

Dichroic Circular Polarizers



SPECIFICATIONS	
Polarizer Material	Dichroic Polymer
Retarder Material	Birefringent Polymer
Substrate Material	BK 7 Grade A, fine annealed
Standard Wavelengths	532, 632.8, 670, 780, 850, 1064 and 1550 nm
Isolation	>99.8%
Transmitted Wavefront Distortion (at 632.8 nm)	
Visible	$\leq \lambda/5$
Near Infrared	$\leq \lambda/2$
Surface Quality	40-20 scratch and dig
Beam Deviation	
Visible	≤ 1 arc min
Near Infrared	≤ 2 arc min
Reflectance (per surface)	$\leq 0.5\%$ at normal incidence
Diameter Tolerance	
Mounted	± 0.005 in.
Unmounted	$+0/-0.010$ in.
Temperature Range	-20° C to $+50^{\circ}$ C
Recommended Safe Operating Limit	1 W/cm ² , CW
<i>Prolonged exposure to strong ultraviolet radiation may damage these polarizers.</i>	

Key Benefits

- High isolation
- Large diameters available
- Low transmitted wavefront distortion

Meadowlark Optics Dichroic Circular Polarizers consist of a dichroic linear polarizer and true zero-order quarter-wave retarder. Accurately aligning the retarder fast axis at 45° to the linear polarization direction ensures optimum performance.

True zero-order retarders (page 30-31) are used in the assembly of our Dichroic Circular Polarizers. Tight retardance tolerances also contribute to the final performance.

Once aligned, both polarizer and retarder materials are laminated between high quality optical flats, providing less than $\lambda/5$ transmitted wavefront distortion. Antireflection coated windows ensure surface reflection losses are minimized.

Achievement of the desired polarization effect requires proper orientation of your Dichroic Circular Polarizer. Be sure to position the indicator marking in the direction of beam propagation. For maximum transmission, rotate the circular polarizer to align a linearly polarized input beam polarization direction parallel to the marks on the housing.

Our standard Dichroic Circular Polarizers are designed for single wavelength applications. Achromatic versions are also available on a custom basis. Please call for application assistance.

ORDERING INFORMATION			
Mounted			
Diameter (in.)	Clear Aperture (in.)	Thickness (in.)	Part Number
1.00	0.40	0.25	CPM - 050 - λ
1.00	0.70	0.35	CPM - 100 - λ
2.00	1.20	0.50	CPM - 200 - λ
Unmounted			
Diameter (in.)	Clear Aperture (in.)	Thickness (in.)	Part Number
0.50	0.40	0.13	CP - 050 - λ
1.00	0.80	0.26	CP - 100 - λ

Meadowlark Optics standard Dichroic Circular Polarizers provide left-hand circular output. Please call to request a quote for right-hand circular output. Append a "-RH" to your part number for right-hand circular output.