

Glan Laser Polarizers



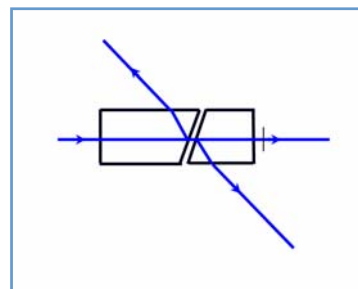
Glan Laser polarizers utilize the high bi-refringence of natural crystal calcite to produce a linearly polarized output from a laser beam of random polarization. They consist of two prisms of calcite separated by an air-space and arranged so that the internally reflected beams exit through a side port to avoid damaging the optics.

Only laser grade calcite is used. This material has very low scatter and high homogeneity. For applications in the ultra-violet (from 220–350 nm) UV transmitting Laser-UV grade calcite should be selected.

Since lasers have axial rays and a single frequency, these Glan Laser polarizers act very efficiently. They produce a high degree of linear polarization in the transmitted beam.

Typically they produce an extinction ratio in excess of 1×10^{-5} . They have a transmittance of over 88% and a 6° field of view.

Glan Laser polarizers normally supplied as square



cross section prisms with an aperture of 8, 10, 15 or 20 mm. They are mounted in an absorbing black potting compound within a metal cell.

Cut-out escape holes in the sides of the housing permit the unwanted reflected beam to exit without causing overheating or damage to the polarizer or mounting 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 or Laser-UV grade |
| Cell: | Aluminium (black anodized) |
| Wavelength - Laser grade: | 350 - 2800 nm |
| - Laser-UV grade: | 220 - 2800 nm |
| Transmission of p-component: | 88% |
| Extinction ratio: | 1×10^{-5} |
| Wavefront distortion: | $\lambda/4$ @ 633nm |
| Surface quality: | 20-10 |
| Field of view: | ± 3 deg |
| Dimensions: | ± 0.25 mm |
| Clear aperture: | >90% |
| Length/Aperture: | 1 |
| Centration to cell OD: | 10 arcmin |
| Laser Damage Threshold: | 1J/cm ² , 10ns 500w/cm ² CW |

To request a quote or to order, please specify:

Quantity — Calcite Grade (UV or Vis) — Aperture — AR Coating (UV, Vis or NIR)

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