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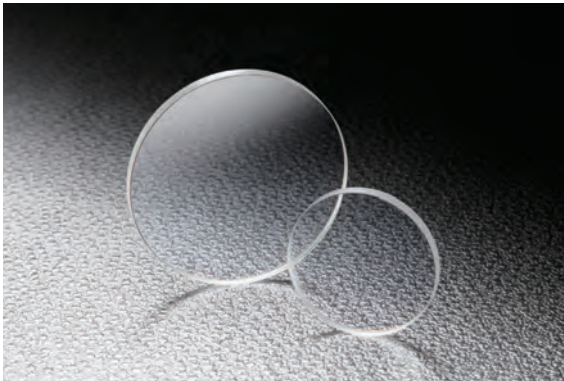
Polarizing Beamsplitters

Waveplates

Polarizers

Mica waveplates are zero-order (first-order) retardation plates (phase plates) which are designed at 550nm wavelength and effective from 400 – 700nm. A mica sheet is sandwiched between optical glass discs for protection and ease of use.

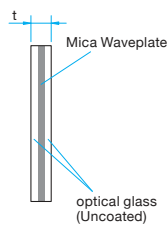
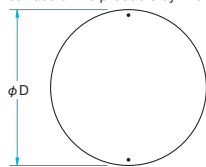
- These products utilize birefringence of mica and give phase difference of $\lambda/4$ ($\pi/2$, 90°) or $\lambda/2$ (π , 180°) to the input beams. $\lambda/4$ plates convert linearly polarization to circularly and circularly polarization to linearly. $\lambda/2$ plates convert the direction of polarization in 90 degrees.
- Usually linearly polarized beams are input to the waveplates in a leaning of 45 degrees against its optical axis.



Outline Drawing

(in mm)

The optical axis is indicated on the surface of the products by two dots.



- Tolerance Diameter $\phi D \pm 0.2$
- Thickness $t \pm 0.2$

Specifications

Material	A mica sheet is sandwiched between optical glass discs for protection and ease of use.
Wavelength Range	400 – 700nm
Transmitted wavefront distortion	2λ $\lambda=550\text{nm}$
Incident angle	0°
Design wavelength	580nm
Theoretical retardation	$\lambda/4$: 145nm $\lambda/2$: 290nm
Surface Quality (Scratch-Dig)	40-20

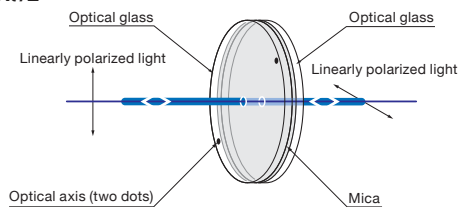
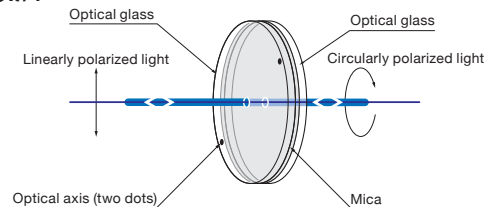
Guide

- ▶ Please contact our Sales Division for customized products. (Customized on size etc.)

Attention

- ▶ Mica waveplates cannot be used for high-power laser applications because of their relatively high absorption coefficient and occasional inhomogeneities.
- ▶ Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.
- ▶ If you want to use the polarization measurement, please use the crystal waveplate. [Reference](#) B087

Schematic

● $\lambda/2$ ● $\lambda/4$  $\lambda/2$

Part Number	Diameter ϕD [mm]	Thickness t [mm]
WPM-10-2P	$\phi 10$	2.5
WPM-20-2P	$\phi 20$	2.5
WPM-25-2P	$\phi 25$	2.5
WPM-30-2P	$\phi 30$	2.5
WPM-40-2P	$\phi 40$	3.5
WPM-50-2P	$\phi 50$	3.5

 $\lambda/4$

Part Number	Diameter ϕD [mm]	Thickness t [mm]
WPM-10-4P	$\phi 10$	2.5
WPM-20-4P	$\phi 20$	2.5
WPM-25-4P	$\phi 25$	2.5
WPM-30-4P	$\phi 30$	2.5
WPM-40-4P	$\phi 40$	3.5
WPM-50-4P	$\phi 50$	3.5

Compatible Optic Mounts

PH-30-ARS / SPH-30-ARS

Typical Transmittance Data

T: Transmission

