meadowlark optics

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

Clear Aperture in. (mm)	Thickness in. (mm)	Diameter ± 0.005 in. (± 0.13 mm)	Part Number
Mounted and Laminated			
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%

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