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Domes



- Stock and custom Domes available for a range of underwater, ROV and Pyrometer and high pressure viewport applications.
- Available in BK7, Silicon, Sapphire, UV Quartz and Acrylic.
- Custom BK7 glass domes up to 190mmdiameter. Large Acrylic molded or diamond turned domes up to 300mmdiameter.
- Excellent TWE form error for high end imaging applications.
- New designs with low tooling costs turned around within manageable lead-times.
- [Stock domes available online.](#) **More Information** [button](#)

Apertures



- A complete range of apertures, including Pinholes, Slits and Iris Diaphragms for beam-shaping applications or saturation of a detector.
- Laser drilled pinholes from 0.5 μ m to 1000 μ m apertures on 302 stainless. Mounted in a range of standard sizes or as unmounted foils.
- Laser drilled slits from 5 μ m to 200 μ m width as unmounted foils or mounted as standard or custom sizes.
- Iris diaphragms in sprung stainless steel or stainless steel.
Fully closing types available. Sizes ranging from 0.7mm aperture to 225mm aperture. Motorized type also available.

- Precision tolerances and extensive in house testing facilities available for demanding projects.
- Custom apertures available.
- [Over 86 stock apertures available.](#) [More Information button](#)

Reticules



- Eyepiece and stage graticules processed using vacuum metal deposition and etching or photolithographically processes. For use in Gun-Sights, ranging systems and scopes.
- Standard and custom patterns from scales, cross hairs, protractors and grids.
- Standard 19mm and 21mm eyepiece for most standard eye-pieces. Stage graticules for sample measurement and calibration in microscopy.
- Manufactured to almost any pattern and applied to most substrates including plastics, IR/ UV crystals and metals.
- Mounted reticule assemblies also available.
- All measured for quality using a Starrett AV300 video imaging test instrument.
- [Over 24 stock reticules available on-lin.](#)

Beamsplitters



- Large range of Plate and cube Beamsplitters.
- Plate Beamsplitters to 300mmsquare.
- Polarizing and non-polarizing cubes from 3mm to 50mm.
- A range of split ratios (T%/R%), 50/50, 60/40, 70/30, 90/10.
- Visible and NIR wavelengths including Telecom 1050-1700nm on plates, with high quality $\frac{1}{4}$ wave substrates available.
- Highly accurate R/T% values.
- High quality BBAR coatings on the rear of plate Beamsplitters to eliminate secondary reflections.
- Dielectric and hybrid coatings on cubes especially for difficult NIR wavelengths.

- All measured using our Cary spectrophotometer equipped with a Universal Measurement Attachment (UMA).
- Stock pre-coated sheets available for custom sizes at short notice.
- [Over 85 stock beamsplitter options online.](#)

Diffusers



- Diffusers used for altering divergence on incident light for a range of imaging and optical sensing applications.
- Ground glass diffusers in UV and NIR materials. Supplied with 40 micron finish or custom grit size down to 3 μm .
- White-flashed opal in 3.3mm and 6mm thk.
- Custom diameters, squares and shapes available at short notice.
- 0.3mm PVC screens and Optolite™ HSR plastic diffusers acrylic with controlled transmission values.
- Anti-Newton etched glass up to 450mm square.
- Stock sheets available for custom sizes at short notice.
- [Over 46 stock diffuser options online.](#)

Polarizers



- A range of polarizer solutions for UV-Visible-NIR applications.
- Visible grade sheet linear polarizer's, HN22, HN32, HN38, HN38S, HN42, HN42HE either as original 3M grades or replacement material. Up to 36x22" and in various laminations and thickness.
- UV-NIR sheet polarizer's. HR, HNP'B grades.
- Circular HNCP37 original 3M polarizer's and replacement materials. Left and right handed types in a range of lamination and finishes.
- Crystal and cube polarizer's.
- Large stock sheet polarizers available for custom sizes at short notice.
- [Over 98 stock polarizer options online.](#)

