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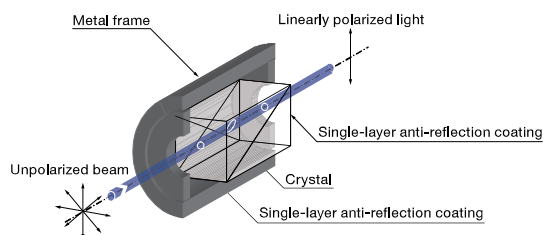
This is a special polarizer with minimal transmission loss, and a high extinction ratio below 5×10^{-5} is obtained. It is used in high-precision polarization experiments.

The Calcite can be used in the visible to the infrared region, and α -BBO crystal type usable in the ultraviolet region are available.

- Glan Thompson prism is housed in a metal frame, and no stress is applied to the inner element when frame is mounted in the holder.
- Calcite type Glan Thompson prism are available in two acceptance angles.
- A single-layer anti-reflection coating has been applied on the surface of the Glan Thompson prism to provide high transmittance.

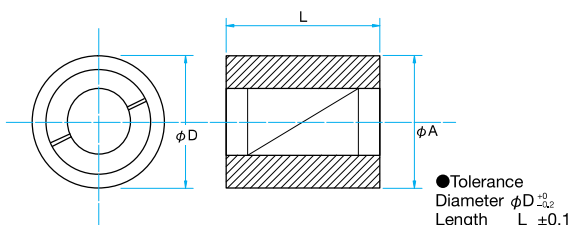


Schematic



Outline Drawing

(in mm)



Specifications

| | |
|----------------------------------|---|
| Material | α -BBO, Calcite |
| Beam Deviation | $<3''$ |
| Transmitted wavefront distortion | $\lambda/4$ |
| Coating | MgF ₂ Single-layer anti-reflection coating |
| Laser Damage Threshold | 0.3J/cm ² (Pulse duration 10ns) |
| Surface Quality (Scratch-Dig) | 20-10 |
| Material of metal frame | Aluminum Finishing: Black anodized |

Guide

- ▶ Glan laser prism for high-power laser (GLPB / GLPC) and Wollaston prism (WPPB / WPPC) are also available.
- ▶ If you need uncoated Glan Thompson prism or anti-reflection coating with specific reflectance, please contact our Sales Division with your request.

Attention

- ▶ A change in the incident angle may also change the extinction ratio of the linearly polarized transmitted light.
- ▶ Separation angle will vary depending on the wavelength. Please confirm the wavelength characteristic graph for separation angle.
- ▶ Because of natural calcite crystals, there are individual differences, and variations in quality.

 α -BBO

| Part Number | Wavelength Range [nm] | Extinction ratio | ϕA [mm] | $\phi D \times L$ |
|----------------|-----------------------|---------------------|---------------|-------------------|
| GTPB-06-18SN | 200 - 900 | $<5 \times 10^{-5}$ | $\phi 6$ | 15×18 |
| GTPB-08-21SN | 200 - 900 | $<5 \times 10^{-5}$ | $\phi 8$ | 25.4×21 |
| GTPB-10-24.5SN | 200 - 900 | $<5 \times 10^{-5}$ | $\phi 10$ | 25.4×24.5 |
| GTPB-15-32.5SN | 200 - 900 | $<5 \times 10^{-5}$ | $\phi 15$ | 30×32.5 |

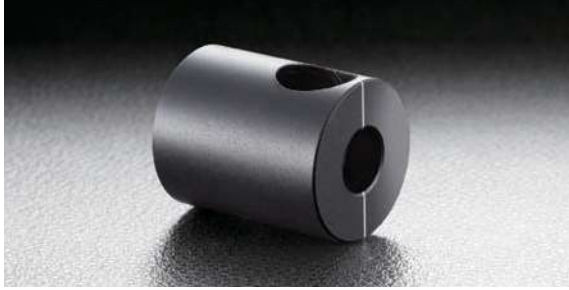
Calcite

| Part Number | Wavelength Range [nm] | Extinction ratio | ϕA [mm] | $\phi D \times L$ |
|----------------|-----------------------|---------------------|---------------|-------------------|
| GTPC-06-23SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 6$ | 15×23 |
| GTPC-08-28SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 8$ | 25.4×28 |
| GTPC-10-33SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 10$ | 25.4×33 |
| GTPC-15-45.5SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 15$ | 30×45.5 |
| GTPC-06-26SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 6$ | 15×26 |
| GTPC-08-32SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 8$ | 25.4×32 |
| GTPC-10-38SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 10$ | 25.4×38 |
| GTPC-15-53SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 15$ | 30×53 |

