



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai- 400076

PR: 1000024632
Rfx: 6100001081

Technical Specification for
“Lab-Scale Vacuum Membrane Laminator”

1. Specifications and System information/Requirement:

- a. The system should be capable of performing glass-on-glass encapsulation for Perovskite Solar Cells and Modules.
- b. Temperature range: ambient to 200°C (maximum).
- c. Temperature uniformity: 2°C
- d. Usable area: 60cm X 40cm approximate
- e. Maximum thickness of the laminate: 2cm (approximate)
- f. Noise reduced Vacuum Pump ~ 40 m³/h (approximate) with suitable gauges and display
- g. Ultimate value of the vacuum should be <0.5 Torr with controlled upper and lower lid.
- h. Auto and Manual control
- i. System should have its own air-cooling, vacuum pumps and computer/PLC control.
- j. Temperature and ramp rate to be display on panel.
- k. A separate Laptop (with the latest configuration) should be provided for the offline data analysis and process control design.
- l. Needed power requirements should be compatible for Indian standard, 220V AC.
- m. Laminator heating: Electrical

2. Other Terms and Conditions :

- i. Company should have supplied and installed 10 or more, same or similar equipment in India including Government Institutions or PSU.
- ii. Company should provide documentary evidence for the supply and installation in the form of Satisfactory letter from atleast 3 companies/institutions.
- iii. The Vendor/OEM should be in the same/similar kind of equipment business for >10 years. Documentary evidence for the same needs to be submitted in the form of Certificate of Incorporation.
- iv. Glass-on-glass lamination for perovskite solar cells should be demonstrated during the course of contract to be awarded either at the existing client or seller's location. Also, the inspection will be done prior to shipment.

- v. In person support for the installation at buyer's location.
- vi. In person training for 2 people (inclusive of travel, accommodation and food)
- vii. The entire set up should have 3 years warranty.