



## Indian Institute of Technology Kanpur National Centre for Flexible Electronics

**Enquiry number: SCDT/FlexE/2019-2020/29**

**Date: 30 October 2019**

Opening Date : 30/10/2019  
Closing Date : 20/11/2019

Sealed quotations from prospective vendors are invited by the National Centre for Flexible Electronics, IIT Kanpur for the supply and installation of **OLED Lifetime system** with the following technical specification.

### Technical specifications:

1. Lifetime measurement setup supporting a minimum of 16 channels expandable up to at least 32 channels in future is desirable. All the channels should be individually controllable for current/voltage and operational mode (continuous/pulsed) settings.
2. Customized jig for our substrate design and test requirement is mandatory. An allowable tolerance of  $\pm 0.5\text{mm}$  must be given on all sides to ensure proper positioning. Some Jigs for our climate chamber must be durable at
  - a. min RT~65 °C and 40~65% Relative Humidity.
  - b. min RT~80 °C without humidity condition
3. It should be possible to measure all pixels on a substrate in bottom emission devices (substrate size~2", pixel size: 4mm x 4mm, 8 pixels/substrate). There will be two kinds of substrates one with common cathode (two cathode pads) and one with separate cathode (four cathode pads).
4. It should be possible to measure top emission devices in future with the same system with new jigs.
5. PC and software for real time data acquisition and graphical display with auto test end feature (once the desired brightness level reaches or time) are mandatory.
6. Power supply with a desirable voltage range of at least  $\pm 20\text{V}$  and double current range of 10mA with an accuracy of at least  $\pm 0.05\% + 10\mu\text{A}$  (offset) FSR and 50mA with an accuracy of at least  $\pm 0.05\% + 50\mu\text{A}$  (offset) FSR. and noise range  $\ll 0.1\%$  FSR. The resolution of Voltage step  $\leq 3\text{mV}$  and current step  $\leq 15\mu\text{A}$  is desirable.
7. Power supply must support the following driving modes
  - a. Constant Current
  - b. Constant Voltage
  - c. pulsed Current
  - d. pulsed Voltage
  - e. pulsed Current - Voltage
8. Brightness Measurements should be possible in the range from 10 to 100000 cd/m<sup>2</sup> for Standard A illuminant, 2800K by using designated brand of Si-Photodiode and Photocurrent measurement should be possible in the multi ranges from 0 to 1mA with accuracy of at least  $\pm 0.05\% + 50\text{nA}$  FSR.
9. Lifetime measurements for the following OLEDs must be supported by the system:
  - a. RGB (single emitter)
  - b. White, yellow, Orange (multiple emitter)
10. System manufacturer's support must be provided for integration of measurement setup in our climate chamber.
11. Dark current specification for photodiode as a standalone component must be in the range of Pico Amperes.
12. Linear photo detector response up to 100000 cd/m<sup>2</sup> for Standard A illuminant.
13. Data acquisition of at least 16 bit is desirable.
14. Standard warranty of 1 year for all parts starting from the date of installation.
15. The Lifetime system manufacturer must have a vast expertise in the area of OLED Lifetime systems and must have a very good sales record of selling at least 100 systems for OLED display manufacturers, material companies, research institutes and universities working on OLEDs.

16. The manufacturers must prove its sales record by submitting at least 5 OLED lifetime system purchase orders of recent 1 year from major OLED display manufacturers, material companies, research institutes and universities working on OLEDs.
17. The Lifetime system manufacturer must have at least 3 patents in the area of OLEDs.
18. Adequate documentation needs to be provided with the system such as user manual, Maintenance and troubleshooting guide, Circuit drawings, Electrical connection map, jig drawings, software copy. Regarding this, NDA can be done from our side if required and sensitive components can be black boxed.
19. The manufacturer should provide necessary service and support for the next 10 years. It should be possible to buy additional jigs and required accessories separately from the supplier.
20. The manufacturer must have a recognized quality management system certification such as ISO 9001 or equivalent.

### **General Terms & Condition.**

1. All vendors are requested to submit **“technical and financial bids”** together in separately sealed envelopes.
2. Evaluation will be done on the basis of technical specifications given in tender document.
3. Financial bid will be open for those only who qualify all the technical specification as per our tender notice.
4. Quotation must be valid for 90 days.
5. Payments terms: 20% down payment upon purchase order (<10000 USD), 70% against installation, 10% after successful running of equipment for 3 months & approval.
6. The supplier must have supplied systems to institutions of national and/or international repute.
7. Warranty should be clearly mentioned. The Warranty must start from the date of installation at IITK.
8. Installation, demonstration, and training-sessions at IIT Kanpur will have to be provided by the manufacturer or the vendor for the quoted system free of cost.
9. Quotation should carry proper certifications like proprietary certificate/ authorization certificate from manufacturer, etc.
10. Quotation must integrate FCA/FOB prices.
11. Institute is exempted for partial custom duty (CD applicable to IIT Kanpur is 5.15%).
12. GST on purchases meant for research purposes is applicable @ 5% only.
13. The delivery period should within 3 months of PO.
14. At any time prior to the deadline for submission of bid, the Institute may, for any reason, at its own initiative, modify the bid document by amendments. Such amendments shall be uploaded on the website through corrigendum and shall form an integral part of bid document. The relevant clauses of the bid document shall be treated as amended accordingly. It shall be the sole responsibility of the prospective bidders to check the website from time to time for any amendment in the tender document. In case of failure to get the amendments, if any, the Institute shall not be responsible for it.
15. The Penalty @1% per week or part thereof subject to max 10% of the delivery price will be deducted from the balance payment, if supply is not completed within aforesaid delivery period.
16. The indenter reserves the right to withhold placement of final order. The right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason is reserved.
17. For any clarifications, the undersigned could be contacted.

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