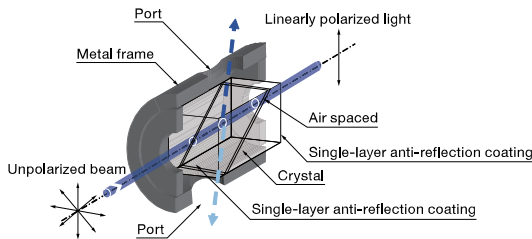
Compatible Optic Mounts

GTPC-PH30 / GTPC-SPH30 / GTPC-ADP

The Glan Laser polarizer are designed to provide an enhanced laser damage threshold for high power lasers and high energy laser pulses. The transmission loss is minimal, and a high extinction ratio below 5×10^{-5} is obtained. The Calcite type that can be used in the visible to the infrared region, and α -BBO crystal type usable in the ultraviolet region are available.

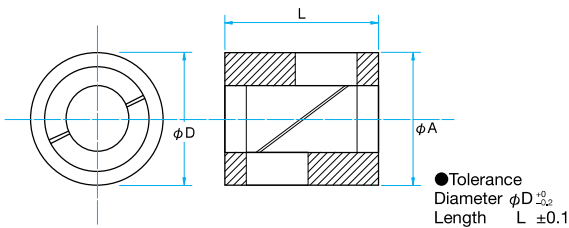


Schematic



Outline Drawing

(in mm)



- The two prisms are mounted with a small gap (air-gap) to eliminate the adhesive and reduce laser damage.
- Glan Laser prism is housed in a metal frame. The polarization component which does not pass through the prism exit out of the frame through port (hole) of the metal frame.
- Since there are two ports, the prism can also be used by replacing the input and output direction.
- A single-layer anti-reflection coating has been applied on the surface of the Glan Laser prism to provide higher transmittance.

Specifications

| | |
|----------------------------------|---|
| Material | α -BBO, Calcite |
| Beam Deviation | $<3''$ |
| Transmitted wavefront distortion | $\lambda/4$ |
| Coating | MgF ₂ Single-layer anti-reflection coating |
| Laser Damage Threshold | 2J/cm ² (Pulse duration 10ns) |
| Surface Quality (Scratch-Dig) | 20-10 |
| Material of metal frame | Aluminum Finishing: Black anodized |

Guide

- ▶ Glan Thompson prism with wider acceptance angle (GTPB / GTPC) and Wollaston prism (WPPB / WPPC) are also available.
- ▶ If you need uncoated Glan Laser prism or anti-reflection coating with specific reflectance, please contact our Sales Division with your request.

Attention

- ▶ A change in the incident angle may also change the extinction ratio of the linearly polarized transmitted light.
- ▶ Because of natural calcite crystals, there are individual differences, and variations in quality.

