

Laser Beam Expander with Accessories

Table 5: Technical specifications of Laser Beam Expander

No.	Parameter	Specification	Remarks to Party
1	Application	For expanding the beam emanating from the laser head, in order to reduce the divergence	Provide details including make and model
2	Design Wavelength (DWL)	532 nm	Provide value
3	Input clear aperture	≥ 12 mm	About 2 mm greater than the input laser beam diameter of about ~10 mm
4	Output beam diameter	~100 mm Adequate expansion factor (X) is required to expand the laser beam diameter	Provide value of output beam diameter achievable and the expansion factor
5	Output beam divergence	< 0.1 milli-radians Adequate expansion factor (X) is required to reduce the beam divergence	Provide value of output beam divergence achievable and the expansion factor
6	Substrate	Suitable material for High-energy pulsed lasers (> 800 mJ energy per pulse at 532 nm)	Provide details
7	Laser-Induced Damage Threshold (LIDT)	≥ 4.5 J/cm ² at 532 nm, ~10 ns pulse width, ~30 Hz PRF	Provide LIDT value and coating details
8	Angle of Incidence	0 deg	Provide value
9	Transmission	$\geq 95\%$	Provide value
10	Transmitter Wavefront Error	P-V: $\lambda/10$ or better for ~10 mm input laser beam diameter	Provide value
11	Mount	Suitable mount at the laser beam height is to be provided. Mount requirements are: <ul style="list-style-type: none"> ○ Beam expander has to be precisely aligned with the laser beam emanating from the laser head. ○ Mounting height is to be determined as per height of the laser beam from table top for the offered laser system. ○ Provision for fine adjustment/translation of the beam expander is preferable (height and position adjustment) 	Provide details of the mount