

Beam Expanders

Lens assemblies for changing the laser beam diameter and divergence

Beam expander is an optical component built to enlarge the diameter of collimated input beam and reduce beam divergence. It is primarily applied in laser scanning laser processing, interferometry and remote sensing. A typical Galilean type beam expander consists of one negative lens and one positive lens.

CASTECH offers two types of beam expanders, fixed magnification and variable magnification. The fixed magnification beam expander is with compact design, which benefits system integration. The magnification and divergence of variable type are adjustable, making it easy to adapt to different application scenarios.

Our product covers diverse magnifications and wavelengths to meet various application requirements. Advanced polishing and coating technology have been used to ensure high beam quality and low insertion loss.



Applications

- Laser Scanning
- Short Pulsed Laser
- Ultra-Short Pulsed Laser

CASTECH's products are produced independently throughout the entire process and can be customized according to customer needs. Refer to the following list for standard products.

Beam Expander Model Number: tBE-b-c-d-e

Type (t)	Wavelength (b)	Expansion (c)	Thread (d)	Divergence Adjustable (e)
F (Fixed magnification)	355 nm	2 (2X) 3 (3X)	22 (M22*0.75)	A (Yes)
V (Variable magnification)	532 nm 1064 nm	1:3 (1X-3X)* 1:4 (1X-4X)*	30 (M30*1)	B (No)
EV (Electric variable magnification)	...	2:8 (2X-8X)*	

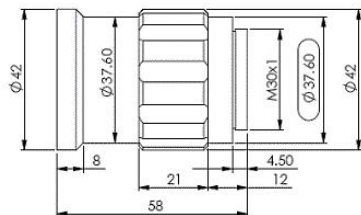
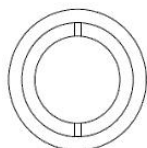
Typical Specifications

Expansion	Material	Input Aperture	Exit Aperture	Max Outside Diameter
2	UVFS	12 mm	26 mm	42 mm
10	UVFS	6 mm	31 mm	46 mm
2X-8X*	UVFS	3 mm	26 mm	48 mm

*Only suitable for V/EV (variable/electric variable magnification beam expander) type products

Housing dimensions(mm):

ZJ161



ZJ162

