

High Power Laser Beam Expander **BEHP** **RoHS**

It is capable of 1x to 3x times changing high-power zoom Laser beam expander.
It supports a broader wavelength range than the current models.
It can be used in an optical system with high precision, such as a laser interferometer and processing by the lens design that takes into account the wavefront aberration.

- The optical design of the beam expander is an air gap configuration that does not use an adhesive to bond the lenses. This allows the beam expander to be used with a high-power laser.
- It is designed and coated to enable to use in a broader wavelength range than the current models.
- By turning the diopter ring that is attached to the center of the beam expander, you can make variable beams such as the focused beam, collimated beam, and the divergent beam. It is used when you want to vary the position of the beam waist and if strict collimation adjustment is necessary.



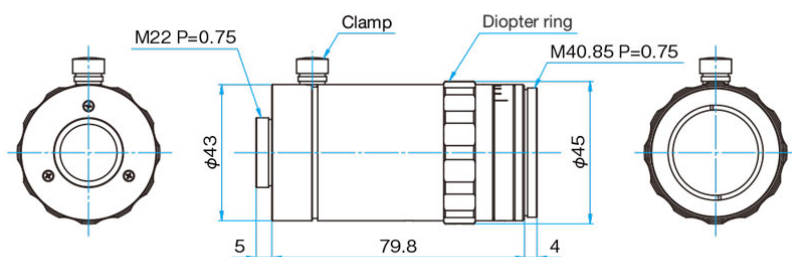
Common Specifications	
Material	Synthetic fused silica
Housing Material	Aluminum
Housing Finish	Black Anodized
Acceptance angle	±1°(φ6mm)(w/o vignetting)
Coating	R<10% @600-700
Transmitted wavefront distortion	<λ/10 @φ6mm(design value)
ポインティング	<0.5mrad (Reference value)

Specifications								
Part number	Price [JP Yen]	Design wavelength [nm]	Wavelengths [nm]	Variable expansion ratio	Input aperture [mm]	Transmittance [%]	Laser Damage Threshold* [J/cm²]	Weight [kg]
BEHP-1.5-250/280	78,000	250-266	250-280	1.5	φ11	>99	2(J/cm²)@266nm	0.25
BEHP-1.5-340/380	78,000	340-355	340-380	1.5	φ11	>99	4(J/cm²)@355nm	0.25
BEHP-1.5-500/570	78,000	500-532	500-570	1.5	φ11	>99	5(J/cm²)@532nm	0.25
BEHP-1.5-1030/1100	78,000	1030-1064	1030-1100	1.5	φ11	>99	7(J/cm²)@1064nm	0.25
BEHP-2-250/280	78,000	250-266	250-280	2	φ10	>99	2(J/cm²)@266nm	0.21
BEHP-2-340/380	78,000	340-355	340-380	2	φ10	>99	4(J/cm²)@355nm	0.21
BEHP-2-500/570	78,000	500-532	500-570	2	φ10	>99	5(J/cm²)@532nm	0.21
BEHP-2-1030/1100	78,000	1030-1064	1030-1100	2	φ10	>99	7(J/cm²)@1064nm	0.21
BEHP-3-250/280	78,000	250-266	250-280	3	φ8	>99	2(J/cm²)@266nm	0.21
BEHP-3-340/380	78,000	340-355	340-380	3	φ8	>99	4(J/cm²)@355nm	0.21
BEHP-3-500/570	78,000	500-532	500-570	3	φ8	>99	5(J/cm²)@532nm	0.21
BEHP-3-1030/1100	78,000	1030-1064	1030-1100	3	φ8	>99	7(J/cm²)@1064nm	0.21

