

 IIT PALAKKAD	<p>भारतीय प्रौद्योगिकी संस्थान पालक्काड Indian Institute of Technology Palakkad अहलिया एकीकृत कैम्पस, कोज़िपारा Ahalia Integrated Campus, Kozhipara पालक्काड- 678557 Palakkad – 678 557</p>	<p>दूरभाषसंख्या/ Phone no:04923 226300/586</p> <p>ईमेल/Email: purchase@iitpkd.ac.in</p>
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TENDER FOR INVITING QUOTATIONS

TENDER NO: IITPKD/ELE/AR/111/2017

DATE: 30.01.2018

DUE DATE OF THE TENDER: 14.02.2018 AT 3.00 PM

Sir,

On Behalf of Indian Institute of Technology Palakkad quotations are invited for “**Solar PV Training Kit**” confirming to the specification in the Annexure

- 1. Preparation of Bids:** - The tenders should be submitted **under two-bid system** (i.e.) Technical bid and Financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. **No prices should be included in technical bid.** Financial Bid should indicate item – wise prices for the items mentioned in the technical bid. The technical bid and the Financial should be put **in separate cover** and sealed. Both sealed covers should be put into a bigger cover.
- 2. The Quotations** duly sealed and superscribed on the envelope **with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above. Fax and Email quotation are not acceptable.**
- 3. The price** should be quoted per unit and packing and delivery charges should be indicated separately. The offer/bids should be exclusive of Taxes and Duties, which will be paid by the purchaser as applicable. However the percentage and of taxes and duties as on date should be clearly indicated.
- 4. The Quotations** should be valid for **sixty days** from the due date and the period of delivery required should also be clearly indicated.
- 5. Local Firms:** Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
- 6. Firms outside Palakkad:** Quotations should be for **F.O.R. at IIT Palakkad.** If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.

7. Goods should be supplied carriage paid and insured. Goods shall not be supplied without an official supply order.
8. **Custom Duty:** Custom Duty which will be paid at a concessional rate against duty exemption certificate.
9. **GST :** Concessional **GST@5%** will be paid extra as per **GOI Notification No.47/2017 Dated : 14.11.2017**
10. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later. **Please indicate actual product cost + Taxes separately.** No advance payment will be made. The Tenderer have to furnish the bank details along with tender like Account No, Account Name, IFSC Code etc.,
11. **Submission of Bids:** Quotation should be sent to the following address "**The Registrar, Indian Institute of Technology Palakkad, Ahalia Integrated Campus, Kozhipara, Palakkad -678 557, Kerala**", Phone No: **04923 226 300/ 590/586** , Email : **purchase@iitpkd.ac.in**
12. **Delivery Period: The Item to be supplied within 3-4 weeks from the date of purchase order.** In case there is any deviation in the delivery schedule, liquidated damages may be enforced or penalty for the delayed supply period may be levied.
13. **Late offer:** The quotation received after due date will not be considered. Please ensure that your offer is sent well in advance to reach the Institute by the due date.
14. **Warranty:** Warranty clause should be indicated clearly. For more details please refer our technical specification.
15. **Acceptance and Rejection:** I.I.T Palakkad has the right to accept the whole or any parts of the Tender or portion of the quantity offered or reject it in full without assigning any reason

Yours faithfully,



REGISTRAR, IIT PALAKKAD

The Solar PV Training Kit Technical Specification

The Solar PV Training Kit is a mini Solar PV Plant Prototype which enables students and faculty to understand in-depth concepts about stand-alone PV systems. The Solar PV Training Kit also provides more details on several concepts such as MPPT, inverter control etc. The system consists of individual plug-in units each with components for different experimental arrangements. The conception of the system allows indoor and outdoor experiments.

Solar Cell Simulator Required Quantity - 2 numbers

	Specification	Requirement
1	Solar Panels	80W or higher
a	Maximum Power Voltage	18.33 V
b	Maximum Power Current	2.39 A
c	Open Circuit Voltage	22.25 V
d	Short Circuit Current	2.53 A
e	Panel Type	Poly crystalline
2	Artificial Sunlight	
a	Type	Halogen
b	Total No. Of Light Panels	2 or more
c	Wattage	150 W or higher (each)
3	Measurement	
a	Module Voltage Voltmeter	0-200 V
b	Inverter i/p Voltage Voltmeter	0-200 V
c	DC Load Voltage Voltmeter	0-200 V
d	Battery Input Voltage Voltmeter	0-200 V
e	Module Current Ammeter	0-10 A
f	Inverter i/p Current Ammeter	0-10 A
g	DC Load Current Ammeter	0-2A
h	Battery i/p Current Ammeter	0-2 A
i	Gen. AC Current Ammeter	0-2 A
j	Gen. AC Voltage Voltmeter	0-750 V
k	Temperature Meter	0-200 degree celcius
l	Potentiometer	0-200 ohm/150 Watts

4	Load Box	
a	AC Load	
b	DC Load	5 Watt CFL
		12 LEDs
5	Battery	
a	Battery Rating	2 number lead acid type
		12 V, 4.5 Ah
6	DC-DC Converter	
a	Input Voltage	25V-15V
b	Output Voltage	0 to 14 V
c	Maximum Load Current	2.0 A
7	Inverter	
a	Input Voltage	14 V-11.5 V
b	Output Voltage	220V/ 50Hz
c	Output Type	Quasi Square Wave
8	Data logger and plotter unit	
a	PV Voltage	Should be provided
b	PV Current	Should be provided
c	MPPT	Should be provided
d	MPPT Algorithm	Should be provided
9	Warranty	1 year

About Price bid

Price bid must be in a separate sealed envelope and if found otherwise, the bidder will be disqualified

The Price bid must contain,

Item a) Price for 1 set of base equipment inclusive of all standard accessories.
 Item c) Price for any optional accessories.

Who can participate?

Only those bidders fulfilling the following criteria should respond to the tender.

1. Bidder should be either an Original Equipment Manufacturer (OEM) or designer of **Solar Cell Simulator** /allied fields
2. Bidder must be in existence in the business of **Solar Cell Simulator** /allied fields for a minimum period of two year (before or since 01-April-2015). Documentary evidence of experience must be provided.
3. The bidder should have implemented orders **Solar Cell Simulator** or allied fields worth exceeding INR 2 lakhs during previous financial years. Purchase orders and certificates of successful implementation must be included.
4. The bidder should have documentary evidence of having supplied **Solar Cell Simulator** or related instruments at a Centrally Funded Technical Institution (like IIT, NIT, IISc, IIST). Bidder must provide a certificate of satisfactory performance of the installed setup. Contact details of faculty-in-charge of installed setup must also be provided.
5. Compliance sheet for the specification & OEM Brochure has to be attached along with Technical bid. Vendor has to fill the compliance sheet and mention page number or reference number in OEM brochure. Unfilled / partial filled compliance sheets lead to disqualification.
6. The bidder must provide detailed specification of each equipment/item. Model numbers, datasheets and brochures must be included for each quoted equipment/accessories/item. Specification corresponding to quoted model number must be available publicly via OEM's website for scrutiny. If not, bid can be disqualified on technical grounds.
7. The bidder should ensure that the Solar Cell Simulator should be covered by warranty of at least one year.
8. If required, IIT Palakkad has the right to judge the technical compliance of the equipment based on the demonstration of the equipment as per the published tender specification.