

Ultra-High Contrast Linear Polarizer

Our UHP-UV series polarizers offer high contrast in the UV from 360 to 400 nm and our UHP-LNIR series polarizers offer high contrast over the exceptionally broad range from 650 to 5000 nm.

SPECIFICATIONS		
Substrate Material		
Ultraviolet		UV Grade Fused Silica
Visible		N-BK7
Infrared		N-BK7
SWIR / MWIR		Design dependent
Polarizer Material		
Ultraviolet		Dichroic Glass
Visible		
Infrared		
SWIR / MWIR		
Transmitted Wavefront Distortion (P-V @ 632.8 nm)		
Ultraviolet		≤ 1λ per Ø10 mm
Visible		≤ 1λ per Ø10 mm
Infrared		≤ 1λ per Ø10 mm
SWIR / MWIR		Design Dependent
Surface Quality		
Ultraviolet		40 – 20 scratch-dig
Visible		
Infrared		
SWIR / MWIR		
Contrast Ratio		
Ultraviolet:	362 – 392 nm	> 100,000:1
	360 – 397 nm	> 10,000:1
	357 – 403 nm	> 1,000:1
Visible:	600 – 1,200 nm	> 100,000:1
	550 – 1,500 nm	> 1,000:1
Infrared:	850 – 1,600 nm	> 100,000:1
	750 – 1,800 nm	> 10,000:1
	650 – 2,000 nm	> 1,000:1
SWIR / MWIR:	2,000 – 4,500 nm	>10,000:1
	1,500 – 5,000 nm	> 1,000:1
Beam Deviation		
Ultraviolet		≤ 5arc-min
Visible		≤ 5arc-min
Infrared		≤ 5arc-min
SWIR / MWIR		≤ 10 arc-min / 12.5 mm ≤ 5 arc-min / 25 mm
Reflectance		
Uncoated		~4.25% per surface at normal incidence
Coated (optional)		R avg ≤ 0.5% over specified band (refer to available AR coatings)
Operating Temperature		
Ultraviolet		-20°C to +50°C
Visible		-20°C to +50°C
Infrared		-20°C to +50°C
SWIR / MWIR (unlaminated)		-50°C to +400°C

Specifications above are for laminated Ultra-high contrast polarizers. For unlaminated parts, please contact your Meadowlark Optics Sales Engineer.



Key Features

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Extremely high contrast, greater than 100,000:1

Unlaminated part usable to 400°C

Wavelength ranges within 340 to 5000 nm

Absorptive dichroic glass

Optical quality substrates for exceptional wavefront distortion

Polarization Suite

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Linear Polarizers

Precision Linear Polarizer

High Contrast Linear Polarizer

Ultra-High Contrast Linear Polarizer

Glan-Thompson Polarizer

Ultra Broadband Polarizer

MWIR Polarizer

Deep Ultraviolet Polarizer

Beamsplitting Polarizers

Wire Grid Versalight Polarizer

Wire Grid Versalight Beam Splitter

Laser Line Beamsplitting Polarizer

Broadband Beamsplitting Polarizer

Polarizing Bandpass Filter

Circular Polarizers

Dichroic Circular Polarizer

Beam Separator



ORDERING INFORMATION

Mounted and Laminated			
Clear Aperture in. (mm)	Thickness in. (mm)	Diameter ± 0.005 in. (± 0.13 mm)	Part Number
0.40 (10.2 mm)	0.25 (6.35 mm)	Ø1.00 (Ø25.4 mm)	UPM – 050 – UV
0.40 (10.2 mm)	0.25 (6.35 mm)	Ø1.00 (Ø25.4 mm)	UPM – 050 – VIS
0.40 (10.2 mm)	0.25 (6.35 mm)	Ø1.00 (Ø25.4 mm)	UPM – 050 – IR
0.70 (17.8 mm)	0.35 (8.89 mm)	Ø1.00 (Ø25.4 mm)	UPM – 100 – UV
0.70 (17.8 mm)	0.35 (8.89 mm)	Ø1.00 (Ø25.4 mm)	UPM – 100 – VIS
0.70 (17.8 mm)	0.35 (8.89 mm)	Ø1.00 (Ø25.4 mm)	UPM – 100 – IR
Mounted and Unlaminated			
0.40 (10.2 mm)	0.185 (4.70 mm)	Ø1.00 (Ø25.4 mm)	UPM – 050 – MIR
0.70 (17.8 mm)	0.185 (4.70 mm)	Ø1.00 (Ø25.4 mm)	UPM – 100 – MIR
Unmounted and Laminated			
Clear Aperture in. (mm)	Thickness in. (mm)	Diameter +0/-0.010 in. (+0/-0.25 mm)	Part Number
0.40 (10.2 mm)	0.14 (3.56 mm)	Ø0.50 (Ø12.7 mm)	UHP – 050 – UV
0.40 (10.2 mm)	0.14 (3.56 mm)	Ø0.50 (Ø12.7 mm)	UHP – 050 – VIS
0.40 (10.2 mm)	0.14 (3.56 mm)	Ø0.50 (Ø12.7 mm)	UHP – 050 – IR
0.80 (20.3 mm)	0.26 (6.60 mm)	Ø1.00 (Ø25.4 mm)	UHP – 100 – UV
0.80 (20.3 mm)	0.26 (6.60 mm)	Ø1.00 (Ø25.4 mm)	UHP – 100 – VIS
0.80 (20.3 mm)	0.26 (6.60 mm)	Ø1.00 (Ø25.4 mm)	UHP – 100 – IR
Unmounted and Unlaminated			
0.40 (10.2 mm)	0.008 (0.203 mm)	Ø0.50 (Ø12.7 mm)	UHP – 050 – MIR
0.80 (20.3 mm)	0.008 (0.203 mm)	Ø1.00 (Ø25.4 mm)	UHP – 100 – MIR

Anti-reflection coating options are available:
 AR0 covers 350 - 450 nm with R avg ≤ 0.5%
 AR1 covers 400 - 700 nm with R avg ≤ 0.5%
 AR2 covers 650 - 950 nm with R avg ≤ 0.5%
 AR3 covers 900 - 1250 nm with R avg ≤ 0.5%
 AR4 covers 1200 - 1700 nm with R avg ≤ 0.5%