Supplier to the satisfaction of the Procuring Entity before recovery may be made.

#### 26. Termination for Unlawful Acts

- 26.1. The Procuring Entity may terminate this Contract in case it is determined *prima facie* that the Supplier has engaged, before or during the implementation of this Contract, in unlawful deeds and behaviors relative to contract acquisition and implementation. Unlawful acts include, but are not limited to, the following:
  - (a) Corrupt, fraudulent, and coercive practices as defined in **ITB** Clause **Error! Reference source not found.**;
  - (b) Drawing up or using forged documents;
  - (c) Using adulterated materials, means or methods, or engaging in production contrary to rules of science or the trade; and
  - (d) Any other act analogous to the foregoing.

#### 27. Procedures for Termination of Contracts

- 27.1. The following provisions shall govern the procedures for termination of this Contract:
  - (a) Upon receipt of a written report of acts or causes which may constitute ground(s) for termination as aforementioned, or upon its own initiative, the Implementing Unit shall, within a period of seven (7) calendar days, verify the existence of such ground(s) and cause the execution of a Verified Report, with all relevant evidence attached;
  - (b) Upon recommendation by the Implementing Unit, the Head of the Procuring Entity shall terminate this Contract only by a written notice to the Supplier conveying the termination of this Contract. The notice shall state:
    - (i) that this Contract is being terminated for any of the ground(s) afore-mentioned, and a statement of the acts that constitute the ground(s) constituting the same;
    - (ii) the extent of termination, whether in whole or in part;
    - (iii) an instruction to the Supplier to show cause as to why this Contract should not be terminated; and
    - (iv) special instructions of the Procuring Entity, if any.
  - (c) The Notice to Terminate shall be accompanied by a copy of the Verified Report;
  - (d) Within a period of seven (7) calendar days from receipt of the Notice of Termination, the Supplier shall submit to the Head of the Procuring Entity a verified position paper stating why this Contract should not be terminated. If the Supplier fails to show cause after the lapse of the seven

- (7) day period, either by inaction or by default, the Head of the Procuring Entity shall issue an order terminating this Contract;
- (e) The Procuring Entity may, at any time before receipt of the Supplier's verified position paper described in item (d) above withdraw the Notice to Terminate if it is determined that certain items or works subject of the notice had been completed, delivered, or performed before the Supplier's receipt of the notice;
- (f) Within a non-extendible period of ten (10) calendar days from receipt of the verified position paper, the Head of the Procuring Entity shall decide whether or not to terminate this Contract. It shall serve a written notice to the Supplier of its decision and, unless otherwise provided, this Contract is deemed terminated from receipt of the Supplier of the notice of decision. The termination shall only be based on the ground(s) stated in the Notice to Terminate;
- (g) The Head of the Procuring Entity may create a Contract Termination Review Committee (CTRC) to assist him in the discharge of this function. All decisions recommended by the CTRC shall be subject to the approval of the Head of the Procuring Entity; and
- (h) The Supplier must serve a written notice to the Procuring Entity of its intention to terminate the contract at least thirty (30) calendar days before its intended termination. The Contract is deemed terminated if it is not resumed in thirty (30) calendar days after the receipt of such notice by the Procuring Entity.

# 28. Assignment of Rights

The Supplier shall not assign his rights or obligations under this Contract, in whole or in part, except with the Procuring Entity's prior written consent.

#### 29. Contract Amendment

Subject to applicable laws, no variation in or modification of the terms of this Contract shall be made except by written amendment signed by the parties.

# 30. Application

These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of this Contract.

# SECTION V SPECIAL CONDITIONS OF THE CONTRACT

GCC Clause	
1.1(g)	The Procuring Entity is <b>Batangas State University</b>
1.1(i)	The Supplier is
1.1(j)	The Funding Source is:
	The Government of the Philippines (GOP) through the <i>Eight Hundred Six Thousand Eight Hundred Thirty-Four Pesos Only (Php 806,834.00).</i>
1.1(k)	The Project Site is
	Batangas State University GPB Campus I Rizal Avenue Extension, Batangas City
5.1	The Procuring Entity's address for Notices is:
	Dr. Tirso A. Ronquillo
	University President Batangas State University
	International Affairs Office, GPB Main Campus I
	Batangas City
	The Supplier's address for Notices is:
6.2	Delivery and Documents -
	The delivery terms applicable to this Contract are delivered to <b>Batangas State University</b> . Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.
	Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI-Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are as follows:
	For Goods supplied from within the Philippines:
	Upon delivery of the Goods to the Project Site, the Supplier shall notify the Procuring Entity and present the following documents to the Procuring Entity:
	(i) Original and copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;

- (ii) Original and copies delivery receipt/note, railway receipt, or truck receipt;
- (iii) Original Supplier's factory inspection report;
- (iv) Original and copies of the Manufacturer's and/or Supplier's warranty certificate;
- (v) Delivery receipt detailing number and description of items received signed by the authorized receiving personnel;
- (vi) Certificate of Acceptance/Inspection Report signed by the Procuring Entity's representative at the Project Site; and
- (vii) Four copies of the Invoice Receipt for Property signed by the Procuring Entity's representative at the Project Site.

For purposes of this Clause the Procuring Entity's Representative at the Project Site are the Asst. Director for Supply & Property Management Office, **MR. MARIO EBORA** and the Asst Director of IPMPTAC, **Engr. ALBERTSON D. AMANTE.** 

#### **Incidental Services -**

The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI-Schedule of Requirements:

Select appropriate requirements and delete the rest.

- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Procuring Entity's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

	Patent Rights –
	The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.
10.4	Not applicable
13.4(c)	No further instructions.
16.1	The inspections and tests that will be conducted are: Checking based on the required specifications.
17.3	One (1) year after acceptance by the Procuring Entity of the delivered Goods.
17.4	The period for correction of defects in the warranty period is <i>fifteen (15) days.</i>
21.1	No additional provision.

# **SECTION VI**

# **SCHEDULE OF REQUIREMENTS**

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of de livery to the project site.

Item No.	Specific	ations	QTY.	Delivery Days/Weeks
	Combined Frequency Coun with AM/FM			
	Frequency Range	0.5 Hz to 5 MHz		
	Amplitude	> 10 Vpp (into 50 ohm load)		
	Impedance	50 ohm +/- 10%		
	Attenuator	,		
	dc Offset	ohm)		
	Duty Cycle	80%:20%:80% to 1 MHz continuously variable		
	SINE WAVE			45 calendar
	Distortion	= 1%, 0.5 Hz ~ 100kHz,<br THD = 30dB fundamental<br in all ranges	2 units	
	Flatness	>/= 0.2 dB bolow 500 kHz		
1.	TRIANGLE WAVE			
	Linearity	>/= 95 %	_ 440	days
	Symmetry	+/=-2 % 1 Hz to 100 KHz		
	Rise/Fall Time (into 50 ohm load)	= 50 ns at maximum output</td <td></td> <td></td>		
	CMOS OUTPUT			
	Level (Rise/Fall Time)	4 Vpp +/- 1 Vpp to 14.5 Vpp +/- 0.5 Vpp : = 120 ns</td <td></td> <td></td>		
	TTL OUTPUT			
	Level (Rise/Fall Time)	>/= 3 Vpp : 20 TTL Load Fan Out (>/= 25 ns)		
	SWEEP OPERATION			
	Sweep Rate (Time)	100:1 max (0.5-30s) adj.		
	AM MODULATION			
	Depth	0 to 100 %		
	Mod. Frequency	400 Hz (INT); dc to 1 MHz (EXT)		
	Carrier BW	100 Hz to 5 MHz ( -3 dB)		

	FM MODULATION			
	Deviation	0 to +/- 5%		
	Mod. Frequency	400 Hz (INT); dc to 20 kHz (EXT)		
	FREQUENCY COUNTER			
	Range	0.5 Hz to 5 MHz (INT) 5 Hz to 150 MHz (EXT)		
	Accuracy	Timebase +/-1 count		
	Warranty	at least 3 Years		
	Mixed Signal Oscilloscop Inclu			
	Bandwidth	200 MHz		
	Number of Analogue Channels	4		
	Number of Digital Channels	16		
	Record Length	1M points/ch		
	Sample Rate Random	1G samples/s		
	USB interface	Yes		
	Vertical Resolution	1 (Digital) bit, 8 (Analogue) bit		
	Minimum Time Base	2 ns/div		
	Maximum Time Base	100 s/div		
	Minimum Vertical Sensitivity	2 mV/div		
2.	Maximum Vertical Sensitivity	5 V/div	1 unit	45 calendar
۷.	Safety Category Voltage	300V	1 unit	days
	Minimum Operating Temperature	0 deg C		
	Safety Category Level	CAT II		
	Dimensions	377 x 134 x 180 mm		
	Maximum Operating Temperature	+ 50 deg C		
	Length	377mm		
	Display Type	Colour		
	Screen Size	7 in		
	Width	134 mm		
	Input Capacitance	11.5 pF		
	Power Source	Mains		
	Height	180 mm		
	Safety Category	CAT II 300V		
	Rise Time	2.1 ns		
-	•			

Didding D	ocuments (Based on Revised IRR of RA 918	74, I bui til Eultioli, December 2010j		<del>.                                    </del>
	Weight	3.6 kg		
	Input Impedance	1 (Analogue) Mohm, 101 (Digital) kohm		
	ESSENT	ΓIALS		
	Oscilloscope Probe	Probe Type: Pasive Voltage, Attenuation: 10x, Bandwidth: 500 MHz, Connector Type: BNC, Safety Category: CAT II 300V	1 unit	
	Digital HandHeld	Multimeter Kit		
	DC Volts, AC Volts	50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V, 1000.0 V; Accuracy: 0.025 %. 0.4 % (true-rms)		
	DC Current, AC Current	500.00 uA, 5000.0 uA, 50.000 mA, 400.00 mA, 5.000 A, 10.000 A; Accuracy: 0.15 %, 0.7 % (true-rms)		
	Temperature (excluding	-200 deg C to 1090 deg C;		
	probe)	Accuracy: 1 %		
		500.00 ohm, 5.000 kohm, 50.000 kohm, 500.00 kohm, 5.0000 Mohm, 50.00 Mohm, 500.0 Mohm; Accuracy: 0.05 %		
3.	Capacitance	1.000 nF,10.00 nF 100.0 nF, 1.000 μF, 10.00 μF, 100.0 μF, 1000 μF, 10.00 mF, 100 mF; Accuracy: 1.0 %	1 unit	45 calendar days
	Frequency	99.999 Hz, 999.99 Hz, 9.9999 kHz, 99.999 kHz, 999.99 kHz; Accuracy: 0.005 %		
	Multiple On screen Displays	Yes		
	True RMS AC Bandwidth	100 kHz		
	dBV/dBm			
	DC mV Resolution			
	Megohm Range	-		
	Conductance			
	Continuity Beeper	Yes		

Bidding Documents (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
Battery/Fuse Access	Battery/Fuse		
Elapse Time Clock	Yes		
Time of Day Clock	Yes		
Min-Max-Avg	Yes		
Peak	250 uS		
Duty Cycle	0.01 % to 99.99 %		
Pulse Width	0.025 ms, 0.25 ms, 2.5 ms,		
Hold	1250.0 ms Yes		
Isolated Optical Interface			
Auto/Touch Hold			
Reading Memory			
Log to PC	Yes		
Interval/Event Logging	Yes		
Logging Memory	up to 10,000 readings		
Maximum Voltage between	1000V		
any Terminal and Earth			
Ground			
Battery Type	6 AA Alkaline Batteries, NEDA 15A IEC LR6	1 unit	45 calendar days
Battery Life			auys
	Hours in Logging Mode		
Operating Temperature	55 5		
Storage Temperature	-40 deg C to 60 deg C		
Relative Humidity	0 to 90 % (0 to 37 deg C), 0		
	to 65 % (37 deg C to 45		
	deg C), 0 to 45 % (45 deg		
	C to 55 deg C)		
Electromagnetic	EMC EN61326-1		
Compatibility			
Vibration	Random vibration per MIL-		
Choole	PRF-28800F Class 2		
Shock	1 meter drop per IEC/EN61010-1 2nd		
	Edition		
Size (HxWxL)	22.2 cm x 10.2 cm x 6 cm		
Weight	870.9 g		
INCLUDED ACCESSORIES			
Alligator Clips	CAT II 300 V 5 A (Red,		
Amgator Chps	Black)		
Test Prohes	CAT III 1000V 10 A (Red,		
1030110003	Black)		

cuments (Based on Revised IRR of RA 91		
Test Lead	s CAT III 1000V 10 A (Red,	
	Black)	
CD-ron	Software for storing	
	documents and analyzing	
	readings or a series of	
	measurements	
USB Interface Cabl		
Thermocouple Probe and		
Adapto		
Softcas	e for meter protection and	
	accessory storage	
Batterie	s 6 AA (Non-rechargeable)	
ESSEN	TIAIS	
ESSEN	Current: 440mA, Voltage:	
Replacement Multimeter	1000V, Breaking Capacity: 10kA, Material: HBC	1 unit
Fuse	Ceramic, Dimensions: 10.3	
	(Dia.) x 35 mm	
	DC Current Range: 1-400	
	Adc, DC Accuracy: +/- 3.5	
	%, AC Current Range: 1-	
	400 AC rms, AC Accuracy:	
	+/- 3.5 %, Crest Factor: 3	
	@ 400 A, 6 @ 200 A, AC	
Current Clamp Adapter	Frequency Response: 3	1 unit
Eurrent Clamp Adapter	kHz, Output Signal:	1 unit
	1mV/A, Safety: IEC 1010,	
	CAT III 600V, Load	
	Impedance: 1Mohm/100	
	pF, Battery Life: 60 Hours	
	Typical	
	Multifunctional desktop	
	charger for both NiCD and	
	NiMH cells	
	Charges 1-6 AA, AAA,	
	and/or 1-4 C, D cells	
	and/or 1-2 9V Blocks	
	Microprocessor	
	•	
	controlled charging,	1 unit
Battery Charger	utilising delta peak	I unit
Succery Granger	techniques Faulty cell detection	
	-	
	D1	
	Pre charge function	
	Individual supervision of	
	0	

Bidding L	Oocuments (Based on Revised IRR of RA 91	84, Fourth Edition, December 2010)		
		Cell Temperature		
		Detection		
		Reverse Connection		
		Protection		
		Auto-Diagnostic of the		
		inserted cell with		
		automatic start of		
		precharging and/or		
		refreshing process, if		
		required tired cells will		
		be activated		
		3 Colour cell charge		
		status indicators		
		Input: 100-240 VAC		
		50/60 Hz		
		Dimensions: L 191 x W		
		172 x H 57 mm		
	Replacement Battery (Pack	AAA: 550-1100 mAh, 400		
	of 4)	mA, 1.65 - 3.3 hrs		
	01 4)	AA: 1300-2850 mAh,		
		1000 mA, 1.5 - 3.5 hrs		
		C: 1500-5000 mAh, 1000		
		mA, 1.8 - 6 hrs		
		D: 1800-10000 mAh,		
		1000 mA, 2.2 - 12 hrs		
		9V: 120-250 mAh, 60 mA,		
		2.5 - 5 hrs		
		Capacity: 2500 mAh,		
		Terminal Type: Standard,		
		Chemistry: NiMH, Size:		
		AA, Nominal Voltage:		
		1.2V, Maximum	2 units	
		Continuous Current: 5000	2 units	
		mA, Dimensions: 50.5 x		
		14.5 mm, Operating		
		Temperature Range: '-20 to		
		65 degC		
	SMD Rewo	rk Station		
	51·12 1CW0			
		Self contained air supply  Airflow 1001 /min (free		
		Airflow 100L/min (free		
		flowing)		
		Slim handpiece with		
4		control buttons for	1!+	45 calendar
4.	FEATURES	Start/Stop function	1 unit	days
		Automatic safety cool		-
		down		
		5 programmable pre-sets		
		for temperature and airflow		
		Temperature range 50 ~		
		600 deg C		
	1			i