α -BBO

| Part Number | Wavelength Range [nm] | Extinction ratio | ϕA [mm] | $\phi D \times L$ |
|----------------------|-----------------------|---------------------|---------------|-------------------|
| GLPB2-06-29SN-2/3 | 200 - 270 | $<5 \times 10^{-6}$ | $\phi 6$ | 15x29 |
| GLPB2-08-31SN-2/3 | 200 - 270 | $<5 \times 10^{-6}$ | $\phi 8$ | 25.4x31 |
| GLPB2-10-31SN-2/3 | 200 - 270 | $<5 \times 10^{-6}$ | $\phi 10$ | 25.4x31 |
| GLPB2-15-38.6SN-2/3 | 200 - 270 | $<5 \times 10^{-6}$ | $\phi 15$ | 30x38.6 |
| GLPB2-20-48.9SN-2/3 | 200 - 270 | $<5 \times 10^{-6}$ | $\phi 20$ | 38x48.9 |
| GLPB2-06-25SN-3/7 | 300 - 700 | $<5 \times 10^{-6}$ | $\phi 6$ | 15x25 |
| GLPB2-08-25SN-3/7 | 300 - 700 | $<5 \times 10^{-6}$ | $\phi 8$ | 25.4x25 |
| GLPB2-10-26SN-3/7 | 300 - 700 | $<5 \times 10^{-6}$ | $\phi 10$ | 25.4x26 |
| GLPB2-15-33.4SN-3/7 | 300 - 700 | $<5 \times 10^{-6}$ | $\phi 15$ | 30x33.4 |
| GLPB2-20-43.6SN-3/7 | 300 - 700 | $<5 \times 10^{-6}$ | $\phi 20$ | 38x43.6 |
| GLPB2-06-23SN-7/30 | 700 - 3000 | $<5 \times 10^{-6}$ | $\phi 6$ | 15x23 |
| GLPB2-08-24.7SN-7/30 | 700 - 3000 | $<5 \times 10^{-6}$ | $\phi 8$ | 25.4x24.7 |
| GLPB2-10-25.9SN-7/30 | 700 - 3000 | $<5 \times 10^{-6}$ | $\phi 10$ | 25.4x25.9 |
| GLPB2-15-33SN-7/30 | 700 - 3000 | $<5 \times 10^{-6}$ | $\phi 15$ | 30x33 |
| GLPB2-20-43.6SN-7/30 | 700 - 3000 | $<5 \times 10^{-6}$ | $\phi 20$ | 38x43.6 |

Calcite

| Part Number | Wavelength Range [nm] | Extinction ratio | ϕA [mm] | $\phi D \times L$ |
|----------------|-----------------------|---------------------|---------------|-------------------|
| GLP2-06-21SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 6$ | 15x21 |
| GLP2-08-24.5SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 8$ | 25.4x24.5 |
| GLP2-10-26.2SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 10$ | 25.4x26.2 |
| GLP2-15-33.3SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 15$ | 30x33.3 |
| GLP2-20-42.3SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 20$ | 38x42.3 |

Compatible Optic Mounts

GTPC-PH30, -PH50 / GTPC-SPH30, -SPH50 / GTPC-ADP

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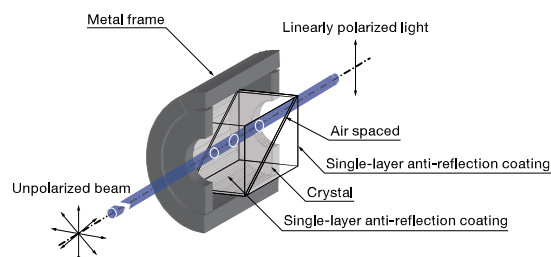
Waveplates

Polarizers

The transmission loss is minimal, and a high extinction ratio below 5×10^{-5} is obtained. The Calcite type that can be used in the visible to the infrared region, and α -BBO crystal type usable in the ultraviolet region are available. The polarizer provides a very short prism length.

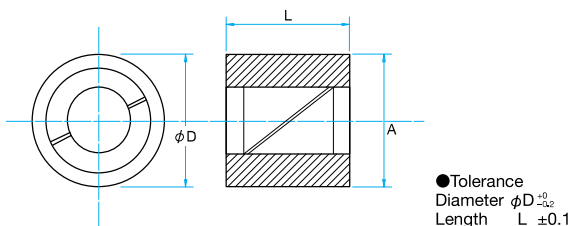


Schematic



Outline Drawing

(in mm)



- The two prisms are mounted with a small gap (air-gap) to eliminate the adhesive and reduce laser damage.
- A single-layer anti-reflection coating has been applied on the surface of the polarizing prism to provide high transmittance.

