

colorPol®-Polarizers - general specifications

Optical parameters

Wavefront distortion	< Lamba/4 at 633 nm (laminated polarizers)
Refractive index	1,52 ± 0,005 at 633 nm
Surface imperfections	5/2 x 0.04 within 1 cm ² acc. (ISO 10110-07) MIL-C-48497 A, scratch and digs 40-20
Acceptance angle	± 20°

Mechanical parameters

Clear aperture	90% for parts >= 1x1 cm ²
Edge chips	50 µm to 200 µm dependent upon part size
Thermal expansion coefficient	8,4 ± 0,2 x 10 ⁻⁶ K ⁻¹ (0-300°C)

Operation limits

Lasers damage threshold	10 W/cm ² continuous block 25 W/cm ² continuous pass 1 W/cm ² continuous block (laminated polarizers) 5 W/cm ² continuous pass (laminated polarizers)
Temperature	- 50° ... + 400°C - 20° ... + 120°C (laminated polarizers)

Test conditions

Thermal cycle	40° to + 80°C 200 cycles (DIN EN 60068-2-14 method Na)
Humid storage	85°C, 85% rel. humidity/ 1,000 hours 90°C, 95% rel. humidity/ 150 hour
UV-stability	20 mW/cm ² at 60 hours irradiation without any degradation
Chemical resistance	colorPol® polarizers are insensitive to standard cleaning solvents, most acids, bases and distilled water.

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