Digital display  Auto power off Quick change nozzle adapter Voltage 240 Vac Power Consumption 1300W  Air Flow 5~50 L/min (with 4mm nozzle) Weight 1.3 kg Outer Dimensions (W x H x 160 x 145 x 220 mm D) INCLUDED ACCESSORIES Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures Dimensions (mm) H.170 x W.550 x D.485 Weight 2.1kg	Bidding Do	ocuments (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
Quick change nozzle adapter			Digital display		
Noltage   240 Vac			Auto power off		
Power Consumption   1300W			Quick change nozzle		
Power Consumption   1300W			adapter		
Air Flow Weight 1.3 kg Outer Dimensions (W x H x D) INCLUDED ACCESSORIES Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch is solates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Voltage	•		
Neight 1.3 kg  Outer Dimensions (W x H x D)  INCLUDED Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Power Consumption	1300W		
Neight 1.3 kg  Outer Dimensions (W x H x D)  INCLUDED Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Air Flow	5~50 L/min (with 4mm		
Weight  Outer Dimensions (W x H x D)  INCLUDED  ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			nozzle)		
INCLUDED ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Weight	,		
INCLUDED ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		`	160 x 145 x 220 mm		
ACCESSORIES  cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		,			
Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			=		
Standard   Standard   Essential Sincluded   Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit   Exposure area over 10 in x 12 in   Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage   UV tubes are masked off to ensure true and even usable exposure area   Electronic timer with touch membrane control   Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced   Rocker switch isolates bottom tubes for single sided exposures   Dimensions (mm)   H.170 x W.550 x D.485   H.170 x W.550 x D.485		ACCESSORIES	<u> </u>		
Sesential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit   Exposure area over 10 in x 12 in			-		
Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			(standard)		
double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit    Exposure area over 10 in x 12 in     Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage		Double-Sided UV Exposure	Unit, Essentials Included		
to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485			Essential for production of		
problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			double sided PCBs in order		
registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			to avoid the difficult		
exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			problem of artwork		
exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			registration with 2 separate		
The state of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure as is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485			_ =		
T2 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			unit		
Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			Exposure area over 10 in x		
box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			12 in		
tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			Quality construction in steel		
FEATURES  covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485			box with glass covering base		
minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			tubes and mylar film		
operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		FEATURES	covering tubes in lid to		
Tor tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
Tunit  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			_ =		
S. OV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					45 calendar
ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485	5.			1 unit	
Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					<b>y</b> -
membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			_		
Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			_		
Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			· · · · · · · · · · · · · · · · · · ·		
bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
Dimensions (mm) H.170 x W.550 x D.485			_		
			_		
Weight 2.1kg		Dimensions (mm)	H.170 x W.550 x D.485		
		Weight	2.1kg		

		355 x 260 (vacuum pip		
	Exposure Area (mm)	protrudes 25mm into top left of exp.area)		
	Timer			
	Tubes	8 x 18 in (15W each)		
	Operating Voltage	240Vac 50/60 Hz		
	Туре	Double Sided		
	ESSENT	<b>FIALS</b>		
	Replacement UV Tube and Starter Kit	Wattage: 15W, No.of Tubes: 2, No. of Starters: 2	4 units	
	Bench Top Zero Volt Ionis	er, Essentials Included		
		Steady state DC ionisation and patented Sense Feedback Balancing Compact Size		
		Rapid access maintenance		
		Automatic balancing of ionisation system		
	FEATURES	Equipped with audible and visual indicators for "Balance" and		
		"Maintenance Required"  Data acquisition ready	1 unit	
		Low offset voltage		
		Balance +/-5 voltage offset,		
		field programmable		
6.	Туре	Bench Top		45 calendar days
	Number of Fans	1		uays
	Supply Voltage	220V ac		
	Depth	7.9 cm		
	Heigth	24.1 cm		
	Width	15.2 cm		
	ESSENTIALS			
	Mounting Arm	compatible with supplied Bench Top Zero Volt Ioniser	1 unit	
	Power Cable Assembly	2.5 m Black, Type F Schuko Plug 10A, IEC C13, 250V	1 unit	

	Bench Magnifier, Es			
7.	Doptre Lens Size Magnifier Type Lamp Type Lamp Wattage Operating Voltage	A round glass lens, daylight lamp with flexible joints and a quick positioning handle. Allows the user to quickly push the magnifier out of the way or pull the magnifier closer to the workpiece for detailed working  Energy saving 22W bulb and electronic ballast for longer life and reduced costs  Low heat emission bulb and shadow free lighting for clear and confortable working  Protective sun cap  With a 1.5m cable and table clamp with cone holder is ideal for mobile working and can quickly and easily be moved from desk to desk  3 dioptre  125 mm  Table Clamp Mount  Fluorescent	2 units	45 calendar days
	Replacement Tube	22 Watt Round Fluorescent Energy Saving Tube	10 units	
	Test Block with Cord and Plug	Cord: 1.5 m, Plug Type: G BS1363, Max. Working Voltage 240 Vac 50/60 Hz, Max. Working Current: 13 A without cord 5 A with cord, Insulation Resistance: > 100 Mohm @ 500 Vdc, Withstand Voltage: 2000Vac for 2 min, Cable Entry: 4 to 7 mm, Max. Conductor Size: 2, Materials: G.P. phenolic/Polycarbonate	2 units	

ng Do	ocuments (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
		Accessory Type: Wall		
	Wall Bracket	Bracket, For Use With:	2 units	
		Clamp Fitting Lamp		
	Bench Bracket	Accessory Type: Bench Bracket, For Use With: All	2 units	
	Bench Bracket	Lamps	2 units	
		Accessory Type: Floor		
	Floor Stand	Stand, For Use With:	2 units	
	l loor Stand	Clamp Fitting Lamp	2 units	
		Weight: 10 kg, Accessory		
		Type: Heavy Duty Table		
		Base, For Use With: Twin		
	Table Base	Tube Lamp, Standard	2 units	
		Fluorescent Magnifier and		
		Rectangular Magnifying		
		Lamp		
	Soldering Stat	ion 230 VAC		
	FEATURES			
	LITTORES			
		Wireless Temperature		
		Lockout		
		Slim, Comfortable		
		handpiece to reduce		
		operator fatigue		
		Heater and sensor design		
		that allows for quick heat		
		up and recovery		
		Tip temperature offset capability, and temperature		
		lockout come as a standard		
		Auto shut off feature to		
		extend tip, iron and station		
		life		
		ESD safe to protect	2 units	45 calendar
		sensitive components		days
	POWER UNIT			
	Voltage	230 VAC (input) 24 V		
	Voltage	(output)		
	Temperature Range			
	Footprint	165 x 114 x 102 cm		
	Weight	1.78 kg		
	Temperature Accuracy	5 deg C		
	Temperature Stability	6 deg C		
	Temperature Stability ESD Safe			

	Heating Element Type			
	Iron Cord Length			
	Supplied Tip			
	Iron Stand	PH50		
	Bench Top Po			
	Warranty	at least 3 Years		
9.		Three Independent Output: 30V/3A x 2 Variable, (2.5V/3.3V/5V)/3A (Fixed) 4 LED Display Sets: 3 Digits after Decimal Point Minimum Resolution: 1 mV/1 mA Digital Panel Control: Rotary Encoder Switch, Rubber Key with Indicator User Friendly Operation: Coarse/Fine Control 4 sets Save/Recall Key-Lock Warning Buzzer Output On/Off Tracking Series and Parallel Mode Smart Cooling Fan Achieving Low Noise Compact Design	1 unit	45 calendar days
	OUTPUTS			
	Voltage 1	0 to 30 V		
	Current 1	0 to 3.0 A		
	Voltage 2	0 to 30 V		
	Current 2	0 to 3.0 A		
	Voltage 3	2.5/3.3/5.0 V Selectable		
	Current 3	3.0 A Fixed		
	VOLTAGE REGULATION			
	Load	= 5 mV</td <td></td> <td></td>		
	Line	= 15 Mv</td <td></td> <td></td>		
			-	•

ocuments (Based on Revised IRR of RA 918	4, Fourth Edition, December 2010)		
CURRENT REGULATION			
Load	= 0.02 %+3mA</td <td></td> <td></td>		
Line	= 0.02 %+3mA</td <td></td> <td></td>		
RIPPLE			
Voltage (mVrms)	≤2mV		
Current (mArms)	≤3mA		
RESOLUTION			
Voltage	1mV		
Current	1mA		
PROGRAM ACCURACY			
Voltage	±0.03% rdg + 10 digits		
Current	±0.3% rdg + 10 digits		
READBACK ACCURACY			
Voltage	±0.03% rdg + 10 digits		
Current	±0.3% rdg + 10 digits		
DISPLAY			
Voltage	4 3/4 digits 0.4in LED		
Current	3 3/4 digits 0.4in LED		
Weight	7 kg		
Dimensions	W 210 x H 130 x D 265mm		
Supply Voltage	110 / 230V ±10% 50 /		
	60Hz		
230 VAC Solder Fur	ne Extractor		
Supply Voltage	230 Vac 50-60 Hz		
Power Consumption	22 W		
	"1.0 m/min vertically		
Air Flow (with Filter)	mounted 0.4 m/min horizontally	2 units	45 calendar
	mounted"	2 units	days
	"1.0 m/s vertically		
Air velocity (with filter)	mounted		
	2.6 m/s horizontally mounted"		
Dimensions (W x H x D)	166 x 212 x 113 mm		
Weight (excl. pwr. cord)	930 gm		

	INCLUDED ACCESSORIES	, , ,		
	Filter		2 units	
	Instruction Manual		2 units	
	Power Cord		2 units	
	Antistatic Table Ton P	ack Kit 16 Rins	2 411165	
11.	FEATURES  STANDARDS  Dimensions (HxWxD mm)	Convenient conductive table top bin rack  Ideal for kitting ESD sensitive components  Complete with 1 Mohm grounding wire  Surface Resistivity  <106Ω/sq  Supports ESD S20.20 and EN 61340-5-1 ESD control programme compliance	1 unit	45 calendar days
	Tool and Wrist Strap ESD			
12.	FEATURES	satellite modules Control unit can be mounted at eye level, where it will not impede worksurface area Control unit LEDs indicate proper grounding of 2 mats/2 operators and continuously display grounding status The satellite (remote) monitors include monitored single wire wrist strap	2 units	45 calendar days

ESSENTIALS			
Power Cord			
Connector A	C13		
Connector B	UK Plug		
Length	2m		
Current Rating	10:00 AM	2 units	45 calendar
Sheath Colour	Black	2 units	days
Voltage Rating	250 V		
Connector B Type	BS 1363		
Connector A Type	IEC		
Connector A Gender	Female		
Connector B Gender	Connector B Gender		

# SECTION VII TECHNICAL SPECIFICATIONS

Item No.	Specific	ations	QTY.	STATEMENT OF COMPLIANCE Comply/Not Comply
	Combined Frequency Coun with AM/FM			
	Frequency Range	0.5 Hz to 5 MHz		
	Amplitude	> 10 Vpp (into 50 ohm load)		
	Impedance	50 ohm +/- 10%		
	Attenuator	-20dB +/- 1 dB		
	dc Offset	< -5V ~ > 5V (charge 50 ohm)		
	Duty Cycle	80%:20%:80% to 1 MHz continuously variable		
	SINE WAVE			
	Distortion	= 1%, 0.5 Hz ~ 100kHz,<br THD = 30dB fundamental<br in all ranges		
	Flatness	>/= 0.3 dB below 500 kHz: >/= 1 dB below 5 MHz		
1.	TRIANGLE WAVE		2 units	
	Linearity	>/= 95 %		
	Symmetry	+/=-2 % 1 Hz to 100 KHz		
	Rise/Fall Time (into 50 ohm load)	= 50 ns at maximum output</td <td></td> <td></td>		
	CMOS OUTPUT			
		4 Vpp +/- 1 Vpp to 14.5 Vpp +/- 0.5 Vpp : = 120 ns</td <td></td> <td></td>		
	TTL OUTPUT			
	Level (Rise/Fall Time)	>/= 3 Vpp : 20 TTL Load Fan Out (>/= 25 ns)		
	SWEEP OPERATION			
	Sweep Rate (Time)	100:1 max (0.5-30s) adj.		
	AM MODULATION			
	Depth	0 to 100 %		
	Mod. Frequency	400 Hz (INT); dc to 1 MHz (EXT)		
	Carrier BW	100 Hz to 5 MHz ( -3 dB)		

	FM MODULATION			
	Deviation	0 to +/- 5%		
	Mod. Frequency	400 Hz (INT); dc to 20 kHz (EXT)		
	FREQUENCY COUNTER			
	Range	0.5 Hz to 5 MHz (INT) 5 Hz to 150 MHz (EXT)		
	Accuracy	Timebase +/-1 count		
	Warranty	at least 3 Years		
	Mixed Signal Oscilloscope, 20	0 MHz, Essentials Included		
	Bandwidth	200 MHz		
	Number of Analogue Channels	/1.		
	Number of Digital Channels	16		
	Record Length	1M points/ch		
	Sample Rate Random	1G samples/s		
	USB interface	Yes		
	Vertical Resolution	1 (Digital) bit, 8 (Analogue) bit		
	Minimum Time Base	2 ns/div		
	Maximum Time Base	100 s/div		
	Minimum Vertical Sensitivity	2 mV/div		
	Maximum Vertical Sensitivity	5 V/div		
2.	Safety Category Voltage	300V	1 unit	
	Minimum Operating Temperature	0 deg C		
	Safety Category Level	CAT II		
	Dimensions			
	Maximum Operating Temperature	+ 50 deg C		
	Length	377mm		
	Display Type	Colour		
	Screen Size	7 in		
	Width	134 mm		
	Input Capacitance	11.5 pF		
	Power Source	Mains		
	Height	180 mm		
	Safety Category	CAT II 300V		
	Rise Time	2.1 ns		

				T
	Weight	3.6 kg		
	Input Impedance	1 (Analogue) Mohm, 101 (Digital) kohm		
	ESSEN'			
	Oscilloscope Probe	Probe Type: Pasive Voltage, Attenuation: 10x, Bandwidth: 500 MHz, Connector Type: BNC, Safety Category: CAT II 300V	1 unit	
	Digital HandHold	Multimatan Vit		
	Temperature (excluding probe) Resistance	50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 50.000 V, 500.00 V, 1000.0 V; Accuracy: 0.025 %. 0.4 % (true-rms) 500.00 uA, 500.00 mA, 400.00 mA, 5.000 A, 10.000 A; Accuracy: 0.15 %, 0.7 % (true-rms) -200 deg C to 1090 deg C; Accuracy: 1 % 500.00 ohm, 5.000 kohm, 50.000 kohm, 50.000 Mohm, 50.000 kohm, 50.000 Mohm, 50.000		
3.	Capacitance	nF, 1.000 μF, 10.00 μF, 100.0 μF, 1000 μF, 10.00 mF, 100 mF; Accuracy: 1.0 %	1 unit	
	requests	9.9999 kHz, 99.999 kHz, 999.99 kHz; Accuracy: 0.005 %		
	Multiple On screen Displays	Yes		
	True RMS AC Bandwidth	100 kHz		
	dBV/dBm	Yes		
	DC mV Resolution	1 uV		
	Megohm Range	up to 500 M		
	Conductance	50.00 nS		
	Continuity Beeper	Yes		
	1			i

