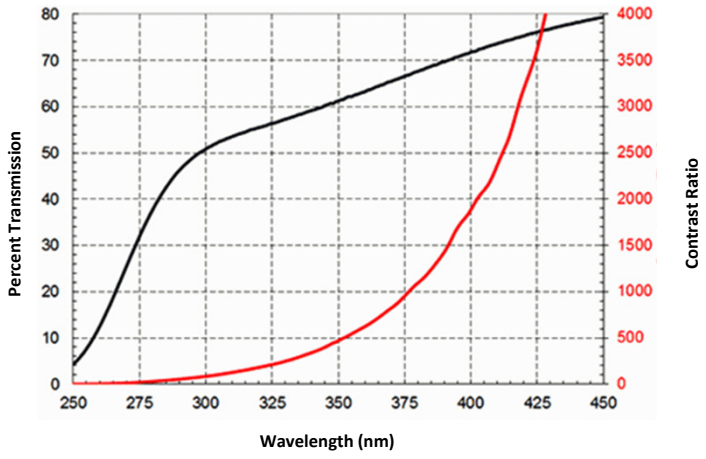
Wire Grid VersaLight™ Polarizer

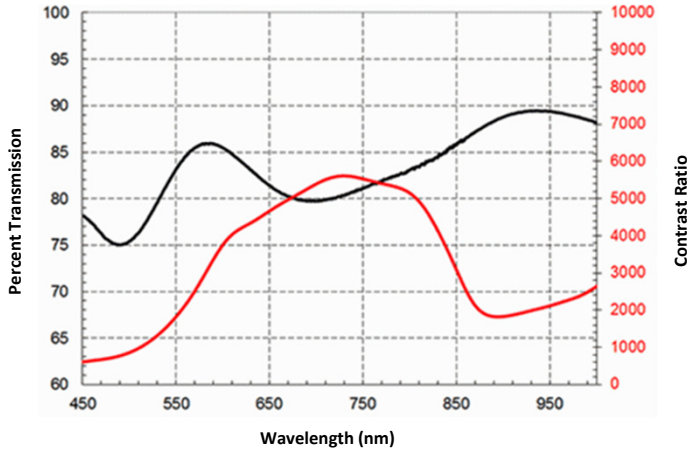
VersaLight™ is constructed of a thin layer of aluminum MicroWires® on a glass substrate and sets a new standard for applications requiring high durability, contrast and a wide field of view for visible through infrared wavelengths. VersaLight offers the performance quality of dichroic sheet polarizers while extending the operating temperature to 200° C.

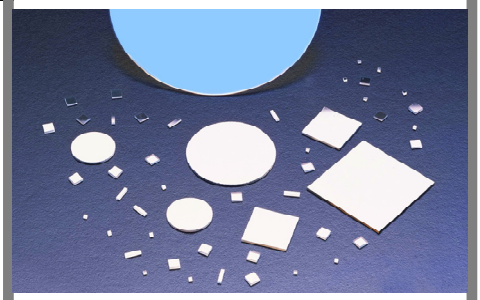
The nature of VersaLight's MicroWire construction allows it to perform as an exceptional polarizing beam splitter. In operation, VersaLight reflects one polarization state and transmits another, both with high contrast. VersaLight offers the broadest band and highest field of view of any polarizer material presently available. VersaLight can be shaped as needed and stacked to achieve very high contrast ratios. Large aperture VersaLight Polarizers are available on a custom basis, up to 200 mm rounds.

Typical UV VersaLight Polarizer Performance



Typical NIR VersaLight Polarizer Performance





Key Features

- Broadband use
- Reflective polarizer
- Large acceptance angle
- High heat resistance

