

ZERO-ORDER RETARDERS, Crystalline quartz

These are air-spaced, double plate Retarders. All surfaces are AR coated. These are no more nor less accurate than the multiple-order type under ordinary laboratory conditions. However these have wider bandwidth and less sensitivity to temperature change than the multiple-order type.

These Retardation Plates are within the "zeroth" order of retardance, that is between $(0\lambda - 1\lambda)$.

Specifications

Aperture	: Clear aperture 15mm mounted in 1" OD cell
Substrate Material	: Crystal quartz
Transmitted Wavefront	: $\lambda/10$ at 633nm
Surface Quality	: 10 ~ 5 laser quality
Diameter Tolerance	: +0.00mm, -0.25mm
Parallelism	: 0.5 seconds
Retardation Tolerance	: 0.5% of design value at 20°C

Quarter-wave

Catalog Number & Wavelength	Bandwidth	Field of View	Temperature Stability ($\Delta\phi/^\circ\text{C}$)
RZ-1/4-193	±1.9 nm	±0.4°	0.00013
RZ-1/4-213	±2.1 nm	±0.5°	0.00014
RZ-1/4-248	±2.5 nm	±0.6°	0.00018
RZ-1/4-266	±2.6 nm	±0.6°	0.00022
RZ-1/4-308	±3.1 nm	±0.6°	0.00026
RZ-1/4-325	±3.2 nm	±0.7°	0.00029
RZ-1/4-351	±3.5 nm	±0.7°	0.00029
RZ-1/4-442	±4.4 nm	±0.8°	0.00029
RZ-1/4-488	±4.8 nm	±0.8°	0.00029
RZ-1/4-514	±5.1 nm	±0.9°	0.00029
RZ-1/4-532	±5.3 nm	±0.9°	0.00030
RZ-1/4-633	±6.3 nm	±1.0°	0.00030
RZ-1/4-670	±6.6 nm	±1.0°	0.00030
RZ-1/4-780	±7.7 nm	±1.1°	0.00031
RZ-1/4-830	±8.2 nm	±1.1°	0.00031
RZ-1/4-852	±8.4 nm	±1.1°	0.00031
RZ-1/4-980	±9.7 nm	±1.2°	0.00032
RZ-1/4-1053	±10.4 nm	±1.3°	0.00032
RZ-1/4-1064	±10.5 nm	±1.3°	0.00032
RZ-1/4-1310	±13.0 nm	±1.5°	0.00033
RZ-1/4-1480	±14.7 nm	±1.6°	0.00033
RZ-1/4-1550	±15.4 nm	±1.6°	0.00034
RZ-1/4-1560	±15.4 nm	±1.6°	0.00034

* Value assumes a tolerable phase retardation error of 1%
MANY MORE WAVELENGTHS IN STOCK. IF NOT, WE'LL MAKE IT

Half-wave

Catalog Number & Wavelength	Bandwidth	Field of View	Temperature Stability ($\Delta\phi/^\circ\text{C}$)
RZ-1/2-193	±1.9 nm	±0.6°	0.00028
RZ-1/2-213	±2.1 nm	±0.7°	0.00029
RZ-1/2-248	±2.5 nm	±0.8°	0.00034
RZ-1/2-266	±2.6 nm	±0.8°	0.00042
RZ-1/2-308	±3.1 nm	±0.9°	0.00051
RZ-1/2-325	±3.2 nm	±0.9°	0.00058
RZ-1/2-351	±3.5 nm	±1.0°	0.00058
RZ-1/2-442	±4.4 nm	±1.1°	0.00059
RZ-1/2-488	±4.8 nm	±1.2°	0.00060
RZ-1/2-514	±5.1 nm	±1.2°	0.00061
RZ-1/2-532	±5.3 nm	±1.3°	0.00062
RZ-1/2-633	±6.3 nm	±1.4°	0.00062
RZ-1/2-670	±6.6 nm	±1.4°	0.00062
RZ-1/2-780	±7.7 nm	±1.6°	0.00062
RZ-1/2-830	±8.2 nm	±1.6°	0.00063
RZ-1/2-852	±8.4 nm	±1.7°	0.00063
RZ-1/2-980	±9.7 nm	±1.8°	0.00063
RZ-1/2-1053	±10.4 nm	±1.8°	0.00064
RZ-1/2-1064	±10.5 nm	±1.9°	0.00064
RZ-1/2-1310	±13.0 nm	±2.1°	0.00064
RZ-1/2-1480	±14.7 nm	±2.2°	0.00065
RZ-1/2-1550	±15.4 nm	±2.3°	0.00065
RZ-1/2-1560	±15.4 nm	±2.3°	0.00065

* Value assumes a tolerable phase retardation error of 1%
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