Battery/Fuse Access	Battery/Fuse		
Elapse Time Clock	Yes		
Time of Day Clock	Yes		
Min-Max-Avg	Yes		
Peak	250 uS		
Duty Cycle	0.01 % to 99.99 %		
Pulse Width	0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms		
Hold	Yes		
Isolated Optical Interface	Yes		
Auto/Touch Hold	Yes		
Reading Memory	Yes		
Log to PC	Yes		
Interval/Event Logging	Yes		
Logging Memory	up to 10,000 readings		
Maximum Voltage between	1000V		
any Terminal and Earth			
Ground			
Battery Type		1 unit	
Battery Life			
Butterly Effe	Hours in Logging Mode		
Operating Temperature			
Storage Temperature			
Relative Humidity	0 to 90 % (0 to 37 deg C), 0		
Relative Humany	to 65 % (37 deg C to 45		
	deg C), 0 to 45 % (45 deg		
	C to 55 deg C)		
Electromagnetic			
Compatibility			
	Random vibration per MIL-		
, 101411011	PRF-28800F Class 2		
Shock	1 meter drop per		
	IEC/EN61010-1 2nd		
	Edition		
Size (HxWxL)	22.2 cm x 10.2 cm x 6 cm		
Weight	870.9 g		
INCLUDED ACCESSORIES	-		
Alligator Clips	CAT II 300 V 5 A (Red, Black)		
Test Probes	CAT III 1000V 10 A (Red,		
	Black)		

Test Lead	s CAT III 1000V 10 A (Red, Black)		
CD-ron	Software for storing		
	documents and analyzing		
	readings or a series of		
	measurements		
USB Interface Cabl	e Opto Isolated		
Thermocouple Probe and Adapto	or 80BK-A		
Softcas	e for meter protection and		
	accessory storage		
Batterie	6 AA (Non-rechargeable)		
ECCEN	TTIAIC		
ESSEN			
	Current: 440mA, Voltage:	_	
Replacement Multimeter	1000V, Breaking Capacity:	1 unit	
Fuse	10kA, Material: HBC		
	Ceramic, Dimensions: 10.3		
	(Dia.) x 35 mm		
	DC Current Range: 1-400		
	Adc, DC Accuracy: +/- 3.5		
	%, AC Current Range: 1-		
	400 AC rms, AC Accuracy:		
	+/- 3.5 %, Crest Factor: 3		
	@ 400 A, 6 @ 200 A, AC		
Current Clamp Adapter	Frequency Response: 3	1 unit	
	kHz, Output Signal:		
	1mV/A, Safety: IEC 1010,		
	CAT III 600V, Load		
	Impedance: 1Mohm/100		
	pF, Battery Life: 60 Hours		
	Typical  Multifunctional dealston		
	Multifunctional desktop		
	charger for both NiCD and		
	NiMH cells		
	Charges 1-6 AA, AAA,		
	and/or 1-4 C, D cells		
	and/or 1-2 9V Blocks		
	Microprocessor		
	controlled charging,	1	
Data a Chara	utilising delta peak	1 unit	
Battery Charger	techniques		
	Faulty cell detection		
	Pre charge function		
	Individual supervision of		
İ	_		
	each inserted cell		
	each inserted cell Safety Timer		

_	1			T
		Cell Temperature		
		Detection		
		Reverse Connection		
		Protection		
		Auto-Diagnostic of the		
		inserted cell with automatic start of precharging and/or		
		refreshing process, if		
		required tired cells will be		
		activated		
		3 Colour cell charge		
		status indicators		
		Input: 100-240 VAC		
		50/60 Hz		
		Dimensions: L 191 x W		
		172 x H 57 mm		
		AAA: 550-1100 mAh, 400		
	Replacement Battery (Pack	mA, 1.65 - 3.3 hrs		
	of 4)	AA: 1300-2850 mAh,		
		1000 mA, 1.5 - 3.5 hrs		
		C: 1500-5000 mAh, 1000		
		mA, 1.8 - 6 hrs		
		D: 1800-10000 mAh,		
		1000 mA, 2.2 - 12 hrs		
		9V: 120-250 mAh, 60 mA,		
		2.5 - 5 hrs		
		Capacity: 2500 mAh,		1
		Terminal Type: Standard,		
		Chemistry: NiMH, Size:		
		AA, Nominal Voltage:		
		1.2V, Maximum	0 1	
		Continuous Current: 5000	2 units	
		mA, Dimensions: 50.5 x		
		14.5 mm, Operating		
		Temperature Range: '-20 to		
		65 degC		
	SMD Rewor	rk Station		
		Self contained air supply		
		Airflow 100L/min (free		
		flowing)		
		Slim handpiece with		
		control buttons for		
4.	DE A MILIDE C	Start/Stop function	1 unit	
	FEATURES	Automatic safety cool		
		down		
		5 programmable pre-sets		
		for temperature and airflow		
		Temperature range 50 ~		
		600 deg C		
	1	<i>U</i> -		I

Auto power off Quick change nozzle adapter  Voltage 240 Vac Power Consumption 1300W  Air Flow S-50 L/min (with 4mm nozzle) Weight 1.3 kg Outer Dimensions (W x H x 160 x 145 x 220 mm D) INCLUDED ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to cheek optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485 Weight 2.1kg	i			1	
Quick change nozzle adapter			Digital display		
Voltage   240 Vac			4		
Power Consumption   1300W			Quick change nozzle		
Power Consumption  Air Flow  Air Flow  S-50 L/min (with 4mm nozzle)  Weight  1.3 kg  Outer Dimensions (W x H x 160 x 145 x 220 mm D)  INCLUDED  ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485			adapter		
Air Flow 5–50 L/min (with 4mm nozzle)  Weight 1.3 kg  Outer Dimensions (W x H x D)  INCLUDED Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Voltage	240 Vac		
Neight 1.3 kg  Outer Dimensions (W x H x D)  INCLUDED Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Power Consumption	1300W		
Weight Outer Dimensions (W x H x D)  NCLUDED ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Air Flow	5~50 L/min (with 4mm		
Outer Dimensions (W x H x D)  INCLUDED  ACCESSORIES  Double-Sided UV Exposure Unit, Essentials Included (Standard)  Double-Sided UV Exposure Unit, Essentials Included (Standard)  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit (Exposure area over 10 in x 12 in (Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage (UV tubes are masked off to ensure true and even usable exposure area (Electronic timer with touch membrane control)  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			nozzle )		
INCLUDED ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485		Weight	1.3 kg		
INCLUDED ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485		Outer Dimensions (W x H x	160 x 145 x 220 mm		
ACCESSORIES  cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		· ·			
Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  1 UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		INCLUDED	Handpiece holder, Power		
Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		ACCESSORIES	cord, Heat resistant pad,		
Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485			pick up wire, 4mm Nozzle		
Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485			(standard)		
Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485		Double-Sided UV Exposure	Unit, Essentials Included		
double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit    Exposure area over 10 in x 12 in			•		
problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			-		
registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  1. UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			to avoid the difficult		
exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			problem of artwork		
Series and some state of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485			registration with 2 separate		
Exposure area over 10 in x  12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			exposures on a single sided		
The state of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  FEATURES  12 in  Quality construction in steel box with glass covering base tubes and mylar film covering base tubes and mylar film covering base tubes and mylar film covering table to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485					
Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			•		
FEATURES  covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		EE ATUDEC			
operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		FEATURES	9		
or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			=		
ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485	5.			1 unit	
exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485	.				
Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			-		
Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			Vacuum pump and vacuum		
gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			bleed operated separate of		
optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			· · · · · · · · · · · · · · · · · · ·		
achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			_		
Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			=		
bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
Dimensions (mm) H.170 x W.550 x D.485					
			_		
Weight 2.1kg		Dimensions (mm)	H.170 x W.550 x D.485		
		Weight	2.1kg		

	Exposure Area (mm)	355 x 260 (vacuum pip protrudes 25mm into top left of exp.area)	
	Timer	0 to 999 seconds	
	Tubes	8 x 18 in (15W each)	
	Operating Voltage	240Vac 50/60 Hz	
	Туре	Double Sided	
	ESSENT	TIALS	
	Replacement UV Tube and Starter Kit	Wattage: 15W, No.of Tubes: 2, No. of Starters: 2	4 units
	Bench Top Zero Volt Ionis	er, Essentials Included	
		Steady state DC ionisation and patented Sense Feedback Balancing Compact Size	
		Rapid access maintenance	
		Automatic balancing of ionisation system	
	FEATURES	Equipped with audible and visual indicators for "Balance" and	
		"Maintenance Required"  Data acquisition ready	1 unit
		Low offset voltage	
		Balance +/-5 voltage offset, field programmable	
•	Туре		
-	Number of Fans	1	
	Supply Voltage	220V ac	
ļ	Depth	7.9 cm	
	Heigth	24.1 cm	
	Width	15.2 cm	
1	ESSENTIALS		
	Mounting Arm	compatible with supplied Bench Top Zero Volt Ioniser	1 unit
F	Power Cable Assembly	2.5 m Black, Type F Schuko Plug 10A, IEC C13, 250V	1 unit

	Bench Magnifier, Es	sentials Included		
	_	A round glass lens, daylight lamp with flexible joints and a quick positioning handle. Allows the user to quickly push the magnifier out of the way or pull the magnifier closer to the workpiece for detailed working  Energy saving 22W bulb and		
7.	FEATURES	electronic ballast for longer life and reduced costs  Low heat emission bulb and shadow free lighting for clear and confortable working  Protective sun cap		
		With a 1.5m cable and table clamp with cone holder is ideal for mobile working and can quickly and easily be moved from desk to desk  3 dioptre	2 units	
	Lens Size	-		
	Magnifier Type			
	Lamp Type	Fluorescent		
	Lamp Wattage	22 W		
	Operating Voltage	220 Vac ~ 240 Vac		
	ESSENTIALS			
	Replacement Tube	22 Watt Round Fluorescent Energy Saving Tube	10 units	
	Test Block with Cord and Plug	Cord: 1.5 m, Plug Type: G BS1363, Max. Working Voltage 240 Vac 50/60 Hz, Max. Working Current: 13 A without cord 5 A with cord, Insulation Resistance: > 100 Mohm @ 500 Vdc, Withstand Voltage: 2000Vac for 2 min, Cable Entry: 4 to 7 mm, Max. Conductor Size: 2, Materials: G.P. phenolic/Polycarbonate	2 units	

		Accessory Type: Wall	2 units	
	Wall Bracket	Bracket, For Use With:		
		Clamp Fitting Lamp		
	Bench Bracket	Accessory Type: Bench	2 units	
		Bracket, For Use With: All		
		Lamps		
	Floor Stand	Accessory Type: Floor	2 units	
		Stand, For Use With:		
		*		
		Clamp Fitting Lamp		
	Table Base	Weight: 10 kg, Accessory	2 units	
		Type: Heavy Duty Table		
		Base, For Use With: Twin		
		Tube Lamp, Standard		
		Fluorescent Magnifier and		
		Rectangular Magnifying		
		Lamp		
	Soldering Stat			
	Soluel ing Stat	IIII 230 VAC		
		Wireless Temperature		
	FEATURES	Lockout		
		Slim, Comfortable		
		handpiece to reduce		
8.		operator fatigue		
		Heater and sensor design		
		that allows for quick heat		
		up and recovery		
		Tip temperature offset		
		capability, and temperature		
		lockout come as a standard		
		Auto shut off feature to		
		extend tip, iron and station		
		life		
		ESD safe to protect		
		sensitive components		
	POWER UNIT	sensitive components		
	Voltage			
		(output)		
	Temperature Range	177 deg C to 454 deg C		
	Footprint			
	Weight	1.78 kg		
	Temperature Accuracy	ŭ		
	Temperature Stability	-		
	ESD Safe	Yes		
	PENCIL			
	Power Consumption	50 W		
	Power Consumption	50 W		

	Heating Element Type	Nichrome Wound		
	Iron Cord Length	1.22 m		
	Supplied Tip	ETA		
	Iron Stand	PH50		
	Bench Top Po	ower Supply		
	Warranty	at least 3 Years		
9.	FEATURES	Three Independent Output: 30V/3A x 2 Variable, (2.5V/3.3V/5V)/3A (Fixed) 4 LED Display Sets: 3 Digits after Decimal Point Minimum Resolution: 1 mV/1 mA Digital Panel Control: Rotary Encoder Switch, Rubber Key with Indicator User Friendly Operation: Coarse/Fine Control 4 sets Save/Recall Key-Lock Warning Buzzer Output On/Off Tracking Series and Parallel Mode Smart Cooling Fan Achieving Low Noise Compact Design	1 unit	
	OUTPUTS			
	Voltage 1	0 to 30 V		
	Current 1	0 to 3.0 A		
	Voltage 2	0 to 30 V		
	Current 2	0 to 3.0 A		
	Voltage 3	2.5/3.3/5.0 V Selectable		
	Current 3	3.0 A Fixed		
	VOLTAGE REGULATION			
	Load	= 5 mV</td <td></td> <td></td>		
	Line	= 15 Mv</td <td></td> <td></td>		

	CURRENT REGULATION			
	Load	= 0.02 %+3mA</td <td></td> <td></td>		
	Line	= 0.02 %+3mA</td <td></td> <td></td>		
	RIPPLE			
	Voltage (mVrms)	≤2mV		
	Current (mArms)	≤3mA		
	RESOLUTION			
	Voltage	1mV		
	Current	1mA		
	PROGRAM ACCURACY			
	Voltage	±0.03% rdg + 10 digits		
	Current	±0.3% rdg + 10 digits		
	READBACK ACCURACY			
	Voltage	±0.03% rdg + 10 digits		
	Current	±0.3% rdg + 10 digits		
	DISPLAY			
	Voltage	4 3/4 digits 0.4in LED		
	Current	3 3/4 digits 0.4in LED		
	Weight	7 kg		
	Dimensions	W 210 x H 130 x D 265mm		
		110 / 230V ±10% 50 / 60Hz		
	230 VAC Solder F	ume Extractor		
	Supply Voltage	230 Vac 50-60 Hz		
	Power Consumption	22 W		
	Air Flow (with Filter)	"1.0 m/min vertically mounted 0.4 m/min horizontally		
•		mounted" "1.0 m/s vertically	2 units	
	Air velocity (with filter)	mounted  2.6 m/s horizontally  mounted"		
	Dimensions (W x H x D)			
	Weight (excl. pwr. cord)	930 gm		

