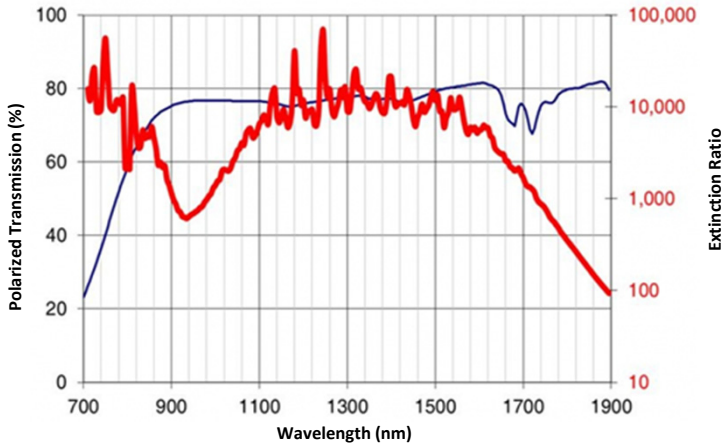
Precision Linear Polarizer

Meadowlark Optics manufactures Precision Linear Polarizers using dichroic sheet polarizer material laminated between high quality glass substrates (BK 7 material, λ/10 flat). For visible wavelength polarizers, this construction produces a total transmitted wavefront distortion of less than λ/5.

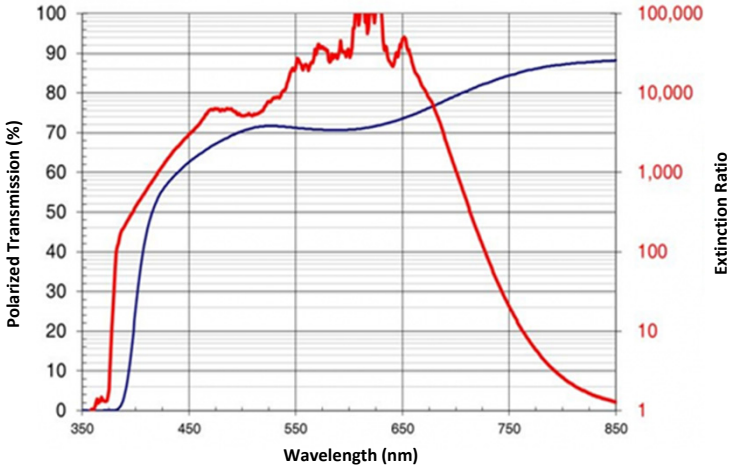
We use various polarizer materials to cover wavelengths between 320 and 2000 nm. Both visible and near infrared polarizers are supplied with a high-efficiency, broadband antireflection (AR) coating; single-layer AR coatings are optional on our ultraviolet polarizers.

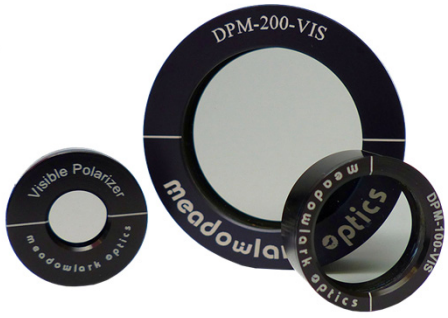
Both mounted and unmounted Precision Linear Polarizers are offered as standard products. Meadowlark Optics Precision Linear Polarizers have their transmission axis clearly marked.

NIR polarizer 2 performance, specify – NIR2



Visible polarizer performance, specify - VIS





Key Features

- High extinction ratios
- Excellent surface quality
- Wide angular acceptance
- Low transmitted wavefront distortion
- Ultraviolet, visible, near infrared wavelengths

