Domestic RFQ for Photonic Curing System

We are seeking a photonic curing system to fabricate perovskite solar cells. Only domestic manufacturers may apply. **Please email your quotes to savasthi@iisc.ac.in. The last date to respond is 6th March 2024.**

General Description

This system will use a collection of flash lamps to create pulses of intense light that are used to cure films rapidly. The fumes created during the curing (primarily solvents) must be evacuated safely using an exhaust. The systems should be electronically controlled.

Technical Specifications

	Specification	Details
1.	Application	Photonic curing using flash lamps for perovskite solar cells.
2.	Sample size	Must be able to accommodate samples of size 300x150 mm
3.	Illumination area	Must be at least 150mm x 150mm with uniformity of 10%.
4.	Pulse mode	Single pulse with rest time of < 60s. Mention your repetition mode.
5.	Radiant energy per pulse	More than 10 J/cm2. Energy must be tuneable from 1 to maximum in increments of 0.1 J/cm2. Please mention the radiant energy per pulse
6.	Radiant peak power	at least 1 kW/cm2. Please mention the peak power density
7.	Pulse width	~10-20 msec FWHM. Mention your FWHM
8.	User interface	Must be able to tune radiant energy from 1 to maximum in increments of 0.1 J/cm2
9.	External control	The system should have an option to interface with a PC-based using an interfacing library like Python or Labview.
10.	Warranty	12 months
11.	Documentation	Full documentation with description, service, and troubleshooting details
12.	Safety	1. A completely covered system such that lamp intensity does not reach the operator. 2. Interlock so that the lamp does not trigger without closing the door. 3. A gasket-sealed sealed sample chamber that does not allow fumes to reach the operator. The chamber must be connected to an exhaust port that will connect to our utility. 4. The system must also have a N2 inlet so that the chamber can be purged to remove left over fumes.
13.	Power input	Single Phase 240V RMS 50Hz

14.	Instrument footprint	Looking for a compact system. Use the third dimension to pack the control electronics underneath the instrument. We don’t have space for a separate electronic rack. Please mention the instrument footprint.

Other Details

1. The Bidder should belong to either Class-1 or Class-2 suppliers distinguished by their "local content" as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter. a) Class-1 supplier: Goods and services should have local content of equal to or more than 50%. b) Class-2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.
2. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
3. The quotations should be on FOR-IISc Bangalore basis in INR only.
4. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.
5. Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to the Class-1 supplier.
6. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details.