Filter Instruction Manual Power Cord	2 units 2 units
	2 units
Power Cord	
	2 units
Antistatic Table Top Rack Kit, 16 Bins	
FEATURES  Convenient conductive table top bin rack  Ideal for kitting ESD sensitive components  Complete with 1 Mohm grounding wire  Surface Resistivity  <106Ω/sq  Supports ESD S20.20 and EN 61340-5-1 ESD control programme compliance  Dimensions (HxWxD mm)  STANDARDS  Dimensions (HxWxD mm)  Convenient conductive table top bin rack  Ideal for kitting ESD  Sensitive components  Complete with 1 Mohm grounding wire  Surface Resistivity  <106Ω/sq  Supports ESD S20.20 and EN 61340-5-1 ESD control programme compliance	1 unit
System comprises continuous monitor with 2 satellite modules  Control unit can be mounted at eye level, where it will not impede worksurface area  Control unit LEDs indicate proper grounding of 2 mats/2 operators and continuously display grounding status  The satellite (remote) monitors include monitored single wire wrist strap ground, parking stud and unmonitored ground for guest or equipment  The versatile design allows placement where desired up to 2.1m from the control unit - red LED will illuminate but audio alarm not sound when wrist strap coil cord is snapped on parking stud  Uses reliable wave	2 units

ESSENTIALS		
Power Cord		
Connector A	C13	
Connector B	UK Plug	
Length	2m	
Current Rating	10:00 AM	2 units
Sheath Colour	Black	2 units
Voltage Rating	250 V	
Connector B Type	BS 1363	
Connector A Type	IEC	
Connector A Gender	Female	
Connector B Gender	Connector B Gender	

# SECTION VIII BIDDING FORMS

### **List of Forms**

Form No.	Title
BatStateU Goods Form No. 1	Bid Form
BatStateU Goods Form No. 2	List of On-going Government and Private
	Contracts including Contracts Awarded but not
	yet started
BatStateU Goods Form No. 3	Statement of all Government and Private
	completed contracts which are similar in nature
BatStateU Goods Form No. 4	Net Financial Contracting Capacity
BatStateU Goods Form No. 5a	Bank Guarantee
BatStateU Goods Form No. 5b	Surety Bond
BatStateU Goods Form No. 5c	Bid Securing Declaration
BatStateU Goods Form No. 6	Conformity with Technical Specifications and
	Schedule of Requirements
BatStateU Goods Form No. 7	Omnibus Sworn Statement
BatStateU Goods Form No. 8	Request for Clarification
BatStateU Goods Form No. 9	Bill of Quantities

### **BID FORM**

		В	ID FURM		
				Date:	
То:	ATTY. EDGARD I BAC Chairman Batangas State Ur Batangas City				
Gentle	emen and / or Ladie	s:			
perfor	ot of which is he m][description of th	reby duly acknowledg ne Goods] in conformity	e, we, the u with the said	id Bulletin Numbers [insert nundersigned, offer to [supply ] Bidding Documents for the sunderewith and made part of this Bid	/ <i>deliver /</i> n as may be
specif	We undertake, if ied in the Schedule		eliver the goo	ds in accordance with the delive	ery schedule
withii		pted, we undertake to p in the Bidding Documen		ormance security in the form, a	nounts, and
and it				ed in the <u>BDS</u> provision for <b>ITB</b> me before the expiration of that p	
contra		gratuities, if any, paid or re awarded the contract,		to us to agents relating to this w:	Bid, and to
Name Addre	and ess of agent	Amount an Currency	nd	Purpose of Commission or Gratuity	
(if no	ne, state "None")				
there		ntract is prepared and exo f Award, shall be binding		l, together with your writtenacce	ptance
	We understand th	aat you are not bound to a	accept the low	est or any bid you mayreceive.	
Biddi	We certify / confing Documents.	irm that we comply wit	h the eligibilit	y requirements as per <b>ITB</b> Clau	ıse 5 of the
Dated	thisda	ay of, 2015			
[Signa	ature]		[in the co	pacity of]	
Duly a	authorized to sign B	d for and on behalf of			

### List of all Ongoing Government & Private Contracts including contracts awarded but not yet started

Business Name : Business Address :									
Name of Contract/	a. Owner's Name		Bidder's Role		a.	Date Awarded	% of Accomplishment		Value of Outstanding
Project Cost		Nature of Work	Description	%		Date Started Date of Completion	Planned	Actual	Works / Undelivered Portion
Government									
<u>Private</u>									
Note: This statement shall be suppor	ted with:						Total Cost		
1 Notice of Award and for Contract	<u> </u>						•		

- 1 Notice of Award and/or Contract
- 2 Notice to Proceed issued by the owner
- 3 Certificate of Accomplishments signed by the owner or authorized representative

Submitted by	:	
,	(Printed Name & Signature)	
Designation	<b>:</b>	
Date	:	

### Statement of all Government & Private Contracts completed which are similar in nature

Business Address :		-				
Name of Contract	a. Owner's Name		Bidder's Role		a. Amount at Award	a. Date Awarded
7.4 07. 07.11.11.11	b. Address c. Telephone Nos.	Nature of Work	Description	%	b. Amount at Completion	b. Contract Effectivity
Government						
<u>Private</u>						
Note: This statement shall be supported	ed with:					
1 Contract						

- 2 Certificate of Completion
- 3 Certificate of Acceptance

Submitted by	:	
•	(Printed Name & Signature)	
Designation	:	
Date	:	

### NET FINANCIAL CONTRACTING CAPACITY

A. Summary of the Applicant Supplier's/Distributor's/Manufacturer's assets and liabilities on the basis of the attached income tax return and audited financial statement, stamped "RECEIVED" by the Bureau of Internal Revenue or BIR authorized collecting agent, for the immediately preceding year and a certified copy of Schedule of Fixed Assets particularly the list of construction equipment.

		Year 20
1.	Total Assets	
2.	Current Assets	
3.	Total Liabilities	
4.	Current Liabilities	
5.	Net Worth (1-3)	
6.	Net Working Capital (2-4)	

B.	The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

NFCC = K (current asset – current liabilities) minus value of all outstanding works under ongoing contracts including awarded contracts yet to be started
NFCC = P
K = 10 for a contract duration of one year or less, 15 for more than one year up to two years and 20 for more than two years
Herewith attached are certified true copies of the income tax return and audited financial statement stamped "RECEIVED" by the BIR or BIR authorized collecting agent for the immediately preceding year.
Submitted by:
Name of Supplier / Distributor / Manufacturer
Signature of Authorized Representative Date :

NOTE:

1. If Partnership or Joint Venture, each Partner or Member Firm of Joint Venture shall submit the above requirements.

## BID SECURITY (BANK GUARANTEE)

WHEREAS, <u>(Name of Bidder)</u> (hereinafter called "the Bidder") has submitted his bid dated <u>(Date)</u> for the <u>(Name of Contract)</u> (hereinafter called "the Bid").
KNOW ALL MEN by these presents that We <u>(Name of Bank)</u> of <u>(Name of Country)</u> having our registered office at (hereinafter called "the Bank" are bound unto <u>(Name of Employer)</u> (hereinafter called "the Employer") in the sum of <sup>2</sup> for which payment well and truly to be made to the said Employer the Bank binds himself, his successors and assigns by these presents.
SEALED with the Common Seal of the said Bank this day of 20
THE CONDITIONS of this obligation are:
1) If the Bidder withdraws his Bid during the period of bid validity specified in the Form of Bid; or
2) If the Bidder does not accept the correction of arithmetical errors of his bid price in accordance with the Instructions to Bidder; or
3) If the Bidder having been notified of the acceptance of his bid by the Employer during the period of bid validity:
<ul> <li>fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or</li> </ul>
b) fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;
we undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owning to the occurrence of one or both of the two (2) conditions, specifying the occurred condition or conditions.
The Guarantee will remain in force up to and including the date3 days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.
DATESIGNATURE OF THE BANK
WITNESS SEAL
(Signature, Name and Address)

 $<sup>^2</sup>$  The bidder should insert the amount of the guarantee in words and figures, denominated in the currency of the Employer's country or an equivalent amount in a freely convertible currency. This figure should be the same as shown of the Instructions to Bidders.

<sup>&</sup>lt;sup>3</sup> Úsually 28 days after the end of the validity period of the Bid. Date should be inserted by the Employer before the bidding documents are issued.

# BID SECURITY SURETY BOND

BOND NO.: _		DATE BOND EXECUTED:
(Name of Subusiness in the are held and Obligee, in the made, we, the	Surety) the cou firmly ne sum e said	
SEALED with	our se	als and dated this day of 20
		cipal has submitted a written Bid to the Employer dated the day of for the (hereinafter called "the Bid").
NOW, THERI	EFORE,	the conditions of this obligation are:
1)		Principal withdraws his Bid during the period of bid validity specified in the of Bid; or
2)		Principal does not accept the correction of arithmetical errors of his bid in accordance with the Instruction's to Bidders: or
3)		Principal having been notified of the acceptance of his Bid by the Employer g the period of bid validity:
	a)	fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or
	b)	fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;
then this ohl	igation	shall remain in full force and effect, otherwise it shall be null and void.

 $<sup>^{1}</sup>$  The bidder should insert the amount of bond in words and figures, denominated in the currency of the Employer's country of an equivalent amount in a freely convertible currency and callable on demand. This figure should be the same as shown in the Instructions to Bidders.

### PROVIDED HOWEVER, that the Surety shall not be:

- a) liable for a greater sum than the specified penalty of this bond, nor
- b) liable for a greater sum that the difference between the amount of the said Principal's Bid and the amount of the Bid that is accepted by the Employer.

This Surety executing this instrument hereby agrees that its obligation shall be valid for 120 calendar days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived.

PRINCIPAL	SURETY
SIGNATURE(S)	SIGNATURES(S)
NAME(S) AND TITLE(S)	NAME(S)
SFAI.	SFAI.

\_\_\_\_, at \_\_\_\_\_

		C OF THE PHILIPPINES)
		BID-SECURING DECLARATION Invitation to Bid No[insert reference number]
Го:		TANGAS STATE UNIVERSITY ZAL AVENUE, BATANGAS CITY
/ We	, the	undersigned, declare that:
1.		we understand that, according to your conditions, bids must be supported by a Bid curity, which may be in the form of a Bid-Securing Declaration.
2.	wit Ord on	We accept that: (a) I / we will be automatically disqualified from bidding for any contract th any procuring entity for the period of two (2) years upon receipt of your Blacklisting der; and (b) I / we will pay the applicable fine provided under Section 6 of the Guidelines the Use of Bid Securing Declaration, if I / we have committed any of the following tions:
	i)	Withdrawn my / our Bid during the period of bid validity required in the Bidding documents; or
	ii)	Fail or refuse to accept the award and enter into contract or perform any and all acts necessary to the execution of the contract, in accordance with the Bidding Documents after having been notified of your acceptance of our Bid during the period of bid validity.
3.	•	we understand that this Bid-Securing Declaration shall cease to be valid on the following cumstances:
		a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
		b) I am / we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I / we failed to timely file a request for reconsideration or (ii) I / we filed a waiver to avail of said right;
		c) I am / we are declared as the bidder with the Lowest Calculated and Responsive Bid / Highest Rated and Responsive Bid, and I / we have furnished the performance security and signed the Contract.
	IN	WITNESS WHEREOF, I / we have hereunto set my / our hand/s this day of

<u>Name of Bidder</u> <u>Authorized Representative</u> <u>Legal Capacity</u> Affiant

Batangas State University	
Bidding Documents (Based on Revised IRR of RA 9184, Fourth Edition, December 2010)	

BatStateU-Goods Form No.  $\underline{5c}$ 

SUBSCRIBED AND SWORN to before	me this day of at
, Philippines. Affiant /s is / a	are personally known to me and was / were
identified by me through competent evidence of ide	entity as defined in the 2004 Rules on Notarial
Practice (A.M.) No. 02-8-13-SC). Affiant/s exhibite	5
identification card used, with his / her photograph	, , , , , , ,
and his / her Community Tax Certificate No.	9 11 9
Witness my hand and seal this day of _	
withess my hand and sear this day of _	·
	NAME OF NOTARIAL PUBLIC
	Serial No. of Commission
	Notary Public for until
	Roll of Attorney's No
	PTR No, [date issued], [place issued]
	IBP No, [date issued], [place issued]
Doc. No	
Page No	
Book No	
<del></del>	
Series of	

### **CONFORMITY WITH SCHEDULE OF REQUIREMENTS**

Item No.	Section VI-Schedule	e of Requirements	QTY.	REMARKS  Comply/Not Comply
	Combined Frequency Coun with AM/FM			
	Frequency Range	0.5 Hz to 5 MHz		
	Amplitude	> 10 Vpp (into 50 ohm load)		
	Impedance	50 ohm +/- 10%		
	Attenuator	-20dB +/- 1 dB		
	dc Offset	onmj		
	Duty Cycle	80%:20%:80% to 1 MHz continuously variable		
	SINE WAVE			
	Distortion	$, 0.5 Hz \sim 100kHz, THD dB fundamental in all ranges$		
1.	Flatness	>/= 0.3 dB below 500 kHz: >/= 1 dB below 5 MHz	2 units	
	TRIANGLE WAVE			
	Linearity	>/= 95 %		
		+/=-2 % 1 Hz to 100 KHz		
	Rise/Fall Time (into 50 ohm	•		
	load) CMOS OUTPUT	output		
		4 Vpp +/- 1 Vpp to 14.5 Vpp +/- 0.5 Vpp : = 120 ns</td <td></td> <td></td>		
	TTL OUTPUT			
	Level (Rise/Fall Time)	>/= 3 Vpp : 20 TTL Load Fan Out (>/= 25 ns)		
	SWEEP OPERATION			
	Sweep Rate (Time)	100:1 max (0.5-30s) adj.		
	AM MODULATION			
	Depth	0 to 100 %		
	Mod. Frequency	400 Hz (INT); dc to 1 MHz (EXT)		
	Carrier BW	100 Hz to 5 MHz ( -3 dB)		

