



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

Powai, Mumbai - 400076

PR No. 1000025336

Rfx No. 6100001108

**“Photonic Curing System with LabView based Stage Motion Control”**

**Technical Specifications**

1. Lamp Assembly with 300 mm flash lamp (water cooled) with automated sample and stage cooling (air cooled)
2. Latest PC-based Control System (LAPTOP) with standard operations and temperature/ process simulation. Additional program for selective position flashing should be provided.
3. Added laptop for offline data analysis required
4. Power Supply 950V, 5KW.
5. Automated NIST traceable energy output calibration with statistical process measurement
6. Mechanical stage height adjustment with sub-millimetre resolution.
7. Additional transparent window, 2 spare lamps, Lamp cooling assembly is required as spare.

**8.Lamp output specification:**

- a. Max radiant energy delivered (J/cm<sup>2</sup>) >30 (software controlled)
- b. Peak radiant power delivered (kW/cm<sup>2</sup>) >5 (software controlled)
- c. Peak average power output >7 W/cm<sup>2</sup> (software controlled)
- d. Curing dimension per pulse (L x W in mm) 75 x 300 (software controlled)
- e. Pulse length range (microseconds) 100 – 100,000 (software controlled)
- f. Pulse length increment (microseconds) < 5 (software controlled)
- g. Minimum pulse spacing (microseconds) < 25 (software controlled)
- h. Max pulse rate >7 Hz (software controlled)
- i. Pulse Modes as below (software controlled)
  - 1) Single pulse
  - 2) Uniform multi-pulse
  - 3) Arbitrary multi-pulse

Required:

- 1) 3 years on-site warranty
  - 2) On-site Installation and Training to be provided.
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