Specifications

| | |
|----------------------------------|---|
| Material | α -BBO, Calcite |
| Beam Deviation | <3" |
| Transmitted wavefront distortion | $\lambda/4$ |
| Coating | MgF ₂ Single-layer anti-reflection coating |
| Laser Damage Threshold | 1J/cm ² (Pulse duration 10ns) |
| Surface Quality (Scratch-Dig) | 20-10 |
| Material of metal frame | Aluminum Finishing: Black anodized |

Guide

- ▶ Glan laser prism for high-power laser (GLPB / GLPC) and Wollaston prism (WPPB / WPPC) are also available.
- ▶ If you need uncoated Glan Thompson prism or anti-reflection coating with specific reflectance, please contact our Sales Division with your request.

Attention

- ▶ A change in the incident angle may also change the extinction ratio of the linearly polarized transmitted light.
- ▶ Light not transmitted through the Glan Taylor prism is absorbed and scattered in all side faces of the prism. In the high-precision measurement system, it is necessary to use pinhole to block light scattered in the side face of the prism.
- ▶ Because of natural calcite crystals, there are individual differences, and variations in quality.

 α -BBO

| Part Number | Wavelength Range [nm] | Extinction ratio | ϕA [mm] | $\phi D \times L$ |
|-------------------|-----------------------|---------------------|---------------|-------------------|
| GYPB-06-15SN-2/3 | 200 - 270 | $<5 \times 10^{-5}$ | $\phi 6$ | 15x15 |
| GYPB-08-17SN-2/3 | 200 - 270 | $<5 \times 10^{-5}$ | $\phi 8$ | 25.4x17 |
| GYPB-10-19SN-2/3 | 200 - 270 | $<5 \times 10^{-5}$ | $\phi 10$ | 25.4x19 |
| GYPB-15-23SN-2/3 | 200 - 270 | $<5 \times 10^{-5}$ | $\phi 15$ | 30x23 |
| GYPB-20-29SN-2/3 | 200 - 270 | $<5 \times 10^{-5}$ | $\phi 20$ | 38x29 |
| GYPB-06-15SN-3/7 | 300 - 700 | $<5 \times 10^{-5}$ | $\phi 6$ | 15x15 |
| GYPB-08-17SN-3/7 | 300 - 700 | $<5 \times 10^{-5}$ | $\phi 8$ | 25.4x17 |
| GYPB-10-19SN-3/7 | 300 - 700 | $<5 \times 10^{-5}$ | $\phi 10$ | 25.4x19 |
| GYPB-15-23SN-3/7 | 300 - 700 | $<5 \times 10^{-5}$ | $\phi 15$ | 30x23 |
| GYPB-20-29SN-3/7 | 300 - 700 | $<5 \times 10^{-5}$ | $\phi 20$ | 38x29 |
| GYPB-06-15SN-7/30 | 700 - 3000 | $<5 \times 10^{-5}$ | $\phi 6$ | 15x15 |
| GYPB-08-17SN-7/30 | 700 - 3000 | $<5 \times 10^{-5}$ | $\phi 8$ | 25.4x17 |
| GYPB-10-19SN-7/30 | 700 - 3000 | $<5 \times 10^{-5}$ | $\phi 10$ | 25.4x19 |
| GYPB-15-23SN-7/30 | 700 - 3000 | $<5 \times 10^{-5}$ | $\phi 15$ | 30x23 |
| GYPB-20-29SN-7/30 | 700 - 3000 | $<5 \times 10^{-5}$ | $\phi 20$ | 38x29 |

Calcite

| Part Number | Wavelength Range [nm] | Extinction ratio | ϕA [mm] | $\phi D \times L$ |
|--------------|-----------------------|---------------------|---------------|-------------------|
| GYPC-06-15SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 6$ | 15x15 |
| GYPC-08-17SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 8$ | 25.4x17 |
| GYPC-10-19SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 10$ | 25.4x19 |
| GYPC-15-23SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 15$ | 30x23 |
| GYPC-20-29SN | 350 - 2300 | $<5 \times 10^{-5}$ | $\phi 20$ | 38x29 |

Compatible Optic Mounts

GTPC-PH30, -PH50 / GTPC-SPH30, -SPH50 / GTPC-ADP

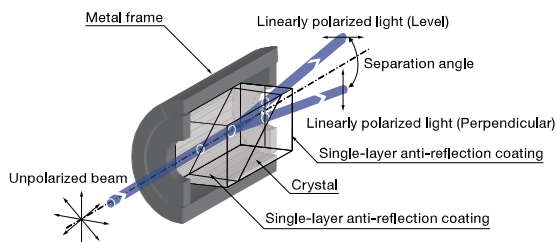
It is a prism for separating the incident beam into two linearly polarized beams with orthogonal polarizing direction.