Deviation   O to +/- 5%   400 Hz (INT); dc to 20 kHz (EXT)		FM MODULATION	4, Podrui Edition, December 2010)		
FREQUENCY COUNTER  Range  Range  0.5 Hz to 5 MHz (INT) 5 Hz to 150 MHz (EXT)  Accuracy Timebase +/-1 count at least 3 Years  Mixed Signal Oscilloscope, 200 MHz, Essentials Included  Bandwidth Number of Analogue Channels Number of Digital Channels Number of Digital Channels  Record Length Sample Rate Random USB interface Vertical Resolution Minimum Time Base Vertical Resolution Minimum Vertical Sensitivity Maximum Vertical Sensitivity  Safety Category Voltage Minimum Operating Temperature Safety Category Level CAT II Dimensions Maximum Operating Temperature Length Display Type Colour Screen Size 7 in Width Number of Analogue Uthan Display Type Vertical Resolution Vertical Sensitivity Alaximum Vertical Sensitivity Safety Category Level CAT II Dimensions Maximum Operating Temperature Length Temperature Length 1377mm Display Type Colour Screen Size 7 in Width 134 mm Input Capacitance Power Source Mains Height 180 mm		Deviation	0 to +/- 5%		
Range Accuracy Timebase +/-1 count Warranty at least 3 Years  Mixed Signal Oscilloscope, 200 MHz, Essentials Included  Bandwidth Accuracy Bandwidth Anumber of Analogue Channels Number of Digital Channels Accord Length Sample Rate Random USB interface Vertical Resolution Minimum Time Base Accord Length Accuracy I (Digital) bit, 8 (Analogue) bit Analogue) bit Minimum Time Base Accuracy Accuracy Accuracy I (Digital) bit, 8 (Analogue) bit Analogue) bit Analogue Analogue) bit Analogue) bit Analogue) bit Analogue) bit Analog		Mod. Frequency			
Accuracy Timebase +/-1 count Warranty at least 3 Years  Mixed Signal Oscilloscope, 200 MHz, Essentials Included  Bandwidth 200 MHz  Number of Analogue Channels Number of Digital Channels Record Length 1M points/ch Sample Rate Random 1G samples/s USB interface Yes Vertical Resolution (Analogue) bit Minimum Time Base 2 ns/div Maximum Time Base 100 s/div Maximum Vertical Sensitivity Maximum Vertical Sensitivity Safety Category Voltage 300V Minimum Operating Temperature Safety Category Level CAT II Dimensions 377 x 134 x 180 mm Maximum Operating Temperature Length 377mm Display Type Colour Screen Size 7 in Width 134 mm Input Capacitance 11.5 pF Power Source Mains Height 180 mm		FREQUENCY COUNTER			
Mixed Signal Oscilloscope, 200 MHz, Essentials Included  Bandwidth 200 MHz Number of Analogue Channels Number of Digital Channels 16 Record Length 1M points/ch Sample Rate Random 1G samples/s USB interface Yes Vertical Resolution (Analogue) bit Minimum Time Base 2 ns/div Maximum Time Base 100 s/div Maximum Vertical Sensitivity Maximum Vertical Sensitivity Safety Category Voltage 300V Minimum Operating Temperature Safety Category Level CAT II Dimensions 377 x 134 x 180 mm Maximum Operating Temperature Length 377mm Display Type Colour Screen Size 7 in Width 134 mm Input Capacitance 11.5 pF Power Source Mains Height 180 mm		Range			
Bandwidth 200 MHz Number of Analogue Channels Number of Digital Channels Record Length 1M points/ch Sample Rate Random 1G samples/s USB interface Yes Vertical Resolution Minimum Time Base 2 ns/div Maximum Vertical Sensitivity Maximum Vertical Sensitivity Safety Category Voltage 300V Minimum Operating Temperature Safety Category Level CAT II Dimensions 377 x 134 x 180 mm Maximum Operating Temperature Colour Screen Size 7 in Width 134 mm Input Capacitance Height 180 mm		Accuracy	Timebase +/-1 count		
Bandwidth   200 MHz		-			
Number of Analogue Channels Number of Digital Channels Record Length Sample Rate Random USB interface Vertical Resolution Minimum Time Base Maximum Time Base Minimum Vertical Sensitivity Safety Category Voltage Minimum Operating Temperature Safety Category Level CAT II Dimensions Maximum Operating Temperature Length Display Type Screen Size Power Source Mains Mumber of Digital Channels 16 16 16 17 18 19 10 10 10 10 11 10 10 10 11 10 10 10 11 10 10					
Channels   Number of Digital Channels   16		Bandwidth	200 MHz		
Record Length 1M points/ch Sample Rate Random 1G samples/s USB interface Yes Vertical Resolution 1 (Digital) bit, 8 (Analogue) bit Minimum Time Base 2 ns/div Maximum Vertical Sensitivity Maximum Vertical Sensitivity Safety Category Voltage 300V Minimum Operating Temperature Safety Category Level CAT II Dimensions 377 x 134 x 180 mm Maximum Operating Temperature Length 377mm Display Type Colour Screen Size 7 in Width 134 mm Input Capacitance 11.5 pF Power Source Mains Height 180 mm		_	4		
Sample Rate Random  USB interface  Vertical Resolution  Minimum Time Base  Maximum Time Base  Maximum Vertical Sensitivity  Safety Category Voltage  Minimum Operating Temperature  Safety Category Level  Dimensions  Maximum Operating Temperature  Safety Category Level  Dimensions  Maximum Operating Temperature  Safety Category Level  Dimensions  Maximum Operating Temperature  Safety Category Level  Dimensions  And And Andrew  Length  Andrew  Andrew  Andrew  1 unit  1 unit  1 unit  1 unit		Number of Digital Channels	16		
USB interface Vertical Resolution Vertical Resolution  Minimum Time Base  Maximum Time Base  Maximum Vertical Sensitivity  Maximum Vertical Sensitivity  Safety Category Voltage  Minimum Operating Temperature  Safety Category Level  CAT II  Dimensions  Maximum Operating Temperature  Length Temperature  Length Temperature  Screen Size 7 in  Width 134 mm  Input Capacitance Height 180 mm		Record Length	1M points/ch		
Vertical Resolution  Minimum Time Base  2 ns/div  Maximum Time Base  100 s/div  Minimum Vertical Sensitivity  Maximum Vertical Sensitivity  Safety Category Voltage  Minimum Operating Temperature Safety Category Level CAT II  Dimensions Maximum Operating Temperature  Length Display Type Colour Screen Size 7 in Width Input Capacitance Height Winner Winner Winner Maximum Uperating Temperature  10 deg C  CAT II  Anner  10 deg C  CAT II  Anner  10 deg C  CAT II  Anner  11 deg C  11 deg		Sample Rate Random	1G samples/s		
Minimum Time Base 2 ns/div  Maximum Time Base 100 s/div  Minimum Vertical Sensitivity  Maximum Vertical Sensitivity  Safety Category Voltage 300V  Minimum Operating Temperature  Safety Category Level CAT II  Dimensions 377 x 134 x 180 mm  Maximum Operating Temperature  Length 377mm  Display Type Colour  Screen Size 7 in  Width 134 mm  Input Capacitance 11.5 pF  Power Source Mains  Height 180 mm		USB interface	Yes		
Maximum Time Base  Minimum Vertical Sensitivity  Maximum Vertical Sensitivity  Safety Category Voltage  Minimum Operating Temperature  Safety Category Level CAT II  Dimensions  Maximum Operating Temperature  Length Temperature  Length Temperature  Colour  Screen Size 7 in  Width Input Capacitance Power Source Mains Height Maximum Operating Temperature  11.5 pF  Power Source Mains  Height Midity  Maximum Operating Temperature  11.5 pF		Vertical Resolution			
Minimum Vertical Sensitivity  Maximum Vertical Sensitivity  Safety Category Voltage  Minimum Operating Temperature  Safety Category Level  Safety Category Level  CAT II  Dimensions  377 x 134 x 180 mm  Maximum Operating Temperature  Length 377mm  Display Type Colour  Screen Size 7 in  Width 134 mm  Input Capacitance Height 180 mm		Minimum Time Base	2 ns/div		
Sensitivity  Maximum Vertical Sensitivity  Safety Category Voltage  Minimum Operating Temperature  Safety Category Level  Dimensions  Maximum Operating Temperature  Length  Display Type  Colour  Screen Size  Tin  Width  Input Capacitance  Power Source  Mains  Height  Sensitivity  5 V/div  1 unit  1 unit  1 unit		Maximum Time Base	100 s/div		
Sensitivity Safety Category Voltage Minimum Operating Temperature Safety Category Level CAT II  Dimensions Maximum Operating Temperature  Dimensions Maximum Operating Temperature  Length 377 x 134 x 180 mm  Hoisplay Type Colour Screen Size 7 in Width 134 mm  Input Capacitance Mains Height 180 mm			2 mV/div		
Safety Category Voltage  Minimum Operating Temperature  Safety Category Level  CAT II  Dimensions  Maximum Operating Temperature  Length  Display Type  Colour  Screen Size  Vidth  Input Capacitance  Height  Minimum Operating Temperature  11.5 pF  Power Source  Mains  Height  Minimum Operating And	2.		5 V/div	1 unit	
Temperature  Safety Category Level  Dimensions  377 x 134 x 180 mm  Maximum Operating Temperature  + 50 deg C  Length  377mm  Display Type  Colour  Screen Size  7 in  Width  134 mm  Input Capacitance  Height  Height  180 mm		Safety Category Voltage	300V	T unit	
Dimensions 377 x 134 x 180 mm  Maximum Operating Temperature + 50 deg C  Length 377mm  Display Type Colour  Screen Size 7 in  Width 134 mm  Input Capacitance 11.5 pF  Power Source Mains  Height 180 mm			0 deg C		
Maximum Operating Temperature  Length 377mm  Display Type Colour  Screen Size 7 in  Width 134 mm  Input Capacitance 11.5 pF  Power Source Mains Height 180 mm		Safety Category Level	CAT II		
Temperature  Length 377mm  Display Type Colour  Screen Size 7 in  Width 134 mm  Input Capacitance 11.5 pF  Power Source Mains Height 180 mm		Dimensions	377 x 134 x 180 mm		
Display Type Colour  Screen Size 7 in  Width 134 mm  Input Capacitance 11.5 pF  Power Source Mains  Height 180 mm			+ 50 deg C		
Screen Size 7 in  Width 134 mm  Input Capacitance 11.5 pF  Power Source Mains  Height 180 mm		Length	377mm		
Width 134 mm  Input Capacitance 11.5 pF  Power Source Mains  Height 180 mm		Display Type	Colour		
Input Capacitance 11.5 pF  Power Source Mains  Height 180 mm		Screen Size	7 in		
Power Source Mains Height 180 mm		Width	134 mm		
Height 180 mm		Input Capacitance	11.5 pF		
		Power Source	Mains		
Safety Category CAT II 300V		Height	180 mm		
۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱ ۱		Safety Category			
Rise Time 2.1 ns			2.1 ns		

	Woight			
	Weight			
	Input Impedance	1 (Analogue) Mohm, 101 (Digital) kohm		
	ESSENT	ΓIALS		
	Oscilloscope Probe	Probe Type: Pasive Voltage, Attenuation: 10x, Bandwidth: 500 MHz, Connector Type: BNC, Safety Category: CAT II 300V	1 unit	
	Digital HandHeld	Multimeter Kit		
	*	50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V, 1000.0 V; Accuracy: 0.025 %. 0.4 % (true-rms) 500.00 uA, 5000.0 uA, 50.000 mA, 400.00 mA,		
	1 .	5.000 A, 10.000 A; Accuracy: 0.15 %, 0.7 % (true-rms) -200 deg C to 1090 deg C;		
		Accuracy: 1 % 500.00 ohm, 5.000 kohm, 50.000 kohm, 500.00 kohm, 5.0000 Mohm, 50.00 Mohm, 500.0 Mohm; Accuracy: 0.05 %		
3.	Capacitance	-	1 unit	
	Frequency	99.999 Hz, 999.99 Hz, 9.9999 kHz, 99.999 kHz, 999.99 kHz; Accuracy: 0.005 %		
	Multiple On screen Displays	Yes		
	True RMS AC Bandwidth	100 kHz		
	dBV/dBm			
	DC mV Resolution			
	Megohm Range	-		
	Conductance Continuity Beeper			
	Continuity Deeper	103		

