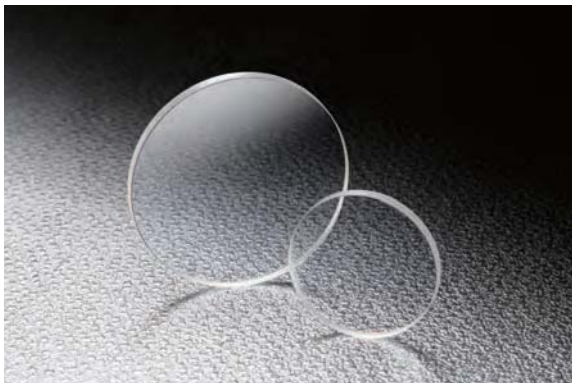
Mica Waveplates | WPM

RoHS

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 λ/4 (π/2, 90°) or λ/2 (π, 180°) to the input beams. λ/4 plates convert linearly polarization to circularly and circularly polarization to linearly. λ/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.



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 λ=550nm
Incident angle	0°
Design wavelength	580nm
Theoretical retardation	λ/4: 145nm λ/2: 290nm
Surface Quality (Scratch–Dig)	40–20

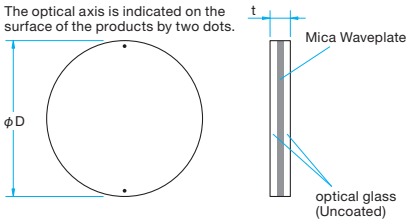
Guide

- 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.

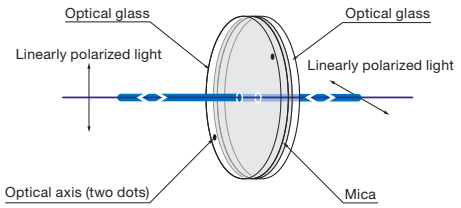
Outline Drawing (in mm)



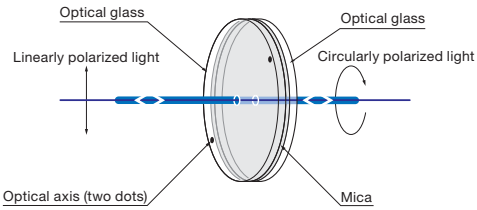
●Tolerance
Diameter ϕD±0.2
Thickness t ±0.2

Schematic

●λ/2



●λ/4



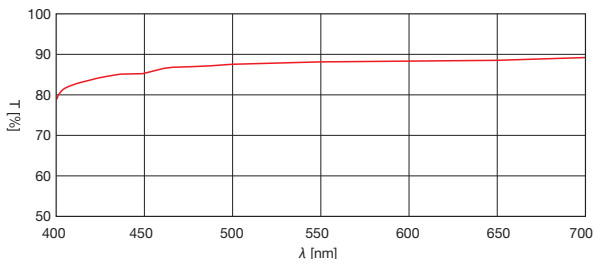
λ/2

Part Number	Diameter ϕD [mm]	Thcikness t [mm]
WPM-10-2P	ϕ10	2.5
WPM-20-2P	ϕ20	2.5
WPM-25-2P	ϕ25	2.5
WPM-30-2P	ϕ30	2.5
WPM-40-2P	ϕ40	3.5
WPM-50-2P	ϕ50	3.5

λ/4

Part Number	Diameter ϕD [mm]	Thcikness t [mm]
WPM-10-4P	ϕ10	2.5
WPM-20-4P	ϕ20	2.5
WPM-25-4P	ϕ25	2.5
WPM-30-4P	ϕ30	2.5
WPM-40-4P	ϕ40	3.5
WPM-50-4P	ϕ50	3.5

Typical Transmittance Data T: Transmission



Compatible Optic Mounts

PH-30-ARS / SPH-30-ARS