Used in the optical system of a phase-contrast microscope.

- Outgoing beam is emitted with deviation. In this case, the emitted beams are in opposite directions depending on the orientation of polarization.
- A single-layer anti-reflection coating has been applied on the surface of the Wollaston prism to provide higher transmittance.

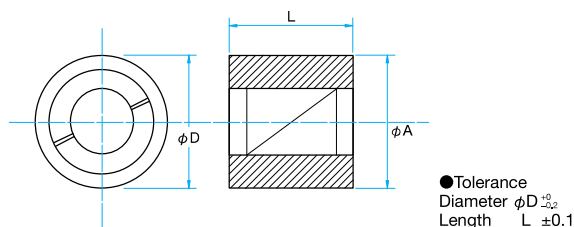


Schematic



Outline Drawing

(in mm)



Specifications

| | |
|----------------------------------|---|
| Material | α -BBO, Calcite |
| Beam Deviation | <math><3^\circ</math> |
| Transmitted wavefront distortion | $\lambda/4$ |
| Coating | MgF ₂ Single-layer anti-reflection coating |
| Laser Damage Threshold | 0.3J/cm ² (Pulse duration 10ns) |
| Surface Quality (Scratch-Dig) | 20-10 |
| Material of metal frame | Aluminum Finishing: Black anodized |

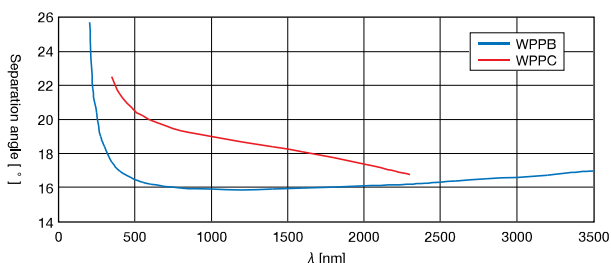
Guide

- ▶ Glan Thompson prism with wider acceptance angle (GTPB / GTPC) and Glan laser prism for high-power laser (GLPB / GLPC) are also available.
- ▶ If you need uncoated Glan Laser prism or anti-reflection coating with specific reflectance, please contact our Sales Division with your request.

Attention

- ▶ A change in the incident angle may also change the extinction ratio of the linearly polarized transmitted light.
- ▶ Separation angle will vary depending on the wavelength. Please confirm the wavelength characteristic graph for separation angle.
- ▶ Because of natural calcite crystals, there are individual differences, and variations in quality.

Typical Separation angle Data



| α -BBO | | | | | | | |
|---------------|-----------------------|--------------------------------|----------------------------|----------------------------|-----------------------------|---------------|-------------------|
| Part Number | Wavelength Range [nm] | Extinction ratio | Separation angle 190nm [°] | Separation angle 800nm [°] | Separation angle 3500nm [°] | ϕA [mm] | $\phi D \times L$ |
| WPPB-06-14SN | 190 - 3500 | <math><5 \times 10^{-5}</math> | 27 | 16 | 17 | $\phi 6$ | 15x14 |
| WPPB-08-16SN | 190 - 3500 | <math><5 \times 10^{-5}</math> | 27 | 16 | 17 | $\phi 8$ | 25.4x16 |
| WPPB-10-18SN | 190 - 3500 | <math><5 \times 10^{-5}</math> | 27 | 16 | 17 | $\phi 10$ | 25.4x18 |
| WPPB-15-23SN | 190 - 3500 | <math><5 \times 10^{-5}</math> | 27 | 16 | 17 | $\phi 15$ | 30x23 |
| WPPB-20-28SN | 190 - 3500 | <math><5 \times 10^{-5}</math> | 27 | 16 | 17 | $\phi 20$ | 38x28 |