Elapse Time Clock Time of Day Clock Time of Day Clock Yes  Min-Max-Avg Yes  Peak 250 uS  Duty Cycle 0.01 % to 99.99 %  Pulse Width 0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms  Hold Yes  Isolated Optical Interface Auto/Touch Hold Yes  Log to PC Interval/Event Logging Assimum Voltage between any Terminal and Earth Ground Battery Life Battery Life 50 Hours Minimum, 180 Hours in Logging Mode Operating Temperature -20 deg C to 55 deg C  Storage Temperature Compatibility Vibration Random vibration per MIL-PRE-28800F Class 2 I meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm Weight Roll William Start III 1000V 10 A (Red, Black) Test Probes CAT III 1000V 10 A (Red, Black) Test Probes CAT III 1000V 10 A (Red, Black)	Bidding Documents (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
Time of Day Clock  Min-Max-Avg Yes  Peak 250 uS  Duty Cycle 0.01 % to 99.99 %  Pulse Width 0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms  Hold Yes  Isolated Optical Interface Yes  Auto/Touch Hold Yes  Log to PC Yes  Interval/Event Logging Yes  Logging Memory Up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground Battery Type Battery Type Storage Temperature -20 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C Relative Humidity 0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C), 0 to 45 % (45 deg C), 0 to 45 % (45 deg C)  Electromagnetic Compatibility VibrationRandom vibration per MIL- PRF-28800F Class 2 I meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm Weight R70.9 g  INCLUDED ACCESSORIES Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,	Battery/Fuse Access	Battery/Fuse		
Min-Max-Avg Yes  Peak 250 uS  Duty Cycle 0.01 % to 99.99 %  Pulse Width 0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms  Hold Yes  Isolated Optical Interface Yes  Auto/Touch Hold Yes  Reading Memory Yes  Log to PC Yes  Interval/Event Logging Yes  Logging Memory up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground  Battery Type 6 AA Alkaline Batteries, NEDA 15A IEC LR6  Battery Life 50 Hours Minimum, 180 Hours in Logging Mode  Operating Temperature -20 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C  Relative Humidity 0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C), 0 to 45 % (45 deg C), 0 to 45 % (45 deg C) to 55 deg C)  Electromagnetic Compatibility  VibrationRandom vibration per MIL-PRF-2880F Class 2  Shock I meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT III 1000V 10 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Elapse Time Clock	Yes		
Peak 250 uS  Duty Cycle 0.01 % to 99.99 %  Pulse Width 0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms  Hold Yes  Isolated Optical Interface Yes  Auto/Touch Hold Yes  Reading Memory Yes  Log to PC Yes  Interval/Event Logging Yes  Logging Memory up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground  Battery Type 6 AA Alkaline Batteries, NEDA 15A IEC LR6  Battery Life So Hours Minimum, 180 Hours in Logging Mode  Operating Temperature -20 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C) to 45 deg C), 0 to 45 % (45 deg C) to 14 s (45 deg C), 0 to 45 % (45 deg C) to 15 deg C)  Electromagnetic Compatibility  VibrationRandom vibration per MIL-PRF-28800F Class 2  I meter drop per IEC/ENG1010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT III 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Time of Day Clock	Yes		
Pulse Width 0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms  Hold Yes  Isolated Optical Interface Yes  Auto/Touch Hold Yes  Reading Memory Yes  Log to PC Yes  Interval/Event Logging Yes  Logging Memory up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground  Battery Type 6 AA Alkaline Batteries, NEDA 15A IEC LR6  Battery Life 50 Hours Minimum, 180  Hours in Logging Mode  Operating Temperature -20 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C  Relative Humidity 0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 65 % (37 deg C) to 55 deg C)  Electromagnetic EMC EN61326-1  Compatibility  VibrationRandom vibration per MIL-PRF-28800F Class 2  I meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT III 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Min-Max-Avg	Yes		
Pulse Width 0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms  Hold Yes  Isolated Optical Interface Yes  Auto/Touch Hold Yes  Reading Memory Yes  Log to PC Yes  Interval/Event Logging Yes  Logging Memory up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground  Battery Type 6 AAA Alkaline Batteries, NEDA 15A IEC LR6  Battery Life 50 Hours Minimum, 180 Hours in Logging Mode  Operating Temperature -20 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C) to 55 deg C)  Electromagnetic Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock I meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT III 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Peak	250 uS		
Hold   Yes	Duty Cycle	0.01 % to 99.99 %		
Hold   Yes     Isolated Optical Interface   Yes     Auto/Touch Hold   Yes     Reading Memory   Yes     Log to PC   Yes     Interval/Event Logging   Yes     Logging Memory   up to 10,000 readings     Maximum Voltage between   any Terminal and Earth     Ground     Battery Type   6 AA Alkaline Batteries, NEDA 15A IEC LR6     Battery Life   50 Hours Minimum, 180     Hours in Logging Mode     Operating Temperature   -20 deg C to 55 deg C     Storage Temperature   -40 deg C to 60 deg C     Relative Humidity   0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C)     Electromagnetic   EMC EN61326-1     Compatibility   Vibration Random vibration per MIL-PRF-28800F Class 2     I meter drop per     IEC/EN61010-1 2nd   Edition     Size (HxWxL)   22.2 cm x 10.2 cm x 6 cm     Weight   870.9 g     INCLUDED ACCESSORIES     Alligator Clips   CAT III 300 V 5 A (Red, Black)     Test Probes CAT III 1000V 10 A (Red, Black)	Pulse Width			
Isolated Optical Interface  Auto/Touch Hold Reading Memory Yes Log to PC Interval/Event Logging Yes Logging Memory Up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground Battery Type 6 AA Alkaline Batteries, NEDA 15A IEC LR6 Battery Life So Hours Minimum, 180 Hours in Logging Mode Operating Temperature -20 deg C to 55 deg C Storage Temperature -40 deg C to 60 deg C Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C), 0 to 45 % (45 deg C) to 55 deg C)  Electromagnetic Compatibility Vibration Random vibration per MIL- PRF-28800F Class 2 Shock I meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm Weight 870.9 g  INCLUDED ACCESSORIES Alligator Clips CAT III 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,				
Auto/Touch Hold Reading Memory Yes  Log to PC Interval/Event Logging Yes  Logging Memory Up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground Battery Type 6 AA Alkaline Batteries, NEDA 15A IEC LR6 Battery Life Hours in Logging Mode Operating Temperature -20 deg C to 55 deg C  Storage Temperature -20 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C) to 55 deg C  Electromagnetic Compatibility Vibration Random vibration per MIL- PRF-28800F Class 2  Shock I meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,	Hold	Yes		
Reading Memory  Log to PC  Interval/Event Logging  Logging Memory  Wes  Logging Memory  Interval/Event Logging  Logging Memory  Wes  Logging Memory  Interval/Event Logging  Maximum Voltage between  Any Terminal and Earth  Ground  Battery Type  6 AA Alkaline Batteries,  NEDA 15A IEC LR6  50 Hours Minimum, 180  Hours in Logging Mode  Operating Temperature  -20 deg C to 55 deg C  Storage Temperature  -40 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 10 to 45 % (45 deg C), 0 to 45 % (45 deg C) to 55 deg C  Electromagnetic  Compatibility  Vibration  Random vibration per MIL-  PRF-28800F Class 2  Shock  I meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL)  Z2.2 cm x 10.2 cm x 6 cm  Weight  870.9 g  INCLUDED ACCESSORIES  Alligator Clips  CAT II 300 V 5 A (Red,  Black)  Test Probes CAT III 1000V 10 A (Red,	Isolated Optical Interface	Yes		
Log to PC  Interval/Event Logging  Logging Memory  Up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground  Battery Type  6 AA Alkaline Batteries, NEDA 15A IEC LR6  Battery Life 50 Hours Minimum, 180 Hours in Logging Mode  Operating Temperature  -20 deg C to 55 deg C  Storage Temperature  -40 deg C to 60 deg C  Relative Humidity 0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C) to 55 deg C  Electromagnetic EMC EN61326-1  Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock I meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT III 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Auto/Touch Hold	Yes		
Interval/Event Logging  Logging Memory  up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground  Battery Type  6 AA Alkaline Batteries, NEDA 15A IEC LR6  50 Hours Minimum, 180 Hours in Logging Mode  Operating Temperature  -20 deg C to 55 deg C  Storage Temperature  -40 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C), 0 to 65 % (37 deg C) to 45 deg C), 0 to 45 % (45 deg C) to 55 deg C)  Electromagnetic C to 55 deg C  Electromagnetic EMC EN61326-1  Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock I meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT III 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Reading Memory	Yes		
Logging Memory up to 10,000 readings  Maximum Voltage between any Terminal and Earth Ground  Battery Type 6 AA Alkaline Batteries, NEDA 15A IEC LR6  Battery Life 50 Hours Minimum, 180 Hours in Logging Mode  Operating Temperature -40 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C  Relative Humidity 0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C) to 55 deg C)  Electromagnetic Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT III 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Log to PC	Yes		
Maximum Voltage between any Terminal and Earth Ground  Battery Type 6 AA Alkaline Batteries, NEDA 15A IEC LR6  Battery Life 50 Hours Minimum, 180 Hours in Logging Mode  Operating Temperature -20 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C), 0 to 55 deg C)  Electromagnetic Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Interval/Event Logging	Yes		
any Terminal and Earth Ground  Battery Type 6 AA Alkaline Batteries, NEDA 15A IEC LR6  Battery Life 50 Hours Minimum, 180 Hours in Logging Mode -20 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C to 55 deg C)  Electromagnetic Compatibility  VibrationRandom vibration per MIL- PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,	Logging Memory	up to 10,000 readings		
Battery Type Battery Life Battery Life Battery Life Bornating Temperature Operating Temperature  Storage Temperature  Relative Humidity O to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C to 55 deg C)  Electromagnetic Compatibility Vibration Random vibration per MIL-PRF-28800F Class 2  Shock I meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) Size (HxWxL) Size (HxWxL)  Size (HxWxL)  Alligator Clips Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,	any Terminal and Earth			
Battery Life 50 Hours Minimum, 180 Hours in Logging Mode  Operating Temperature -20 deg C to 55 deg C  Storage Temperature -40 deg C to 60 deg C  Relative Humidity 0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C to 55 deg C)  Electromagnetic Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Battery Type	· ·	1 unit	
Operating Temperature  -20 deg C to 55 deg C  Storage Temperature  -40 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C), 0 to 45 % (45 deg C) to 55 deg C)  Electromagnetic	Battery Life	50 Hours Minimum, 180		
Storage Temperature -40 deg C to 60 deg C  Relative Humidity0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C to 55 deg C)  Electromagnetic Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	On anoting Tomas anothers	<u> </u>		
Relative Humidity 0 to 90 % (0 to 37 deg C), 0 to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C) to 55 deg C)  Electromagnetic Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Operating Temperature	-20 deg C to 55 deg C		
to 65 % (37 deg C to 45 deg C), 0 to 45 % (45 deg C to 55 deg C)  Electromagnetic Compatibility  VibrationRandom vibration per MIL- PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Storage Temperature	-40 deg C to 60 deg C		
deg C), 0 to 45 % (45 deg C to 55 deg C)  Electromagnetic Compatibility  Vibration Random vibration per MIL- PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Relative Humidity			
Electromagnetic Compatibility  Vibration Random vibration per MIL-PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,		, O		
Electromagnetic Compatibility  Vibration Random vibration per MIL- PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,				
Compatibility Vibration Random vibration per MIL-PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,		Ŭ '		
Vibration Random vibration per MIL- PRF-28800F Class 2  Shock 1 meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,	_	EMC EN61326-1		
Shock 1 meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,	Compatibility			
Shock 1 meter drop per IEC/EN61010-1 2nd Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,	Vibration	Random vibration per MIL-		
IEC/EN61010-1 2nd Edition  Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,				
Edition Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black) Test Probes CAT III 1000V 10 A (Red,	Shock	1 1		
Size (HxWxL) 22.2 cm x 10.2 cm x 6 cm  Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,				
Weight 870.9 g  INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,				
INCLUDED ACCESSORIES  Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Size (HxWxL)	22.2 cm x 10.2 cm x 6 cm		
Alligator Clips CAT II 300 V 5 A (Red, Black)  Test Probes CAT III 1000V 10 A (Red,	Weight	870.9 g		
Black) Test Probes CAT III 1000V 10 A (Red,	INCLUDED ACCESSORIES			
Test Probes CAT III 1000V 10 A (Red,	Alligator Clips	•		
		,		
Black)	Test Probes	CAT III 1000V 10 A (Red,		
		Black)		

ocuments (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
Test Leads	CAT III 1000V 10 A (Red,		
	Black)		
CD-rom	Software for storing		
	documents and analyzing		
	readings or a series of		
	measurements		
USB Interface Cable			
Thermocouple Probe and	80BK-A		
Adaptor			
Softcase			
2 3100 1130	accessory storage		
Batteries	i i		
Datteries	O TIT (I TOII-I Centar geatole)		
ESSEN'	ΓΙΔΙ S		
LOSEN	Current: 440mA, Voltage:		
	1000V, Breaking Capacity:		
Replacement Multimeter	, , ,	1 unit	
Fuse	10kA, Material: HBC		
	Ceramic, Dimensions: 10.3		
	(Dia.) x 35 mm		
	DC Current Range: 1-400		
	Adc, DC Accuracy: +/- 3.5		
	%, AC Current Range: 1-		
	400 AC rms, AC Accuracy:		
	+/- 3.5 %, Crest Factor: 3		
	@ 400 A, 6 @ 200 A, AC		
Current Clamp Adapter	Frequency Response: 3	1 unit	
	kHz, Output Signal:		
	1mV/A, Safety: IEC 1010,		
	CAT III 600V, Load		
	Impedance: 1Mohm/100		
	pF, Battery Life: 60 Hours		
	Typical		
	Multifunctional desktop		
i e e e e e e e e e e e e e e e e e e e			
	-		
	charger for both NiCD and NiMH cells		
	charger for both NiCD and NiMH cells		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA,		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor controlled charging,		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor controlled charging, utilising delta peak	1 unit	
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor controlled charging,		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor controlled charging, utilising delta peak		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor controlled charging, utilising delta peak techniques		
Battery Charger	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor controlled charging, utilising delta peak techniques Faulty cell detection Pre charge function		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor controlled charging, utilising delta peak techniques Faulty cell detection Pre charge function Individual supervision of		
	charger for both NiCD and NiMH cells Charges 1-6 AA, AAA, and/or 1-4 C, D cells and/or 1-2 9V Blocks Microprocessor controlled charging, utilising delta peak techniques Faulty cell detection Pre charge function		

Bidding L	Oocuments (Based on Revised IRR of RA 91	84, Fourth Edition, December 2010)		
		Cell Temperature		
		Detection		
		Reverse Connection		
		Protection		
		Auto-Diagnostic of the		
		inserted cell with		
		automatic start of		
		precharging and/or		
		refreshing process, if		
		required tired cells will		
		be activated		
		3 Colour cell charge		
		status indicators		
		Input: 100-240 VAC		
		50/60 Hz		
		Dimensions: L 191 x W		
		172 x H 57 mm		
	Replacement Battery (Pack	AAA: 550-1100 mAh, 400		
	of 4)	mA, 1.65 - 3.3 hrs		
	,	AA: 1300-2850 mAh,		
		1000 mA, 1.5 - 3.5 hrs		
		C: 1500-5000 mAh, 1000		
		mA, 1.8 - 6 hrs		
		D: 1800-10000 mAh,		
		1000 mA, 2.2 - 12 hrs		
		9V: 120-250 mAh, 60 mA,		
		2.5 - 5 hrs		
		Capacity: 2500 mAh,		
		Terminal Type: Standard,		
		Chemistry: NiMH, Size:		
		AA, Nominal Voltage:		
		1.2V, Maximum	2 units	
		Continuous Current: 5000	2 units	
		mA, Dimensions: 50.5 x		
		14.5 mm, Operating		
		Temperature Range: '-20 to		
		65 degC		
	SMD Rewor	rk Station		
		Self contained air supply		
		Airflow 100L/min (free		
		flowing)		
		Slim handpiece with		
		control buttons for		
4.		Start/Stop function	1 unit	
	FEATURES	Automatic safety cool		
		down		
		5 programmable pre-sets		
		for temperature and airflow		
		Temperature range 50 ~		
		600 deg C		
	1	200 225 0		İ

Ridding Do	ocuments (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
		Digital display		
		Auto power off		
		Quick change nozzle		
		adapter		
	Voltage	•		
	Power Consumption	1300W		
	Air Flow	5~50 L/min (with 4mm		
		nozzle)		
	Weight	1.3 kg		
	Outer Dimensions (W x H x	160 x 145 x 220 mm		
	D) INCLUDED	Handriaga halder Dower		
	ACCESSORIES	Handpiece holder, Power		
	ACCESSORIES	cord, Heat resistant pad,		
		pick up wire, 4mm Nozzle		
		(standard)		
	Double-Sided UV Exposure			
		Essential for production of		
		double sided PCBs in order		
		to avoid the difficult		
		problem of artwork		
		registration with 2 separate		
		exposures on a single sided		
		unit		
		Exposure area over 10 in x		
		12 in		
		Quality construction in steel		
		box with glass covering base		
		tubes and mylar film		
	FEATURES	covering tubes in lid to		
		minimise the risk to the		
		operator of electrical shock		
5.		or tube breakage UV tubes are masked off to	1 unit	
J.		ensure true and even usable	ı unit	
		exposure area		
		Electronic timer with touch		
		membrane control		
		Vacuum pump and vacuum		
		bleed operated separate of		
		the timer; with a vaccum		
		gauge fitted to check		
		optimum vacuum is		
		achieved before exposure is		
		commenced		
		Rocker switch isolates		
		bottom tubes for single		
		sided exposures		
	Dimensions (mm)	-		
	Weight			
<u> </u>	ı		<u> </u>	

		355 x 260 (vacuum pip		
	Exposure Area (mm)	protrudes 25mm into top left of exp.area)		
	Timer			
	Tubes	8 x 18 in (15W each)		
	Operating Voltage	240Vac 50/60 Hz		
	Туре	Double Sided		
	ESSENT	<b>FIALS</b>		
	Replacement UV Tube and Starter Kit	Wattage: 15W, No.of Tubes: 2, No. of Starters: 2	4 units	
	Bench Top Zero Volt Ionis	er, Essentials Included		
		Steady state DC ionisation and patented Sense Feedback Balancing Compact Size		
		Rapid access maintenance		
	FEATURES	Automatic balancing of ionisation system  Equipped with audible and		
		visual indicators for "Balance" and "Maintenance Required"		
		Data acquisition ready	1 unit	
		Low offset voltage		
		Balance +/-5 voltage offset,		
6.	Туре	field programmable  Bench Top		4
0.	Number of Fans	1		4
	Supply Voltage	220V ac		
	Depth			
	Heigth	24.1 cm		
	Width	15.2 cm		
	ESSENTIALS			
	Mounting Arm	compatible with supplied Bench Top Zero Volt Ioniser	1 unit	
	Power Cable Assembly	2.5 m Black, Type F Schuko Plug 10A, IEC C13, 250V	1 unit	

