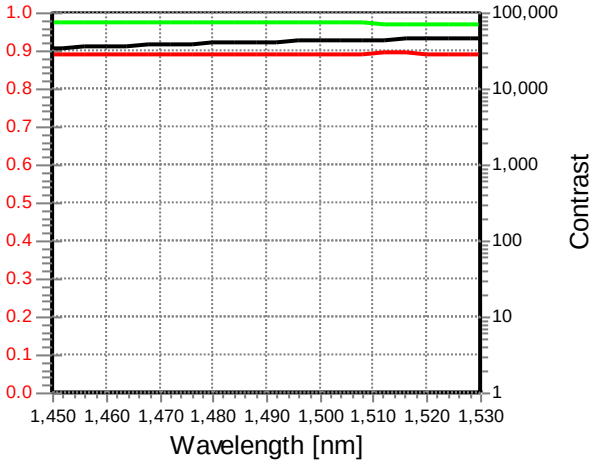
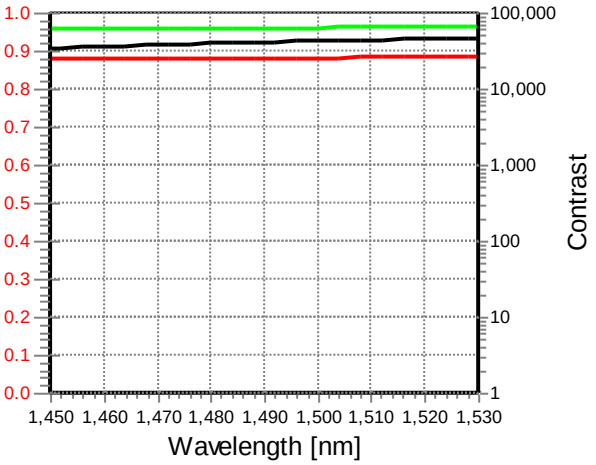
colorPol® IR 1490 BC4 T5 HT

Developed to match special needs of NIR applications between 1 450 nm and 1 530 nm. This polarizer utilizes dichroism of silver nanoparticles in glass to achieve superior contrast and durability.

Custom shapes, sizes and patterned structures are possible due to larger manufactured substrates. For assistance please contact your CODIXX Sales Engineer or one of the local distributors with your custom requirements.



Typical contrast (black) and transmittance (uncoated red, with AR-coating C1490 green) for unlaminated parts



Typical contrast (black) and transmittance (uncoated red, with AR-coating C1490 green) for laminated parts

Key Benefits

- Transmittance typically greater than 97 % with antireflection (AR) coating
- Contrast ratio greater than 10,000 : 1
- Ideal for applications using the NIR wavelength ranges
- Customization
- Highly durable

Applications

- Free space isolators operating in S-bands
- Optical communication
- NIR spectroscopy
- Optical switches

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Specifications colorPol® IR 1490 BC4 T5 HT

	unlaminated	laminated
Spectral range	NIR	
Wavelength range with contrast > 10,000 : 1 (1)	1450 to 1530 nm	
Transmittance uncoated with AR-coating C1490 with 1 side AR-coating CS1490	> 88 % > 96 % > 92 %	> 87 % > 95 % > 91 %
Filter thickness (2)	$500_{+20/-80}$ µm	1.7 ± 0.2 mm (3) 2.0 ± 0.2 mm (4)
Acceptance angle (coating reference for 0°)	± 20°	
Accuracy of polarization axis to edge	< 0.5°	
Usual surface quality (MIL-O-13830A: Scratch / Dig) (5)	40 / 20	
Operating temperature	-50 to +400 °C	-20 to +120 °C
Transmitted wavefront distortion at 633 nm over an inspection area of Ø10 mm	< 3 λ	< λ/4 (4)
Recommended safe operation limit Laser damage threshold Continuous block Continuous pass Pulse peak power Equivalent pulse power density	 10 W/cm² 25 W/cm² 12 MW/cm² 1 µJ/cm²	 1 W/cm² 5 W/cm² 1 MW/cm² 100 nJ/cm²

(1) contrast: ratio of parallel to perpendicular transmittance
(2) other thicknesses on request
(3) laminated
(4) laminated, ground and polished
(5) other specifications available on request

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