Polarization Suite

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

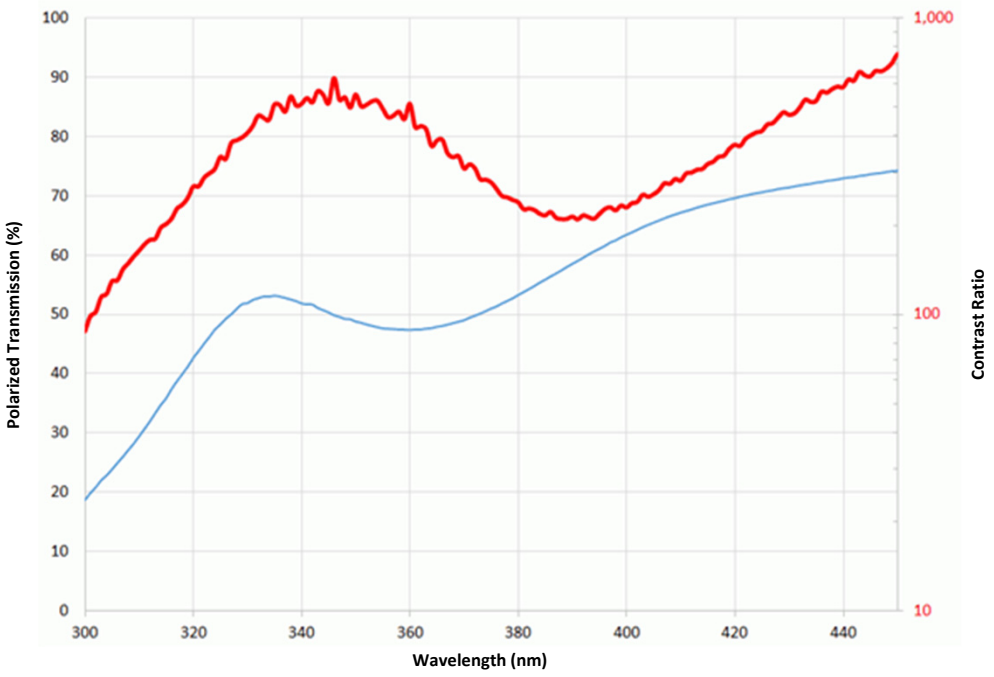
Beamsplitting Polarizers

Versalight Polarizer
Wire Grid Beam Splitter
Laser Line Beamsplitting Polarizer
Broadband Beamsplitting Polarizer
Polarizing Bandpass Filter

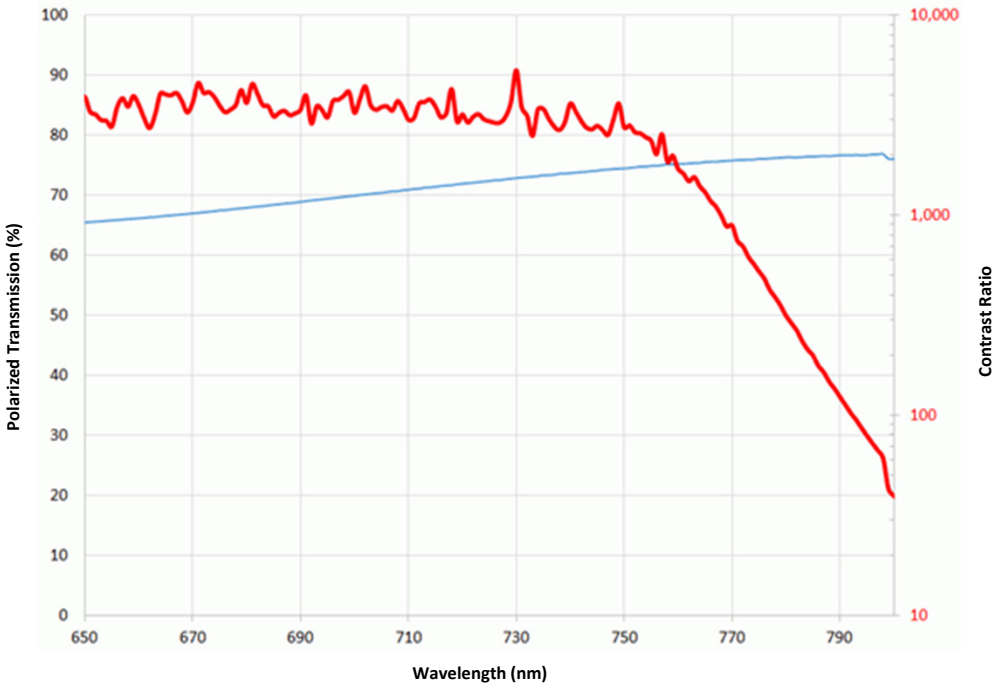
Circular Polarizers

Dichroic Circular Polarizer
Beam Separator

UV polarizer performance, specify – UV1 (uncoated window)