Retarders



- An assortment of retarders for use in UV Visible and NIR wavebands.
- Original 3M plastic polarizer's, 140nm $\frac{1}{4}$ wave visible, 200nm NIR $\frac{1}{4}$ wave, 280nm $\frac{1}{2}$ wave visible, 530nm 1 wave visible, 560nm 1 wave visible. In sheets up to 12" square.
- Mica and Quartz retarder plates in a range of wavelengths from 400-1500nm in standard 25mm dia laminated plates.
- Achromatic retarders made from quartz crystal in wavelengths from 450-1650nm.
- Stock sheets available for custom sizes at short notice.
- Over 20 stock plastic type retarders' options online.
- [Over 70 stock quartz and mica retarders available online.](#)

Metal Optics



- A range of Metal Optic solutions for use as flat, concave and parabolic reflectors applications.
- Materials: Copper, aluminum, brass, nickel and stainless steel.
- For use in solid-state lasers ranging from 400nm to 1.5 μm .
- Complex geometry available..
- Surface roughness less than 20 angstroms.
- Surface accuracy to $\frac{1}{4}$ wave.
- [A range of visible and NIR coatings available. **More Information button**](#)

Optical flats



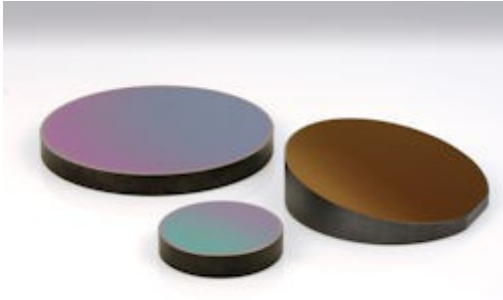
- Optical flats used as reference surfaces for testing of components.
- Double sided or single sided polished for high accuracy front surface mirrors.
- Standard materials Quartz, UV Fused silica and Zerodur.
- Up to 500mm diameter and $\lambda/20$.
- Reconditioning of optical flats service available.
- All tested using our Zygo Verifire XPZ interferometer system fitted with the latest Mx[®] software and are supplied certified in a quality wooden box.
- A range of Monochromatic lights available, free standing or bench top options.
- Over 35 standard optical flats available.
- [Over 15 stock Monochromatic light sources available](#) **More Information button**

Sapphire optics



- Sapphire optics for harsh environment applications.
- UV grade fluorescent free sapphire windows and lenses for use at 150nm to 5.5 μm .
- Random-cut grade windows up to 320mm diameter x 50mm thk.
- C-cut and Z-cut sapphire windows and for non-birefringent critical applications.
- Sapphire domes for high pressure UAV applications.
- Surface quality, Scratch/Dig<60/40 available.
- Small 5mm diameters x 0.5mm or thinner wafers available.
- A range of BBAR coatings can be applied.
- [Over 39 standard sapphire components available.](#) **More Information button**

Germanium optics



- Germanium optics for use at 2 μ m to 14 μ m used in thermal imaging applications.
- Germanium windows and wedge prisms up to 300mm diameter.
- Diamond turned and conventional polished aspheric, spherical and meniscus lenses up to 200mm diameter.
- A range of AR and DLC coatings to cover 2-14 μ m spectrums.
- Hydrophobic and Petrochemical coatings.
- Surface quality <40-20 scratch dig.
- Small 5mm diameters. Diced squares and rectangle. Custom rebated windows to your specific requirements.
- Stock windows available online. [More Information button](#)

Z-Cut quartz optics



- Quartz, a birefringent material so an ideal choice for polarizers..
- Left and right handed Z-cut quartz to 150mm diameter.
- Flatness and TWE better than $\frac{1}{4}$ wave and parallel to 3 arc minutes, 40-20 scratch dig.
- A range of BBAR coatings available.
- Prisms for polarizers in a range of sizes.
- Spherical and meniscus lens options available.
- Over 20 standard components available. [More Information button](#)

Silicon optics



- Silicon optics for use at MWIR $3\mu\text{m}$ to $5\mu\text{m}$ used in thermal imaging applications.
- Silicon is an ideal material for detecting black body temperature of 700K.
- Windows and wedge prisms up to 300mm diameter.
- Diamond turned and conventional polished aspheric, spherical and meniscus lenses up to 200mm diameter.
- A range of AR and DLC coatings to cover 2- $5\mu\text{m}$ spectrums.
- Hydrophobic coatings.
- Surface quality <40-20 scratch dig.
- Small 5mm diameters. Diced squares and rectangle. Custom rebated windows to your specific requirements.
- [Standard stock silicon windows available online.](#)