*Laser pulse width ; 10ns , Repetition frequency ; 20Hz

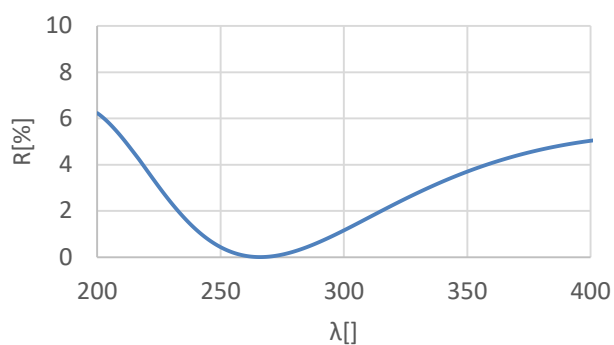
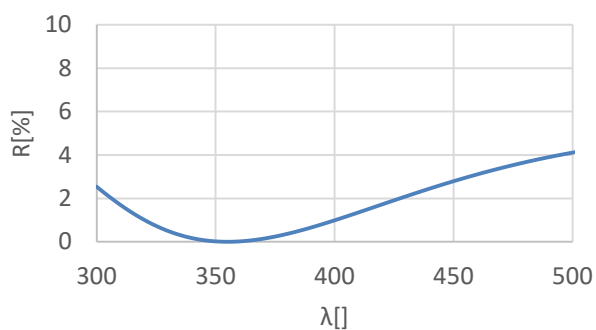
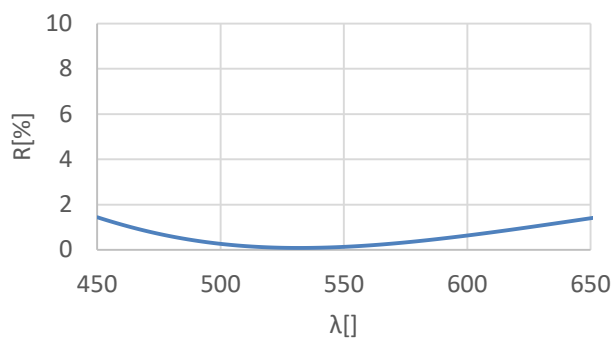
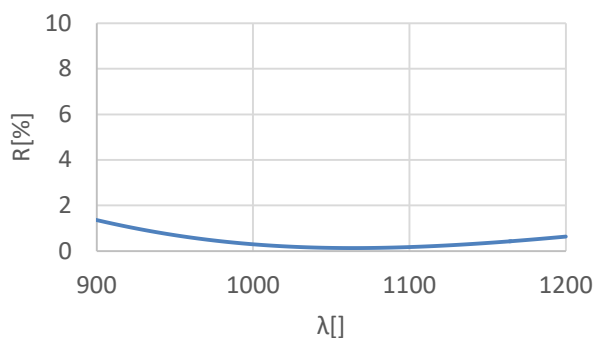
- Guide**
- ▶ We provide the laser beam expander holders (KLH-BE) for optical axis adjustment of the laser beam expander.
 - ▶ We can also provide a beam expander for wavelengths not listed on-line or in our catalog, please contact our Sales Division with your request.

- Attention**
- ▶ The laser energy density at small aperture(output aperture) will become higher than LIDT when reducing the beam diameter and the Beam expander might be broken.
 - ▶ It may not be able to obtain the expected function when the beam expander is used in the opposite direction (reducing the beam diameter). Please refer the technical note of the laser beam expander for details.

BEHP

Typical Reflectance Data (Reference data)

R: Reflectance

BEHP-250/280**BEHP-340/380****BEHP-500/570****BEHP-1030/1100**

Holder for laser beam expander



KLH-BE

Dedicated holder for laser beam expander
Adjust angle of output beam and center of brightness distribution.

High-Power Zoom Laser Beam Expander

BEZHP

RoHS

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Common Specifications	
Material	Synthetic fused silica
Housing Material	Aluminum
Housing Finish	Black Anodized
Acceptance angle	±1°(φ6mm)(w/o vignetting)
Output aperture diameter	φ25mm
Coating	R<10%@600-700
Transmitted wavefront distortion	<λ/7@φ5mm(design value)
Pointing	<0.5mrad (Reference value)