NIR polarizer 1 performance, specify – NIR1



ORDERING INFORMATION

Mounted			
Clear Aperture in. (mm)	***Thickness ± 0.020 in. (±0.51 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)	DPM – 050 – UV1
0.40 (10.2 mm)	0.25 (6.35 mm)	Ø1.00 (Ø25.4 mm)	DPM – 050 – VIS
0.40 (10.2 mm)	0.25 (6.35 mm)	Ø1.00 (Ø25.4 mm)	DPM – 050 – NIR1
0.40 (10.2 mm)	0.25 (6.35 mm)	Ø1.00 (Ø25.4 mm)	DPM – 050 – NIR2 – n
0.70 (17.8 mm)	0.35 (8.9 mm)	Ø1.00 (Ø25.4 mm)	DPM – 100 – UV1
0.70 (17.8 mm)	0.35 (8.9 mm)	Ø1.00 (Ø25.4 mm)	DPM – 100 – VIS
0.70 (17.8 mm)	0.35 (8.9 mm)	Ø1.00 (Ø25.4 mm)	DPM – 100 – NIR1
0.70 (17.8 mm)	0.35 (8.9 mm)	Ø1.00 (Ø25.4 mm)	DPM – 100 – NIR2 – n
1.20 (30.5 mm)	0.50 (12.7 mm)	Ø2.00 (Ø50.8 mm)	DPM – 200 – UV1
1.20 (30.5 mm)	0.50 (12.7 mm)	Ø2.00 (Ø50.8 mm)	DPM – 200 – VIS
1.20 (30.5 mm)	0.50 (12.7 mm)	Ø2.00 (Ø50.8 mm)	DPM – 200 – NIR1
1.20 (30.5 mm)	0.50 (12.7 mm)	Ø2.00 (Ø50.8 mm)	DPM – 200 – NIR2 – n
Unmounted			
Clear Aperture in. (mm)	***Thickness ± 0.020 in. (±0.51 mm)***	***Diameter +0/-0.010 in (+0/-0.25mm)***	***Part Number***
0.40 (10.2 mm)	0.13 (3.3 mm)	Ø0.50 (Ø12.7 mm)	DP – 050 – UV1
0.40 (10.2 mm)	0.13 (3.3 mm)	Ø0.50 (Ø12.7 mm)	DP – 050 – VIS
0.40 (10.2 mm)	0.14 (3.6 mm)	Ø0.50 (Ø12.7 mm)	DP – 050 – NIR1
0.40 (10.2 mm)	0.14 (3.6 mm)	Ø0.50 (Ø12.7 mm)	DP – 050 – NIR2 – n
0.80 (20.3 mm)	0.26 (6.6 mm)	Ø1.00 (Ø25.4 mm)	DP – 100 – UV1
0.80 (20.3 mm)	0.26 (6.6 mm)	Ø1.00 (Ø25.4 mm)	DP – 100 – VIS
0.80 (20.3 mm)	0.27 (6.9 mm)	Ø1.00 (Ø25.4 mm)	DP – 100 – NIR1
0.80 (20.3 mm)	0.27 (6.9 mm)	Ø1.00 (Ø25.4 mm)	DP – 100 – NIR2 – n

Custom AR coatings are available on all polarizers.

For NIR2 polarizers, choose from the following AR coatings:

NIR2 - 1 covers 650 - 950 nm
NIR2 - 2 covers 900 - 1250 nm
NIR2 - 3 covers 1200 - 1700 nm

SPECIFICATIONS

Substrate Material	
Ultraviolet Visible Near Infrared	UV Grade Fused Silica N-BK7 N-BK7
Polarizer Material	Dichroic Polymer
Transmitted Wavefront Distortion (P-V @ 632.8 nm)	
Ultraviolet Visible Near Infrared	≤ λ/2 ≤ λ/5 ≤ λ/2
Surface Quality	40 – 20 scratch-dig
Beam Deviation	
Ultraviolet Visible Near Infrared	≤ 2 arc-min ≤ 1arc-min ≤ 2 arc-min
Reflectance (per surface, at normal incidence)	
Ultraviolet Visible Near Infrared	~4.25% (uncoated) ≤ 0.5% ≤ 0.5%
Storage Temperature	
Ultraviolet Visible Near Infrared	-50˚C to + 50˚C -50˚C to + 50˚C -50˚C to + 50˚C
Operating Temperature	
Ultraviolet Visible Near Infrared	-50˚C to + 50˚C -50˚C to + 50˚C -50˚C to + 50˚C
Laser Damage Threshold	1W/cm^2, CW 200 mJ/cm^2, 20 ns, visible 2 J/cm^2, 20 ns, 1064 nm

Prolonged exposure to strong ultraviolet radiation may damage these polarizers.

Custom coatings are available. Please contact your Meadowlark Optics sales engineer for a custom quote.

meadowlark optics

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