Calcium fluoride optics



- Calcium fluoride optics for vacuum ultra-violet in detector applications.
- A range of CaF_2 windows and lenses available.
- Diamond turned aspheric and meniscus lenses, also traditional spherically polished CaF_2 lenses available.
- Raman/ standard and UV grades available.
- Diameters up to 200mm with $\frac{1}{4}$ wave flatness and 40-20 scratch dig.
- BBAR coatings available from 200nm to $10\mu\text{m}$.
- [Over 58 standard window and lens components available online.](#)

Magnesium fluoride optics



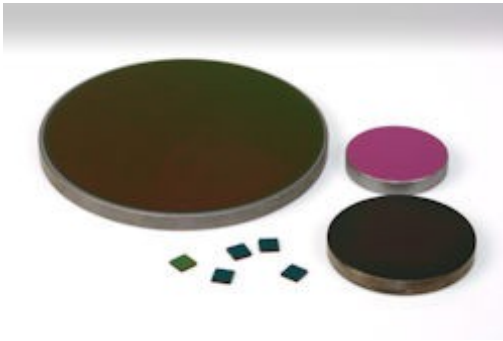
- Magnesium fluoride optics for deep UV applications down to 100nm. And IR applications to 7 μ m
- Windows up to 50mm diameter and 5mm thk.
- Flatness to $\frac{1}{4}$ wave and 20-10 scratch dig.
- BBAR coatings available from 1-7 μ m.
- [Standard stock MgF2 windows available online.](#)

Zinc Selenide optics



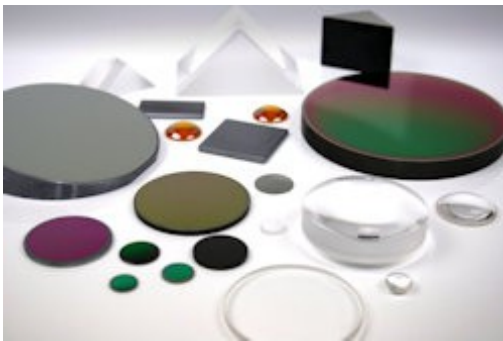
- Zinc Selenide window solutions for “forward looking infrared radiometer and CO2 laser applications.
- Window diameters from 5-100mm.
- Diamond turned aspheric and meniscus lenses, also traditional spherically polished ZnSe lenses available.
- Very wide IR wavelength use from 0.6 μ m to 21 μ m
- Beamsplitter options available.
- Mounting into cells available.
- BBAR coatings available..
- Surface quality <60-40 standard.
- Small 5mm diameters to larger 100mm diameters available.
- Square and rectangular options available when being used as beamsplitter components.
- [Over 22 standard Zinc Selenide lenses and windows available. **More Information button**](#)

Infrared filters



- A range of infrared optical filter solutions available.
- Bandpass filters to 20 μ m
- IR longwave and shortpass filters.
- Infrared neutral density filters.
- Gas-band filters.
- Semiconductor filters.
- Diameters, squares and rectangles to very small sizes down to 2x2mm for use in detectors.
- [A large off-line range of stock filter options available.](#) **More Information button**

Other Infrared optic solutions



- A range of other infrared material solutions are available.
- Barium fluoride (15 online stock window options)
- KRS 5N (3 online window options)
- Potassium bromide (7 online window options)
- Sodium chloride (4 online window options)
- [Stock windows and lenses available online.](#) **More Information button**

Optical tools and accessories



- Filter storage boxes.
- Vacuum pick up tools and systems including accessories.
- Cleaning and packing cloths.
- Surface blowers and brushes.
- Optical cleaning agents.
- Lab gloves and finger cots.
- [All available from stock online.](#) **More Information button**

Optomechanics



- A range of optomechanical components and accessories for a complete range of mounting and positioning options.
- Camera filter holders designed to fit standard 25mm dia filters with M25.5 and M30.5 thread, ready for fitting to Tamron, Fujinon and Sony camera lenses.
- Self centering component holders.
- Adjustable component holders.
- Fitted component holders.
- Breadboards and bases up to 800mm square.
- Mounting posts.
- Post holders
- Post clamps.
- Post thread adaptors.
- [Over 200 standard opto-mechanics available.](#) **More Information button**