

RL-BE Series Laser Beam Expander



RealLight's RL-BE series laser beam expander can optimize the diameter and divergence of a laser beam. This series consists of 2-4 lenses, which allows a collimated beam output with magnifications from 5x to 20x. RealLight's beam expanders are designed for 1535nm, 1064nm, 532nm and 355nm wavelengths, featuring compact size, low loss, high damage threshold, etc. Straight cylinder connections and flange connections are available. Other magnifications and configurations can be customized upon request.

Key Features

- ◆ Various wavelengths
- ◆ Compact design
- ◆ High transmittance

Applications

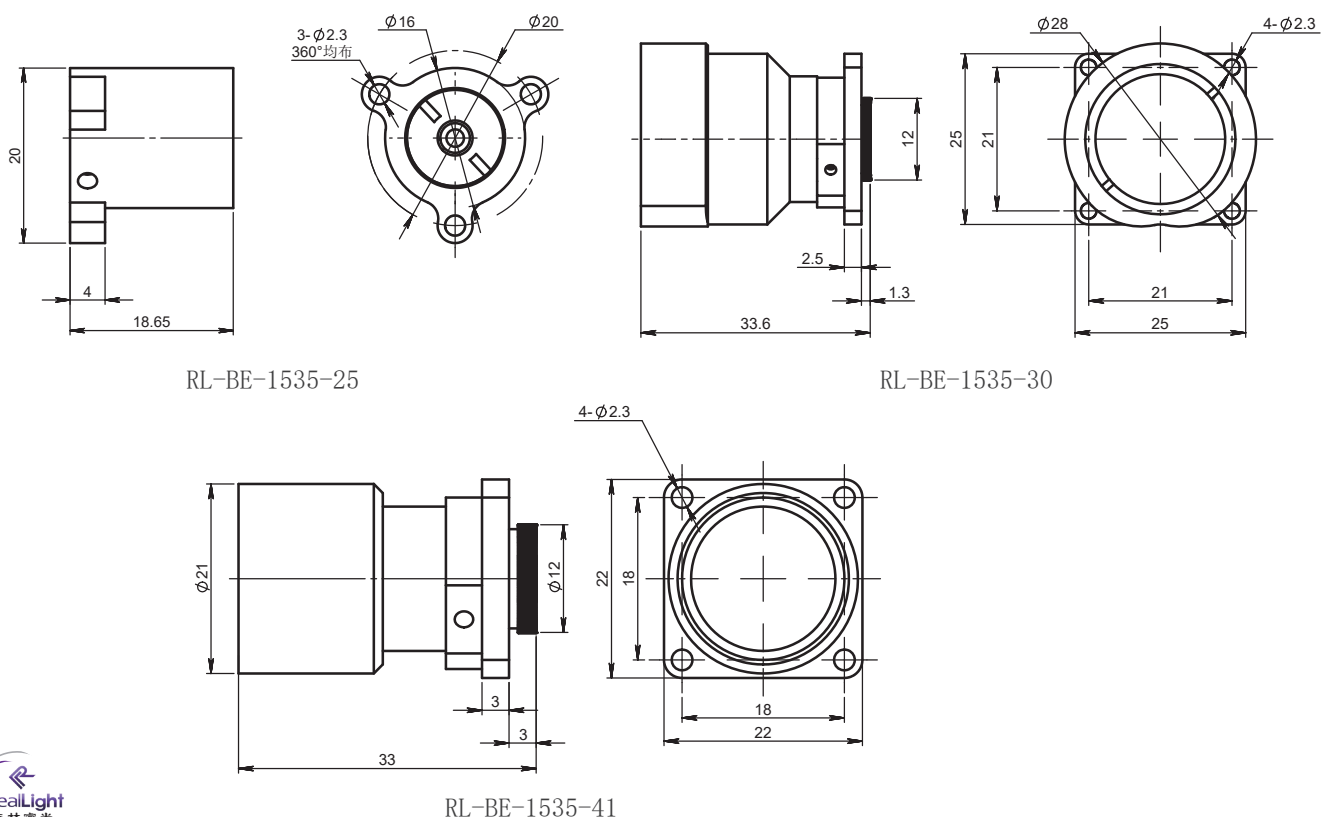
- LiDAR
- Laser Engraving
- Biomedicine
- Scientific Instrument

1535nm Laser Beam Expander Specifications

Part Number	Wavelength (nm)	*Magnification	Transmission	Damage Threshold (J/cm ²)	Input Aperture CA-mm	Output Aperture CA-mm	Outer Diameter of Lens Tube (mm)	Lens Tube Length (mm)
RL-BE-1535-25	1535	25	> 95%	20	1.5	11	20	18.65
RL-BE-1535-30	1535	30	> 95%	20	2	20	28	33.6
RL-BE-1535-41	1535	41	> 93%	20	3	15	21	33

* Magnification: refers to the ratio of focused beam size to fiber core of input laser.

