

## Ultra-High Contrast Linear Polarizer

Our UHPUV 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		
<b>Substrate Material</b>		
Ultraviolet		UV Grade Fused Silica
Visible		N-BK7
Infrared		N-BK7
SWIR / MWIR		Design dependent
<b>Polarizer Material</b>		
Ultraviolet		Dichroic Glass
Visible		
Infrared		
SWIR / MWIR		
<b>Transmitted Wavefront Distortion (P-V @ 632.8 nm)</b>		
Ultraviolet		$\leq 1\lambda$ per $\varnothing 10$ mm
Visible		$\leq 1\lambda$ per $\varnothing 10$ mm
Infrared		$\leq 1\lambda$ per $\varnothing 10$ mm
SWIR / MWIR		Design Dependent
<b>Surface Quality</b>		
Ultraviolet		40 – 20 scratch-dig
Visible		
Infrared		
SWIR / MWIR		
<b>Contrast Ratio</b>		
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	$> 1,000:1$
<b>Beam Deviation</b>		
Ultraviolet		$\leq 5$ arc-min
Visible		$\leq 5$ arc-min
Infrared		$\leq 5$ arc-min
SWIR / MWIR		$\leq 10$ arc-min / 12.5 mm $\leq 5$ arc-min / 25 mm
<b>Reflectance</b>		$\sim 4.25\%$ per surface at normal incidence
<b>Operating Temperature</b>		
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.

For example:

IR-AR1 covers 400 - 700 nm with  $R \leq 0.5\%$

IR-AR2 covers 650 - 950 nm with  $R \leq 0.5\%$

IR-AR3 covers 900 - 1250 nm with  $R \leq 0.5\%$

IR-AR4 covers 1200 - 1700 nm with  $R \leq 0.5\%$