

CUPO

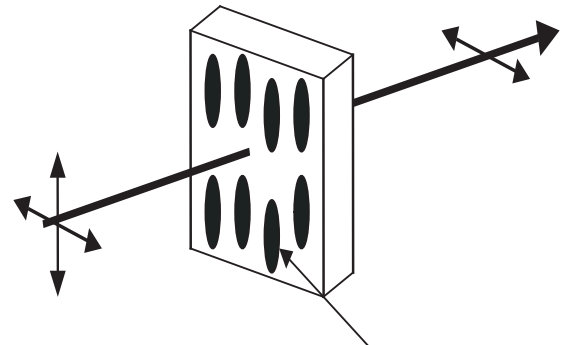
Copper Based Glass Polarizer

PRODUCT DESCRIPTION

HOYA's CUPO is designed as a versatile glass polarizer for the telecommunication industry. CUPO maximizes your device performance at 0.2mm thickness and operates at 1310nm, 1480nm and 1550nm.

HOYA has developed this glass polarizer using light absorption of copper particles created by an electron plasma resonance mechanism. This polarizer contains elongated copper particles aligned along a common axis. This feature produces a high performance polarization with high isolation and low insertion loss. With thickness as low as 0.2mm, it is compact enough for the most miniaturized optical components.

HOYA's CUPO shows no performance degradation in most Telcordia environmental conditions. CUPO is particularly suited for applications in optical communication where high reliability is required.



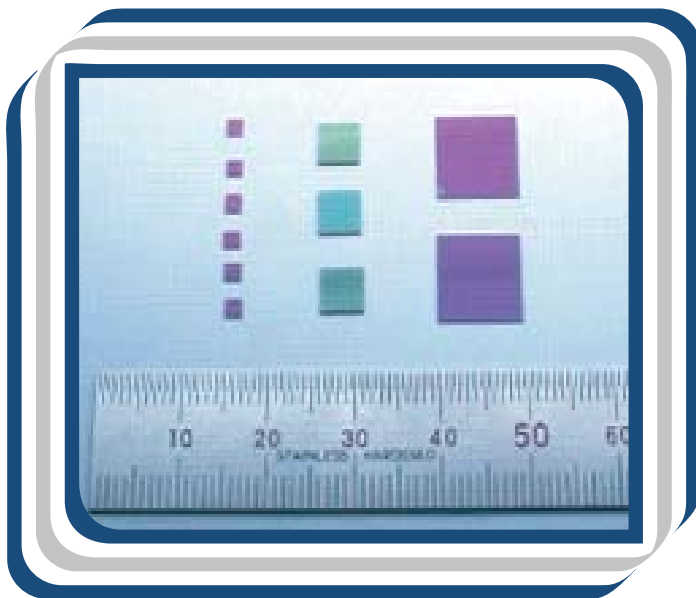
Copper Particles

FEATURES

- ▶ High Isolation
- ▶ Low Loss
- ▶ High Reliability
- ▶ 0.2mm Thickness

APPLICATIONS

- ▶ Optical Isolators
- ▶ Liquid Crystal Switches
- ▶ Circulators



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PRODUCT SPECIFICATIONS

Wavelength (nm)	1310	1480	1550
▶ Isolation (dB)	> 40	> 40	> 40
▶ Insertion Loss (dB)	< 0.1	< 0.1	< 0.1
▶ Refractive Index	1.475	1.473	1.472
▶ Reflectance % (AR coating both sides)	0.15	0.15	0.15

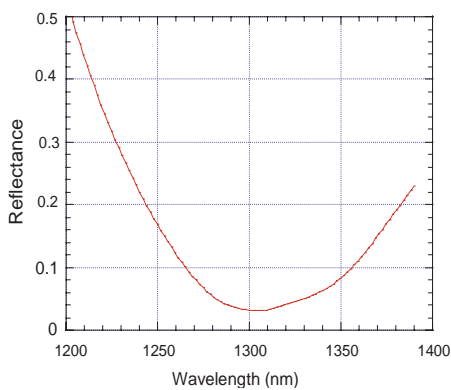
Thermal Properties	Value	Unit
▶ Transformation Temperature (Tg)	477	°C
▶ Sag Temperature (Ts)	545	°C
▶ Coefficient of Thermal Expansion	63.4	$\times 10^{-7}/^{\circ}\text{C}$

Mechanical Properties	Value	Unit
▶ Young's Modulus	62.4	GPa
▶ Shear Modulus	25.5	GPa
▶ Poisson's Ratio	0.221	
▶ Knoop Hardness	433	kgf/mm ²

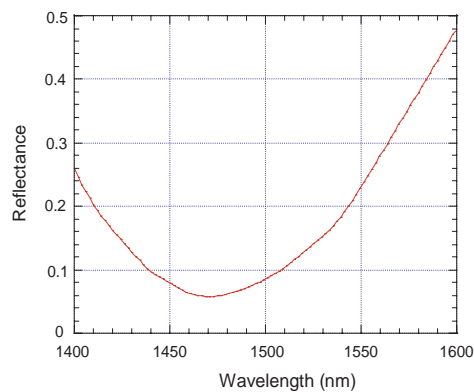
Physical Properties	Value	Unit
▶ Specific Gravity	2.31	

REFLECTANCE SPECTRUM

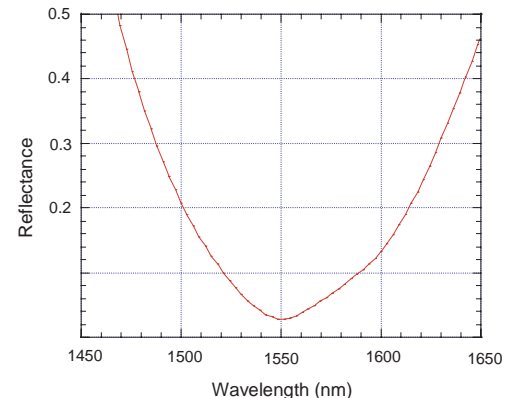
1310nm Reflectance Spectrum



1480nm Reflectance Spectrum



1550nm Reflectance Spectrum



Specifications subject to change without notice.



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