Guide

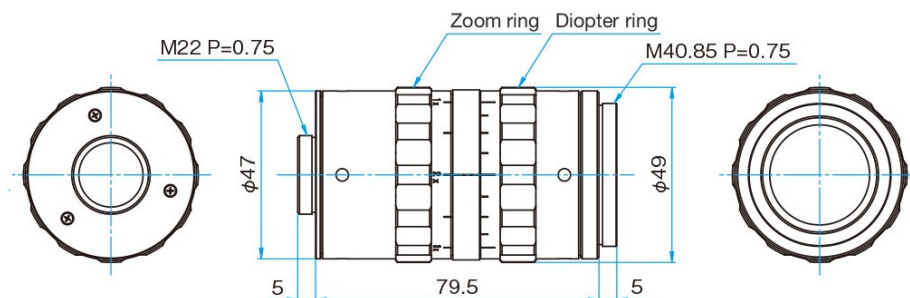
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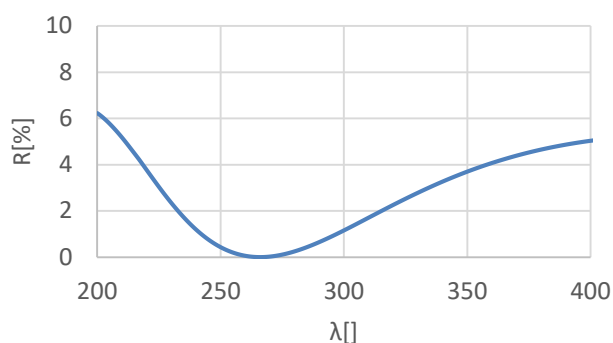
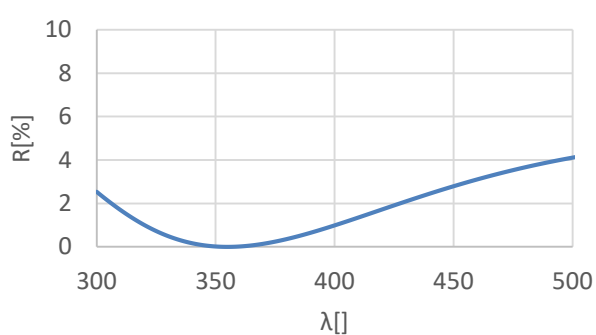
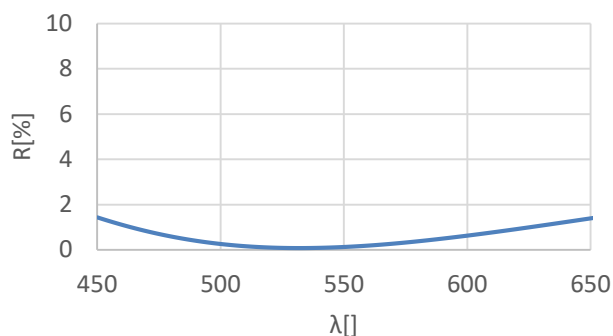
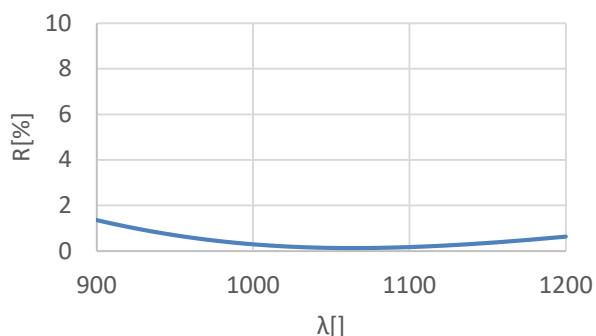
Specifications								
Part number	Price [JP Yen]	Design wavelength [nm]	Wavelengths [nm]	Variable expansion ratio	Input aperture [mm]	Transmittance [%]	Laser Damage Threshold* [J/cm²]	Weight [kg]
BEZHP-1/3-250/280	150,000	250-266	250-280	1-3x	φ14(1x)-6(3x)	>98	2(J/cm²) @266nm	0.21
BEZHP-1/3-340/380	150,000	340-355	340-380	1-3x	φ14(1x)-6(3x)	>98	4(J/cm²) @355nm	0.21
BEZHP-1/3-500/570	150,000	500-532	500-570	1-3x	φ14(1x)-6(3x)	>98	5(J/cm²) @532nm	0.21
BEZHP-1/3-1030/1100	150,000	1030-1064	1030-1100	1-3x	φ14(1x)-6(3x)	>98	7(J/cm²) @1064nm	0.21

*Laser pulse width ; 10ns , Repetition frequency ; 20Hz



Typical Reflectance Data (Reference data)

R: Reflectance

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