1535nm Laser Beam Expander Dimensions Unit:mm



1064nm Laser Beam Expander Specifications

Part Number	Wavelength (nm)	*Magnification	Transmission	Damage Threshold (J/cm ²)	Input Aperture CA-mm	Output Aperture CA-mm	Outer Diameter of Lens Tube (mm)	Lens Tube Length (mm)	Thread
RL-BE-1064-5	1064	5	> 97%	10	10	22	27	74	M22x0.75
RL-BE-1064-10	1064	10	> 97%	10	6	22	27	71.5	M22x0.75
RL-BE-1064-15	1064	15	> 97%	10	6	22	27	74	M22x0.75
RL-BE-1064-20	1064	20	> 97%	10	6	22	27	83	M22x0.75

532nm Laser Beam Expander Specifications

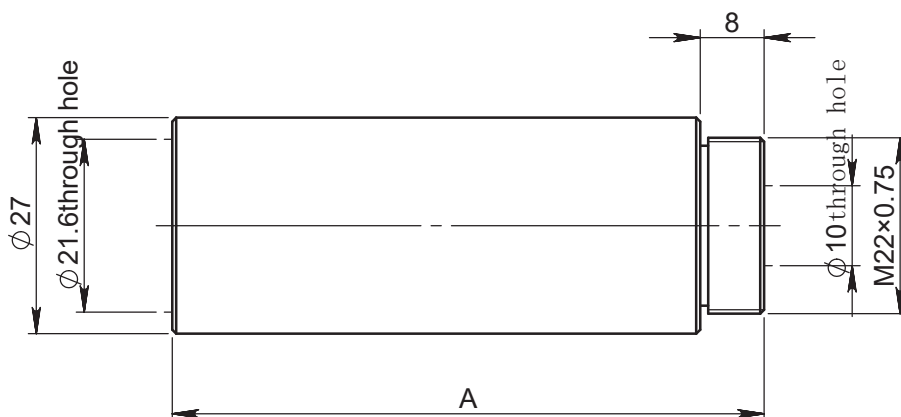
Part Number	Wavelength (nm)	*Magnification	Transmission	Damage Threshold (J/cm ²)	Input Aperture CA-mm	Output Aperture CA-mm	Outer Diameter of Lens Tube (mm)	Lens Tube Length (mm)	Thread
RL-BE-532-5	532	5	> 97%	7	10	22	27	70.2	M22x0.75
RL-BE-532-10	532	10	> 97%	7	6	22	27	77.7	M22x0.75
RL-BE-532-15	532	15	> 97%	7	6	22	27	83	M22x0.75
RL-BE-532-20	532	20	> 97%	7	6	22	27	82.3	M22x0.75

355nm Laser Beam Expander Specifications

Part Number	Wavelength (nm)	*Magnification	Transmission	Damage Threshold (J/cm ²)	Input Aperture CA-mm	Output Aperture CA-mm	Outer Diameter of Lens Tube (mm)	Lens Tube Length (mm)	Thread
RL-BE-355-5	355	5	> 97%	5	10	22	27	76	M22x0.75
RL-BE-355-10	355	10	> 97%	5	10	22	27	66	M22x0.75
RL-BE-355-15	355	15	> 97%	5	10	22	27	71	M22x0.75
RL-BE-355-20	355	20	> 97%	5	10	22	27	87	M22x0.75

* Magnification: refers to the ratio of focused beam size to fiber core of input laser.
 Note: Other magnifications are available upon request.

1064/532/355nm Laser Beam Expander Dimensions Unit:mm



Note: Lens tube lengths are different (between 68mm to 83mm) for beam expanders with different wavelengths and magnifications. For details, please refer to specifications.