82	Bench Magnifier, Es			
7.	Bench Magnifier, Es  Doptre Lens Size Magnifier Type Lamp Type Lamp Wattage Operating Voltage	A round glass lens, daylight lamp with flexible joints and a quick positioning handle. Allows the user to quickly push the magnifier out of the way or pull the magnifier closer to the workpiece for detailed working  Energy saving 22W bulb and electronic ballast for longer life and reduced costs  Low heat emission bulb and shadow free lighting for clear and confortable working  Protective sun cap  With a 1.5m cable and table clamp with cone holder is ideal for mobile working and can quickly and easily be moved from desk to desk  3 dioptre  125 mm  Table Clamp Mount  Fluorescent	2 units	
	ESSENTIALS			
	Replacement Tube	22 Watt Round Fluorescent Energy Saving Tube	10 units	
	Test Block with Cord and Plug	Cord: 1.5 m, Plug Type: G BS1363, Max. Working Voltage 240 Vac 50/60 Hz, Max. Working Current: 13 A without cord 5 A with cord, Insulation Resistance: > 100 Mohm @ 500 Vdc, Withstand Voltage: 2000Vac for 2 min, Cable Entry: 4 to 7 mm, Max. Conductor Size: 2, Materials: G.P. phenolic/Polycarbonate	2 units	

sidding L	Documents (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
	Wall Bracket	Accessory Type: Wall Bracket, For Use With:	2 units	
		Clamp Fitting Lamp		
		Accessory Type: Bench		
	Bench Bracket	Bracket, For Use With: All	2 units	
		Lamps		
		Accessory Type: Floor		
	Floor Stand	Stand, For Use With:	2 units	
		Clamp Fitting Lamp		
		Weight: 10 kg, Accessory		
		Type: Heavy Duty Table		
		Base, For Use With: Twin		
	Table Base	Tube Lamp, Standard	2 units	
	Tuble Buse	Fluorescent Magnifier and	2 units	
		Rectangular Magnifying		
		Lamp		
		1		
	Soldering Stat	cion 230 VAC		
	FEATURES			
		Windless Townsontons		
		Wireless Temperature		
		Lockout		
		Slim, Comfortable		
		handpiece to reduce		
		operator fatigue		
		Heater and sensor design		
		that allows for quick heat		
		up and recovery		
		Tip temperature offset		
		capability, and temperature		
		lockout come as a standard		
		Auto shut off feature to		
		extend tip, iron and station		
0		life	0	
8.		ESD safe to protect	2 units	
		sensitive components		
	POWER UNIT			
	Voltage	230 VAC (input) 24 V		
		(output)		
	Temperature Range	177 deg C to 454 deg C		
		165 114 100		
	Footprint	165 x 114 x 102 cm		
	Weight	1.78 kg		
	Temperature Accuracy	5 deg C		
	Temperature Stability	6 deg C		
	ESD Safe	Yes		
	PENCIL			
	Power Consumption	50 W		
	1			

	Heating Element Type	Nichrome Wound		
	Iron Cord Length			
	Supplied Tip	ETA		
	Iron Stand	PH50		
	Bench Top Po	ower Supply		
	<del>-</del>	at least 3 Years		
9.		Three Independent Output: 30V/3A x 2 Variable, (2.5V/3.3V/5V)/3A (Fixed) 4 LED Display Sets: 3 Digits after Decimal Point Minimum Resolution: 1 mV/1 mA Digital Panel Control: Rotary Encoder Switch, Rubber Key with Indicator User Friendly Operation: Coarse/Fine Control 4 sets Save/Recall  Key-Lock  Warning Buzzer  Output On/Off  Tracking Series and Parallel Mode Smart Cooling Fan Achieving Low Noise Compact Design	1 unit	
	OUTPUTS			
	Voltage 1	0 to 30 V		
	Current 1	0 to 3.0 A		
	Voltage 2			
	Current 2			
	Voltage 3			
	Current 3	3.0 A Fixed		
	VOLTAGE REGULATION			
	Load	= 5 mV</td <td></td> <td></td>		
	Line	= 15 Mv</td <td></td> <td></td>		

	ocuments (Based on Revised IRR of RA 918			
	CURRENT REGULATION			
	Load	= 0.02 %+3mA</td <td></td> <td></td>		
	Line	= 0.02 %+3mA</td <td></td> <td></td>		
	RIPPLE			
•	Voltage (mVrms)	≤2mV		
•	Current (mArms)	≤3mA		
	RESOLUTION			
•	Voltage	1mV		
	Current	1mA		
	PROGRAM ACCURACY			
	Voltage	±0.03% rdg + 10 digits		
	Current	±0.3% rdg + 10 digits		
	READBACK ACCURACY			
	Voltage	±0.03% rdg + 10 digits		
•	Current	±0.3% rdg + 10 digits		
	DISPLAY			
	Voltage	4 3/4 digits 0.4in LED		
	Current	3 3/4 digits 0.4in LED		
	Weight	7 kg		
	Dimensions	W 210 x H 130 x D 265mm		
	Supply Voltage	110 / 230V ±10% 50 / 60Hz		
	230 VAC Solder Fur	ne Extractor		
	Supply Voltage	230 Vac 50-60 Hz		
	Power Consumption	22 W		
		"1.0 m/min vertically		
	Air Flow (with Filter)	mounted		
		0.4 m/min horizontally mounted"	2 units	
		"1.0 m/s vertically		
	A. 1 6 61.	mounted		
•	Air velocity (with filter)	mounted 2.6 m/s horizontally		
	Air velocity (with filter)	2.6 m/s horizontally mounted"		
	Air velocity (with filter)  Dimensions (W x H x D)	2.6 m/s horizontally		

	INCLUDED ACCESSORIES			
	Filter		2 units	
	Instruction Manual		2 units	
	Power Cord		2 units	
	Antistatic Table Top R	ack Kit, 16 Bins		
11.	FEATURES	Convenient conductive		
		Ideal for kitting ESD		
		sensitive components		
		Complete with 1 Mohm		
		grounding wire	1 unit	
		Surface Resistivity		
		<106Ω/sq		
		Supports ESD S20.20 and		
	STANDARDS	EN 61340-5-1 ESD		
		control programme		
	Dimensional CH MAD	compliance		
	Dimensions (HxWxD mm)	388 x 500 x 305		
	Tool and Wrist Strap ESD	Continuous Monitor		
		System comprises		
		continuous monitor with 2		
		satellite modules		
		Control unit can be mounted		
		at eye level, where it will not		
		impede worksurface area Control unit LEDs indicate		
		proper grounding of 2		
		mats/2 operators and		
		continuously display		
		grounding status		
		The satellite (remote)		
		monitors include monitored		
12.		single wire wrist strap	2 units	
	FEATURES	ground, parking stud and unmonitored ground for		
		guest or equipment		
		The versatile design allows		
		placement where desired up		
		to 2.1m from the control		
		unit - red LED will		
		illuminate but audio alarm		
		not sound when wrist strap		
		coil cord is snapped on parking stud		
		Uses reliable wave		
		distortion technology:		
		provides true 100%		
		continuous monitoring; not		
1		pulsed current		

ESSENTIALS		
Power Cord		
Connector A	C13	
Connector B	UK Plug	
Length	2m	
Current Rating	10:00 AM	2 units
Sheath Colour	Black	2 units
Voltage Rating	250 V	
Connector B Type	BS 1363	
Connector A Type	IEC	
Connector A Gender	Female	
Connector B Gender	Connector B Gender	

### **CONFORMITY WITH TECHNICAL SPECIFICATIONS**

Item No.	Section VII-Technic	cal Specifications	QTY.	REMARKS  Comply/Not Comply
	Combined Frequency Coun with AM/FM			
	Frequency Range	0.5 Hz to 5 MHz		
	Amplitude	> 10 Vpp (into 50 ohm load)		
	Impedance	50 ohm +/- 10%		
	Attenuator	-20dB +/- 1 dB		
	dc Offset	ohm)		
	Duty Cycle	80%:20%:80% to 1 MHz continuously variable		
	SINE WAVE	/ 40/ 0 F H 400 H		
	Distortion	<pre><!--= 1%, 0.5 Hz ~ 100kHz, THD </= 30dB fundamental in all ranges</pre--></pre>		
	Flatness	>/= 0.3 dB below 500 kHz: >/= 1 dB below 5 MHz		
1.	TRIANGLE WAVE		2 units	
	Linearity	>/= 95 %		
		+/=-2 % 1 Hz to 100 KHz		
	Rise/Fall Time (into 50 ohm load)	= 50 ns at maximum output</td <td></td> <td></td>		
	CMOS OUTPUT			
	Level (Rise/Fall Time)	4 Vpp +/- 1 Vpp to 14.5 Vpp +/- 0.5 Vpp : = 120 ns</td <td></td> <td></td>		
	TTL OUTPUT			
	Level (Rise/Fall Time)	>/= 3 Vpp : 20 TTL Load Fan Out (>/= 25 ns)		
	SWEEP OPERATION			
	Sweep Rate (Time)	100:1 max (0.5-30s) adj.		
	AM MODULATION			
	Depth	0 to 100 %		
	Mod. Frequency	400 Hz (INT); dc to 1 MHz (EXT)		
	Carrier BW	100 Hz to 5 MHz ( -3 dB)		

Mod. Frequency Counter	ation iency	0 to +/- 5% 400 Hz (INT); dc to 20 kHz (EXT)		
Mod. Frequency Counter	iency	400 Hz (INT); dc to 20 kHz		
F	lange	()		
	lange			
		0.5 Hz to 5 MHz (INT) 5 Hz to 150 MHz (EXT)		
Acci	ıracy	Timebase +/-1 count		
War	ranty	at least 3 Years		
	oscop inclu	e, 200 MHz, Essentials ded		
Bandv	<i>r</i> idth	200 MHz		
Number of Anal Char	ogue mels	4		
Number of Digital Char	inels	16		
Record Le	ngth	1M points/ch		
Sample Rate Ran	dom	1G samples/s		
USB inte	rface	Yes		
Vertical Resolu	ıtion	1 (Digital) bit, 8 (Analogue) bit		
Minimum Time	Base	2 ns/div		
Maximum Time	Base	100 s/div		
Minimum Ver Sensit		2 mV/div		
Maximum Vertical Sensi	tivity	5 V/div		
2. Safety Category Vo	ltage	300V	1 unit	
Minimum Opera Tempera		0 deg C		
Safety Category I	∟evel	CAT II		
Dimens	sions	377 x 134 x 180 mm		
Maximum Opera Tempera	_	+ 50 deg C		
Le	ngth	377mm		
Display	Гуре	Colour		
Screen	Size	7 in		
V	/idth	134 mm		
Input Capacit	ance	11.5 pF		
Power Sc	urce	Mains		
Н	eight	180 mm		
Safety Cate	gory	CAT II 300V		
Rise '	Γime	2.1 ns		

Ridding D	ocuments (Based on Revised IRR of RA 918			
	Weight	3.6 kg		
	Input Impedance	1 (Analogue) Mohm, 101		
	input impedance	(Digital) kohm		
	ESSENT	ΓIALS		
		Probe Type: Pasive		
		Voltage, Attenuation: 10x,		
	O:11	Bandwidth: 500 MHz,	1 unit	
	Oscilloscope Probe	Connector Type: BNC,		
		Safety Category: CAT II		
		300V		
	Digital HandHeld	Multimeter Kit		
	2 -8			
	DC Volts, AC Volts	50.000 mV, 500.00 mV,		
		5.0000 V, 50.000 V, 500.00		
		V, 1000.0 V; Accuracy:		
		0.025 %. 0.4 % (true-rms)		
	DC Current, AC Current	· ·		
		50.000 mA, 400.00 mA,		
		5.000 A, 10.000 A;		
		Accuracy: 0.15 %, 0.7 %		
	T	` '		
	, ,			
		Ÿ		
	Resistance	· ·		
		· ·		
		Accuracy: 0.05 %		
3.	Capacitance	1.000 nF,10.00 nF 100.0	1 unit	
		nF, 1.000 μF, 10.00 μF,		
		•		
		•		
	Frequency	,		
		· ·		
		·		
	Multiple On screen Displays			
	True RMS AC Bandwidth	100 kHz		
	dBV/dBm	Yes		
	DC mV Resolution	1 uV		
	Megohm Range	up to 500 M		
	Conductance			
	Continuity Beeper	Yes		
3.	Probe) Resistance  Capacitance  Frequency  Multiple On screen Displays  True RMS AC Bandwidth  dBV/dBm  DC mV Resolution  Megohm Range  Conductance	500.00 ohm, 5.000 kohm, 50.000 kohm, 50.000 kohm, 500.00 kohm, 50.00 Mohm, 50.00 Mohm, 50.00 Mohm, 500.0 Mohm, 500.0 Mohm, 500.0 Mohm, 500.0 Mohm; Accuracy: 0.05 %  1.000 nF, 10.00 nF 100.0 nF, 1.000 μF, 10.00 μF, 10.00 μF, 10.00 mF, 100 mF; Accuracy: 1.0 %  99.999 Hz, 999.99 Hz, 99.999 kHz, 999.99 kHz, 99.999 kHz, 4 Accuracy: 0.005 %  Yes  100 kHz  Yes  1 uV  up to 500 M  50.00 nS	1 unit	

Bidding Documents (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
Battery/Fuse Access	Battery/Fuse		
Elapse Time Clock	Yes		
Time of Day Clock	Yes		
Min-Max-Avg	Yes		
Peak	250 uS		
Duty Cycle	0.01 % to 99.99 %		
Pulse Width	0.025 ms, 0.25 ms, 2.5 ms,		
Hold	1250.0 ms Yes		
Isolated Optical Interface	Yes		
Auto/Touch Hold			
Reading Memory	Yes		
Log to PC	Yes		
Interval/Event Logging	Yes		
Logging Memory	up to 10,000 readings		
Maximum Voltage between any	1000V		
Terminal and Earth Ground			
Battery Type	6 AA Alkaline Batteries, NEDA 15A IEC LR6	1 unit	
Pattary Life			
Battery Life			
	Hours in Logging Mode		
Operating Temperature	-20 deg C to 55 deg C		
Storage Temperature	-40 deg C to 60 deg C		
Relative Humidity	0 to 90 % (0 to 37 deg C), 0		
	to 65 % (37 deg C to 45		
	deg C), 0 to 45 % (45 deg		
	C to 55 deg C)		
Electromagnetic			
Compatibility	ENTE EN 101320 1		
	Random vibration per MIL-		
Violation	PRF-28800F Class 2		
Shock	1 meter drop per		
SHOCK	IEC/EN61010-1 2nd		
G. (II W. I.)	Edition		
Size (HXWXL)	22.2 cm x 10.2 cm x 6 cm		
Weight	870.9 g		
INCLUDED ACCESSORIES			
Alligator Clips	CAT II 300 V 5 A (Red,		
	Black)		
Test Probes	CAT III 1000V 10 A (Red,		
	Black)		
	•		

cuments (Based on Revised IRR of RA 91		
Test Leads	CAT III 1000V 10 A (Red,	
	Black)	
CD-ron	Software for storing	
	documents and analyzing	
	readings or a series of	
	measurements	
USB Interface Cable	Opto Isolated	
Thermocouple Probe and		
Adaptor		
Softcase	for meter protection and	
	accessory storage	
Batteries	6 AA (Non-rechargeable)	
ESSEN	TIALS	
EDDEIV		
	Current: 440mA, Voltage: 1000V, Breaking Capacity:	
Replacement Multimeter	10kA, Material: HBC	1 unit
Fuse	Ceramic, Dimensions: 10.3	
	(Dia.) x 35 mm	
	DC Current Range: 1-400	
	Adc, DC Accuracy: +/- 3.5 %,	
	AC Current Range: 1-400 AC	
	rms, AC Accuracy: +/- 3.5 %,	
	Crest Factor: 3 @ 400 A, 6	
Current Clamp Adapter	@ 200 A, AC Frequency	1 unit
current Clamp / Kaapter	Response: 3 kHz, Output	1 unit
	Signal: 1mV/A, Safety: IEC	
	1010, CAT III 600V, Load Impedance: 1Mohm/100 pF,	
	Battery Life: 60 Hours	
	Typical	
	Multifunctional desktop	
	charger for both NiCD and	
	NiMH cells	
	Charges 1-6 AA, AAA,	
	and/or 1-4 C, D cells	
	and/or 1-2 9V Blocks	
	Microprocessor	
	controlled charging,	
	utilising delta peak	1 unit
Battery Charger	techniques	I unit
Jaccery Grianger	•	
	Faulty cell detection	
	Pre charge function	
	Pre charge function Individual supervision of	
	Pre charge function	

