

Rocky Mountain Instrument Co.

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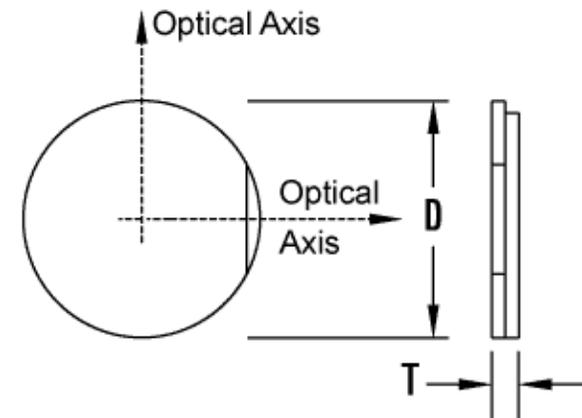
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Waveplates » Zero-Order Waveplates

Waveplates are used in the synthesis and analysis of polarized light. Quarter Waveplates transform linearly polarized light into circularly polarized light, and vice-versa. Half Waveplates rotate the plane of polarization of linearly polarized light through any angle. They also convert left circularly polarized light into right circularly polarized light, and vice-versa.

Zero-Order Waveplates are made from two Crystalline Quartz or Sapphire plates of similar thickness, that are optically contacted together with orthogonally aligned optical axes.

Retardation varies slowly with wavelength, thus they are useful with tunable or broadband sources. Retardation is a function of thickness difference between the two plates, and is essentially invariant with temperature.



RMI Standard Specifications

Material:	Crystalline Quartz
Angle of Incidence:	0°
Construction:	Two piece combination
Transmitted Wavefront:	$\lambda/10$ at 633nm

Surface Quality:	10 – 5, both surfaces
Diameter Tolerance:	+ 0.000, – 0.25mm
Thickness:	2.0 mm (nominal)
Wedge:	≤ 0.5 arc seconds
Bevels:	Minimum safety bevel
Clear Aperture:	Central 85% of diameter
Anti-Reflection Coating:	R ≤ 0.25% per surface
Retardation Tolerance:	$\lambda/100 - \lambda/600$

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The cornerstone of the RMI service philosophy is a collaborative approach with our customers to solve even the most technically challenging requirements. Working with clients in the early stages of development, we transition prototype concepts to efficient and manufacturable solutions.



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