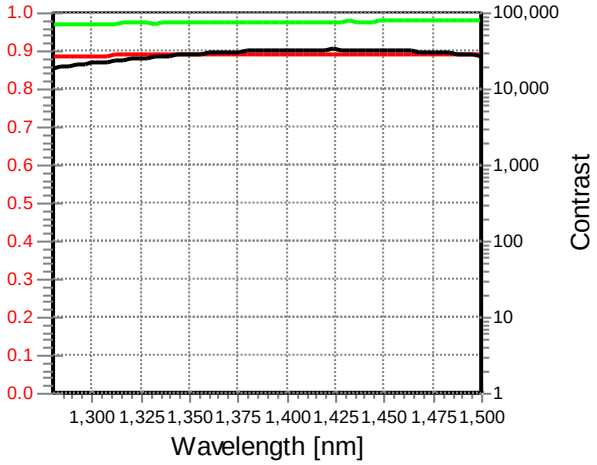
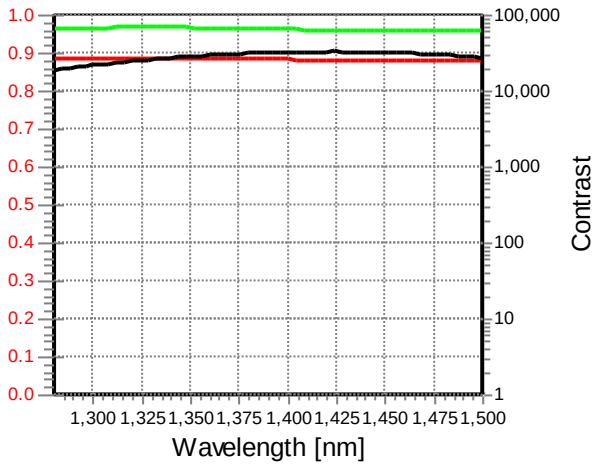
colorPol® IR 1310 BC4 HT

Developed to match special needs of NIR applications between 1 280 nm and 1 500 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 C1310 green) for unlaminated parts



Typical contrast (black) and transmittance (uncoated red, with AR-coating C1310 green) for laminated parts

Key Benefits

- Transmittance typically 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 from 1 280 nm up in O- and E-bands
- Optical communication
- Optical switches
- NIR spectroscopy
- Polarization interferometry
- Signal-to-Noise-Ratio monitoring
- Polarization analysis, monitoring and control
- Polarization mode dispersion monitoring and measurement

CODIXX

www.codixx.de ● colorPol@codixx.de ● +49 39203 9630
Steinfeldstr. 3, 39179 Barleben, Germany

Specifications colorPol® IR 1310 BC4 HT

	unlaminated	laminated
Spectral range	NIR	
Wavelength range with contrast > 10,000 : 1 (1)	1 280 to 1 500 nm	
Transmittance uncoated with AR-coating C1310 with 1 side AR-coating CS1310	> 88 % > 96 % > 92 %	> 87 % > 95 % > 91 %
Filter thickness (2)	270 ± 50 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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