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

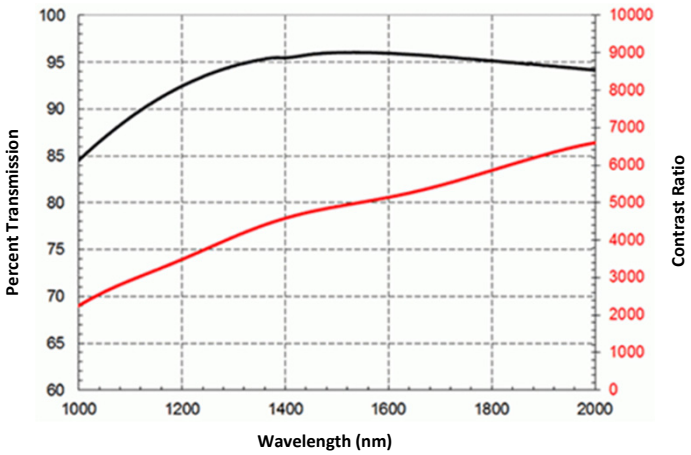
Beamsplitting Polarizers

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

Typical IR VersaLight Performance



SPECIFICATIONS

Wavelength Range	
Ultraviolet	325 nm to 450 nm
Near infrared	450 nm to 1000 nm
Infrared	1000 nm to 2000 nm
Substrate Material	
Ultraviolet	UV Grade Fused Silica
Near Infrared	Eagle XG®
Infrared	Eagle XG®
Transmitted Wavefront Distortion (P-V @ 632.8 nm)	
Ultraviolet	~ λ/4 per in.
Near Infrared	~ 5λ per in.
Infrared	~ 5λ per in.
Surface Quality	80 – 50 scratch-dig
Beam Deviation	≤ 1arc-min
Contrast Ratio (see graph)	Typical Reflection > 80:1 Typical Transmission > 2000:1
Maximum Temperature	200˚C for single layer
Laser Damage Threshold	10 KW/cm², CW at 1540 nm

On ultraviolet VersaLight, the wire grid surface will be unprotected, fragile and cannot be touched.

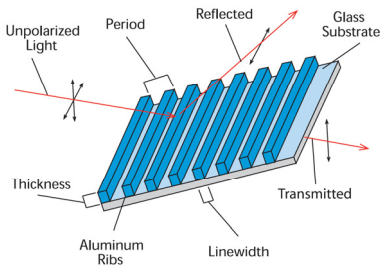
UV VersaLight is optimized for 300-450 nm
NIR VersaLight is optimized for 450-1000 nm
IR VersaLight is optimized for 1000-2000 nm

ORDERING INFORMATION

Thickness ± .002 in. (± 0.05 mm)	*Diameter +0/-0.010 in. (+0/-0.25 mm)*	*Part Number*
Square		
0.039 (1.0 mm)	0.5 × 0.5 (12.7 × 12.7)	VLS – 050 – UV
0.028 (0.7 mm)	0.5 × 0.5 (12.7 × 12.7)	VLS – 050 – NIR
0.028 (0.7 mm)	0.5 × 0.5 (12.7 × 12.7)	VLS – 050 – IR
0.039 (1.0 mm)	1.0 × 1.0 (25.4 × 25.4)	VLS – 100 – UV
0.028 (0.7 mm)	1.0 × 1.0 (25.4 × 25.4)	VLS – 100 – NIR
0.028 (0.7 mm)	1.0 × 1.0 (25.4 × 25.4)	VLS – 100 – IR
0.039 (1.0 mm)	2.0 × 2.0 (50.8 × 50.8)	VLS – 200 – UV
0.028 (0.7 mm)	2.0 × 2.0 (50.8 × 50.8)	VLS – 200 – NIR
0.028 (0.7 mm)	2.0 × 2.0 (50.8 × 50.8)	VLS – 200 – IR
Round		
0.039 (1.0 mm)	Ø0.5 (Ø12.7 mm)	VLR – 050 – UV
0.028 (0.7 mm)	Ø0.5 (Ø12.7 mm)	VLR – 050 – NIR
0.028 (0.7 mm)	Ø0.5 (Ø12.7 mm)	VLR – 050 – IR
0.039 (1.0 mm)	Ø1.0 (Ø25.4 mm)	VLR – 100 – UV
0.028 (0.7 mm)	Ø1.0 (Ø25.4 mm)	VLR – 100 – NIR
0.028 (0.7 mm)	Ø1.0 (Ø25.4 mm)	VLR – 100 – IR
0.039 (1.0 mm)	Ø2.0 (Ø50.8 mm)	VLR – 200 – UV
0.028 (0.7 mm)	Ø2.0 (Ø50.8 mm)	VLR – 200 – NIR
0.028 (0.7 mm)	Ø2.0 (Ø50.8 mm)	VLR – 200 – IR

Call for information on even higher contrast, doubled assemblies. Custom sizes are available. Please contact your Meadowlark Optics Sales Engineer for assistance.

Wire Grid VersaLight Polarizer Construction and Use



meadowlark optics

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