| Calcite | | | | | | | |
|--------------|-----------------------|--------------------------------|----------------------------|----------------------------|-----------------------------|---------------|-------------------|
| Part Number | Wavelength Range [nm] | Extinction ratio | Separation angle 350nm [°] | Separation angle 980nm [°] | Separation angle 2300nm [°] | ϕA [mm] | $\phi D \times L$ |
| WPPC-06-14SN | 350 - 2300 | <math><5 \times 10^{-5}</math> | 22.5 | 19 | 16.7 | $\phi 6$ | 15x14 |
| WPPC-08-16SN | 350 - 2300 | <math><5 \times 10^{-5}</math> | 22.5 | 19 | 16.7 | $\phi 8$ | 25.4x16 |
| WPPC-10-18SN | 350 - 2300 | <math><5 \times 10^{-5}</math> | 22.5 | 19 | 16.7 | $\phi 10$ | 25.4x18 |
| WPPC-15-23SN | 350 - 2300 | <math><5 \times 10^{-5}</math> | 22.5 | 19 | 16.7 | $\phi 15$ | 30x23 |
| WPPC-20-28SN | 350 - 2300 | <math><5 \times 10^{-5}</math> | 22.5 | 19 | 16.7 | $\phi 20$ | 38x28 |

Compatible Optic Mounts

GTPC-PH30, -PH50 / GTPC-SPH30, -SPH50 / GTPC-ADP

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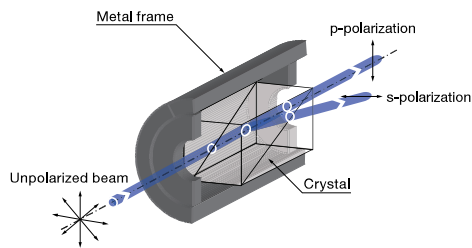
Polarizers

The polarizer separates the incident light into two linearly polarized lights that cross perpendicular. It corresponds to the wide wavelength range from ultraviolet to infrared.

- P polarized light is emitted straight without the displacement from the optical path, and S-polarized light is emitted with a separation angle.
- We offer the RSPCQ-10 of crystalline quartz product and RSPMF-10 of MgF₂ single crystal corresponding to the broad-band more than DUV.

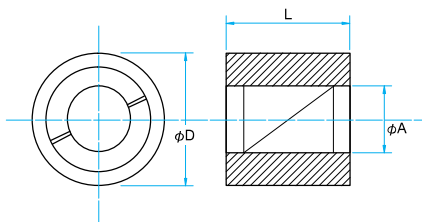


Schematic



Outline Drawing

(in mm)



- Tolerance
Diameter $\phi D \pm 0.1$
Length $L \pm 0.1$

Specifications

| | |
|----------------------------------|--|
| Beam Deviation | <3° |
| Transmitted wavefront distortion | $\lambda/4$ |
| Coating | Uncoated |
| Laser Damage Threshold | 0.3J/cm ² (Pulse duration 10ns) |
| Surface Quality (Scratch-Dig) | 20-10 |
| Material of metal frame | Aluminum Finishing: Black anodized |

Guide

- ▶ If you need anti-reflective coating, please contact our Sales Division with your specific request.

Attention

- ▶ The incident angle changes and the extinction ratio of linear polarization of the transmitted light also changes.

Specifications

| Part Number | Material | Wavelength Range [nm] | Extinction ratio | Separation angle [°] | ϕA [mm] | $\phi D \times L$ [mm] |
|-------------|------------------|-----------------------|---------------------|----------------------|---------------|------------------------|
| RSPCQ-10 | Quartz | 200 – 2300 | $<2 \times 10^{-4}$ | 1 – 1.5 | $\phi 10$ | 25.4×28 |
| RSPMF-10 | MgF ₂ | 130 – 7000 | $<1 \times 10^{-4}$ | 1 – 2 | $\phi 10$ | 25.4×28 |

Compatible Optic Mounts

GTPC-PH30 / GTPC-SPH30 / GTPC-ADP