

Glan Thompson Polarizers



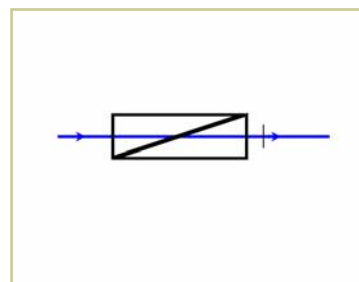
Glan Thompson polarizers consist of two prisms of calcite cemented together in such a way as to permit only the p-polarization to be transmitted. They produce a high degree of polarization in the transmitted beam with an extinction ratio of 1×10^{-6} .

Glan Thompson polarizers have a wide angular field of view, which increases with a longer aspect ratio. Two aspect ratios are offered, 2.5X which provides a 14° field of view and 3X which provides a 22° field of view. They have a transmittance of at least 72%.

Calcite is available in several different grades. For low power laser use, Glan Thompson polarizers must be made of laser grade calcite, which is of high homogeneity, has few inclusions and shows no scattering when illuminated with a helium neon

laser beam. However, these polarizers should not be used for high power laser applications since the cement layer will cause scattering and could induce laser damage. For most general applications it is acceptable to use optical grade calcite, which shows no scattering when viewed under a 40 watt incandescent lamp. Standard grade calcite, which shows some scattering, may be used for less demanding applications.

Glan Thompson polarizers are normally supplied as square cross section prisms with an aperture of 8, 10, 12, 15 or 20



mm. Since they are cemented, they may be supplied un-mounted. Alternatively, they may be mounted in an absorbing black potting compound within a metal cell.

Single layer MgF_2 anti-reflection coatings may be applied if required. These coatings provide a reflectance of less than 2% over a range of 220-400 nm, 400-700 nm or 700-1100 nm.

Typical Specifications

Material:	Crystal Calcite - Laser, Optical or Standard grade
Cell:	Aluminium (black anodized)
Wavelength:	350 - 2800 nm
Transmission of p-component:	72%
Extinction ratio:	1×10^{-6}
Wavefront distortion:	$\lambda/4$ @ 633nm
Surface quality:	20-10
Field of view for 2.5X:	± 7 deg
for 3X:	± 11 deg
Dimensions:	± 0.25 mm
Clear aperture:	>90%
Length/Aperture:	2.5 or 3
Centration to cell OD:	10 arcmin

To request a quote or to order, please specify:

Quantity — Calcite Grade (L, O or S) — Aperture — L/A (2.5 or 3) — AR Coating (UV, Vis or NIR)

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For a quotation — please phone, fax or email us with details of your requirements.