Bidding D	ocuments (Based on Revised IRR of RA 91)			<u></u>
		Cell Temperature		
		Detection		
		Reverse Connection		
		Protection		
		Auto-Diagnostic of the		
		inserted cell with		
		automatic start of		
		precharging and/or		
		refreshing process, if		
		required tired cells will		
		be activated		
		3 Colour cell charge		
		status indicators		
		Input: 100-240 VAC		
		50/60 Hz		
		Dimensions: L 191 x W		
	Replacement Battery (Pack	172 x H 57 mm		
	of 4)	AAA: 550-1100 mAh, 400		
	01 4)	mA, 1.65 - 3.3 hrs		
		AA: 1300-2850 mAh,		
		1000 mA, 1.5 - 3.5 hrs		
		C: 1500-5000 mAh, 1000		
		mA, 1.8 - 6 hrs		
		D: 1800-10000 mAh,		
		1000 mA, 2.2 - 12 hrs		
		9V: 120-250 mAh, 60 mA,		
		2.5 - 5 hrs		
		Capacity: 2500 mAh,		
		Terminal Type: Standard,		
		Chemistry: NiMH, Size: AA,		
		Nominal Voltage: 1.2V,		
		Maximum Continuous	2 units	
		Current: 5000 mA, Dimensions: 50.5 x 14.5 mm,		
		Operating Temperature		
		Range: '-20 to 65 degC		
	SMD Rewor			
	SMD Rewol			
		Self contained air supply		
		Airflow 100L/min (free		
		flowing)		
		Slim handpiece with		
4.		control buttons for	1 unit	
4.	FEATURES	Start/Stop function	I unit	
		Automatic safety cool		
		down		
		5 programmable pre-sets		
		for temperature and airflow		
		Temperature range 50 ~		
1		600 deg C		

Auto power off Quick change norzle adapter 240 Vac Power Consumption Air Flow S-50 L/min (with 4mm nozzle) Weight 1.3 kg Outer Dimensions (W x H x) D) INCLUDED ACCESSORIES Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard) Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer, with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures Dimensions (mm) H.170 x W.550 x D.485 Weight 2.1kg	Bidding Do	ocuments (Based on Revised IRR of RA 918	34, Fourth Edition, December 2010)		
Quick change nozzle adapter			Digital display		
Air Flow   S-50 L/min (with 4mm   nozzle   Noter Dimensions (W x H x   D)			Auto power off		
Power Consumption  Air Flow Air Flow S~50 L/min (with 4mm nozzle)  Weight 1.3 kg  Outer Dimensions (W x H x D)  INCLUDED ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			Quick change nozzle		
Power Consumption  Air Flow Air Flow Weight Outer Dimensions (W x H x D)  INCLUDED ACCESSORIES  But a life in yeight of the production of double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			adapter		
Air Flow S-50 L/min (with 4mm nozzle)  Weight 1.3 kg  Outer Dimensions (W x H x D)  INCLUDED Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Voltage	•		
Meight 1.3 kg  Outer Dimensions (W x H x D)  INCLUDED Handpiece holder, Power cord, Hear resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included (standard)  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit (Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes in lid to minimise the risk to the operator of electrical shock or tube breakage (UV tubes are masked off to ensure true and even usable exposure area electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Power Consumption	1300W		
Outer Dimensions (W x H x D)  INCLUDED  ACCESSORIES  Bandle Sided UV Exposure Unit, Essential pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essential Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer, with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Air Flow	•		
Outer Dimensions (W x H x D)  INCLUDED  ACCESSORIES  Handpiece holder, Power cord, Hear resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		Waight	,		
INCLUDED ACCESSORIES  Handpiece holder, Power cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
ACCESSORIES  cord, Heat resistant pad, pick up wire, 4mm Nozzle (standard)  Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		,	160 x 145 x 220 mm		
Double-Sided UV Exposure Unit, Essentials Included  Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			=		
Standard   Standard		ACCESSORIES	-		
Double-Sided UV Exposure Unit, Essentials Included   Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit   Exposure area over 10 in x 12 in   Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage   UV tubes are masked off to ensure true and even usable exposure area   Electronic timer with touch membrane control   Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced   Rocker switch isolates bottom tubes for single sided exposures   Dimensions (mm)   H.170 x W.550 x D.485					
Essential for production of double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		P. H. C.I. LWA	,		
double sided PCBs in order to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485		Double-Sided UV Exposure			
to avoid the difficult problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x  12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			-		
problem of artwork registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
registration with 2 separate exposures on a single sided unit  Exposure area over 10 in x 12 in Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485					
exposures on a single sided unit  Exposure area over 10 in x 12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			_		
Teach times the control of the contr					
Exposure area over 10 in x  12 in  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  H.170 x W.550 x D.485			_		
FEATURES  FEATURES  TEATURES  TUV tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm)  TEATURES  Tunit					
FEATURES  Quality construction in steel box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			=		
box with glass covering base tubes and mylar film covering tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
tubes in lid to minimise the risk to the operator of electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485		FEATURES			
electrical shock or tube breakage  UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
breakage UV tubes are masked off to ensure true and even usable exposure area Electronic timer with touch membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			_		
UV tubes are masked off to ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
ensure true and even usable exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485	5.			1 unit	
exposure area  Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
Electronic timer with touch membrane control  Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
membrane control Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
Vacuum pump and vacuum bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
bleed operated separate of the timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced  Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
timer; with a vaccum gauge fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
fitted to check optimum vacuum is achieved before exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
exposure is commenced Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
Rocker switch isolates bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485			vacuum is achieved before		
bottom tubes for single sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
sided exposures  Dimensions (mm) H.170 x W.550 x D.485					
Dimensions (mm) H.170 x W.550 x D.485					
			•		
Weight 2.1kg		Dimensions (mm)	H.170 x W.550 x D.485		
		Weight	2.1kg		

Brauing D	Exposure Area (mm)	355 x 260 (vacuum pip protrudes 25mm into top		
	Timer	left of exp.area) 0 to 999 seconds		
	Tubes			
	Operating Voltage	240Vac 50/60 Hz		
	Туре	Double Sided		
	ESSENT	TIALS		
	Replacement UV Tube and Starter Kit	Wattage: 15W, No.of Tubes: 2, No. of Starters: 2	4 units	
	Bench Top Zero Volt Ionis	er, Essentials Included		
		Steady state DC ionisation and patented Sense Feedback Balancing Compact Size		
		Rapid access maintenance  Automatic balancing of		
	FEATURES	ionisation system Equipped with audible and visual indicators for "Balance" and		
		"Maintenance Required"  Data acquisition ready	1 unit	
		Low offset voltage		
		Balance +/-5 voltage offset,		
6.	Tour	field programmable		4
	Туре			
	Number of Fans	1		
	Supply Voltage	220V ac		
	Depth	7.9 cm		
	Heigth	24.1 cm		
	Width	15.2 cm		
	ESSENTIALS			
	Mounting Arm	compatible with supplied Bench Top Zero Volt Ioniser	1 unit	
	Power Cable Assembly	2.5 m Black, Type F Schuko Plug 10A, IEC C13, 250V	1 unit	

Diading D		34, Fourth Edition, December 2010)		
	Bench Magnifier, Es	ssentials Included		
	_	A round glass lens, daylight lamp with flexible joints and a quick positioning handle. Allows the user to quickly push the magnifier out of the way or pull the magnifier closer to the workpiece for detailed working  Energy saving 22W bulb and electronic ballast for longer life and reduced costs  Low heat emission bulb and shadow free lighting		
		for clear and confortable working Protective sun cap  With a 1.5m cable and table clamp with cone holder is ideal for mobile working and can quickly		
7.	Doptre	and easily be moved from desk to desk	2 units	
	Lens Size	125 mm		
	Magnifier Type	Table Clamp Mount		
	Lamp Type	Fluorescent		
	Lamp Wattage	22 W		
	Operating Voltage	220 Vac ~ 240 Vac		
	ESSENTIALS			
	Replacement Tube	22 Watt Round Fluorescent Energy Saving Tube	10 units	
	Test Block with Cord and Plug	Cord: 1.5 m, Plug Type: G BS1363, Max. Working Voltage 240 Vac 50/60 Hz, Max. Working Current: 13 A without cord 5 A with cord, Insulation Resistance: > 100 Mohm @ 500 Vdc, Withstand Voltage: 2000Vac for 2 min, Cable Entry: 4 to 7 mm, Max. Conductor Size: 2, Materials: G.P. phenolic/Polycarbonate	2 units	

	Heating Element Type	Nichrome Wound		
	Iron Cord Length			
	Supplied Tip			
	Iron Stand			
	Bench Top Po	wer Sunnly		
	_	at least 3 Years		
9.	FEATURES	Three Independent Output: 30V/3A x 2 Variable, (2.5V/3.3V/5V)/3A (Fixed) 4 LED Display Sets: 3 Digits after Decimal Point Minimum Resolution: 1 mV/1 mA Digital Panel Control: Rotary Encoder Switch, Rubber Key with Indicator User Friendly Operation: Coarse/Fine Control 4 sets Save/Recall Key-Lock Warning Buzzer Output On/Off Tracking Series and Parallel Mode Smart Cooling Fan Achieving Low Noise Compact Design	1 unit	
	OUTPUTS	0 2077		
	Voltage 1	0 to 30 V		
	Current 1	0 to 3.0 A		
	Voltage 2			
	Current 2			
	Voltage 3			
	Current 3	3.0 A Fixed		
	VOLTAGE REGULATION			
	Load	= 5 mV</td <td></td> <th></th>		
	Line	= 15 Mv</td <td></td> <th></th>		

	CURRENT REGULATION			
	Load	= 0.02 %+3mA</td <td></td> <td></td>		
	Line	= 0.02 %+3mA</td <td></td> <td></td>		
	RIPPLE			
	Voltage (mVrms)	≤2mV		
	Current (mArms)	≤3mA		
	RESOLUTION			
	Voltage	1mV		
	Current	1mA		
	PROGRAM ACCURACY			
	Voltage	±0.03% rdg + 10 digits		
	Current	±0.3% rdg + 10 digits		
	READBACK ACCURACY			
	Voltage	±0.03% rdg + 10 digits		
	Current	±0.3% rdg + 10 digits		
	DISPLAY			
	Voltage	4 3/4 digits 0.4in LED		
	Current	3 3/4 digits 0.4in LED		
	Weight	7 kg		
	Dimensions	W 210 x H 130 x D 265mm		
	Supply Voltage	110 / 230V ±10% 50 / 60Hz		
	230 VAC Solder Fur	ne Extractor		
	Supply Voltage	230 Vac 50-60 Hz		
	Power Consumption	22 W		
	Air Flow (with Filter)	"1.0 m/min vertically mounted		
•	This Flow (with Filter)	0.4 m/min horizontally mounted"	2 units	
	Air velocity (with filter)	"1.0 m/s vertically mounted		
	Dimensions (W x H x D)	2.6 m/s horizontally mounted" 166 x 212 x 113 mm		
	Weight (excl. pwr. cord)	930 gm		

Januaring D	INCLUDED ACCESSORIES	-, - :		
	Filter		2 units	
	Instruction Manual		2 units	
	Power Cord		2 units	
	Antistatic Table Top R	ack Kit. 16 Bins		
11.	FEATURES	Convenient conductive table top bin rack Ideal for kitting ESD sensitive components Complete with 1 Mohm grounding wire Surface Resistivity <106Ω/sq	1 unit	
	STANDARDS  Dimensions (HxWxD mm)	Supports ESD S20.20 and EN 61340-5-1 ESD control programme compliance 388 x 500 x 305		
	Tool and Wrist Strap ESD	Continuous Monitor		
12.	FEATURES	System comprises continuous monitor with 2 satellite modules Control unit can be mounted at eye level, where it will not impede worksurface area Control unit LEDs indicate proper grounding of 2 mats/2 operators and continuously display grounding status The satellite (remote) monitors include monitored single wire wrist strap	2 units	

ESSENTIALS		
Power Cord Connector A		
	C13	
Connector B	UK Plug	
Length	2m	
Current Rating	10:00 AM	]
Sheath Colour	Black	2 units
Voltage Rating	250 V	
Connector B Type	BS 1363	
Connector A Type	IEC	
Connector A Gender	Female	
Connector B Gender	Connector B Gender	

#### **Omnibus Sworn Statement**

REPUBLIC OF THE PHILIPPINES	)
CITY/MUNICIPALITY OF	) S.S

#### **AFFIDAVIT**

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

### 1. Select one, delete the other:

*If a sole proprietorship:* I am the sole proprietor of [Name of Bidder] with office address at [address of Bidder];

If a partnership, corporation, cooperative, or joint venture: I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

### 2. Select one, delete the other:

If a sole proprietorship: As the owner and sole proprietor of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to represent it in the bidding for [Name of the Project] of the [Name of the Procuring Entity];

If a partnership, corporation, cooperative, or joint venture: I am granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the [Name of Bidder] in the bidding as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate issued by the corporation or the members of the joint venture)];

- 3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;
- 4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
- 5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

### 6. *Select one, delete the rest:*

If a sole proprietorship: I am not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a partnership or cooperative: None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a corporation or joint venture: None of the officers, directors, and controlling stockholders of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

- 7. [Name of Bidder] complies with existing labor laws and standards;
- 8. [Name of Bidder] did not give or pay, directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity; and
- 9. [Name of Bidder] is aware of and has undertaken the following responsibilities as a Bidder:
  - a) Carefully examine all of the Bidding Documents;
  - b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
  - c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d) Inquire or secure Supplemental/Bid Bulletin(s) issued for the [Name of the Project].

IN WITNESS WHEREOF, I have hereunto	set my hand this day of, 20 at
Philippines.	
	Bidder's Representative/Authorized Signatory

[JURAT]

### REQUEST FOR CLARIFICATION

Т	)at		f I	٥H	tor
1	Jato	ല വ	ΤI	.et	гer

### ATTY. EDGARD E. VALDEZ

Name of the Bidder

BAC Chairman
Batangas State University
Rizal Avenue, Batangas City
Telephone No.: 980-0385 local 1811

•
Dear Sir:
In relation to the Sectionof Pageof the Bidding Documents for ( <u>Name of the Project</u> ), to wit:
" (Quote unclear provision) "
We would appreciate it if you could provide further explanation or clarification on the above. Thank you very much.
Very truly yours,
Name of Representative of the Bidder

### **Bill of Quantities**

Name of Bidder \_\_\_\_\_\_. Invitation to Bid Number \_\_\_\_. Page of \_\_\_\_.

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Cost of local labor, raw material, and component <sup>2</sup>	Total price EXW per item (cols. 4 x 5)	Unit prices per item final destination and unit price of other incidental services	Sales and other taxes payable per item if Contract is awarded	Total Price delivered Final Destination (col 8 + 9) x 4