

Meller Optics, Inc.

High Speed, Precision Sapphire Fabrication

Meller Optics- History



Established in 1921 in Providence, RI serving the jewelry industry, Meller was asked to build a ruby laser rod for MIT Labs. They were attempting to measure the distance from the surface of the earth to the moon for NASA in the early 60s. This was the pivot point for Meller's entrance into the precision optics industry. Since then, the Meller name has become synonymous with quality. Other nameplate jobs: Kepler Telescope Lenses, Navy 360 Degree Window,

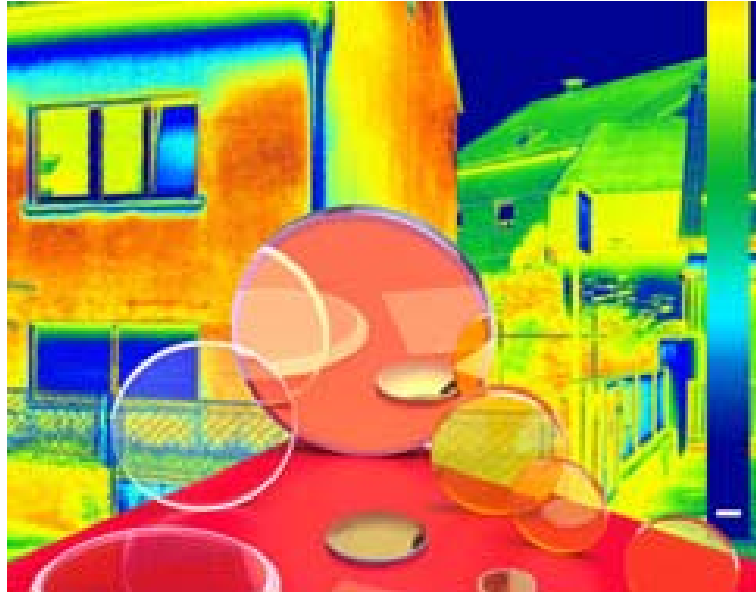
Sapphire Fabrication

Meller Optics is a Master of Sapphire fabrication. We fabricate sapphire domes, lenses, windows, etc. with a proprietary high speed method. This method has proven to deliver extreme quality at a high rate of production.



Infrared Substrates

Meller is also a fabricator of Zinc Selenide, Zinc Sulfide, Germanium, Spinel and other Ceramics utilized in Mid and Long Wave Infrared applications.



Custom fabricated sapphire optics for use in aerospace and other critical applications requiring resistance to fast-moving dirt, temperature extremes, and high pressure are available from Meller Optics, Inc. of Providence, RI.

Meller Sapphire Optics are custom fabricated and feature a curve radius tolerance of .5% with focal length accuracy of ± 0.0005 " , depending upon radius, to provide optimum clarity. Impervious to water, most acids, alkalis, abrasion from fast-moving particulates, temperatures to 1,000°C, and pressures up to 10,000 psi, they are ideal for aerospace applications.

Providing surface finishes from 80-50 to 10-5 scratch-dig, irregularity held to 0.5 fringes of HeNe, and parallelism from 20 to 2 arc/secs., depending upon configuration, Meller Sapphire Optics can be manufactured in 3/8" to 6" dia. sizes in varying wall thicknesses with ± 0.001 " tolerances in plano-convex, -concave, meniscus, and dome shapes, including custom edge finishes.

Meller Sapphire Optics are priced according to configuration, size, and quantity.

Sapphire Windows for protective cover glass

Meller produces thousands of protective windows for the unmanned vehicle market each year. These windows generally include dual or triband anti reflective coatings for targeting, etc.



Sapphire Domes

Custom fabricated sapphire domes that feature a superior combination of optical and mechanical properties for protecting guidance systems, sensors, and other devices in harsh airborne and subsea environments.

Meller Sapphire Optical Domes feature Moh 9 hardness which is second only to diamond in terms of hardness and provide up to 85% transmission uncoated in the UV and IR, and up to 99% when anti-reflective coated on two sides.





I have found over the years that every optics company eventually disappoints in one way or another. The one exception I have found is Meller Optics, and their ability to supply precision, quality Sapphire window components for our airborne turrets. Meller quotes quickly, delivers on time, and meets spec every time. In fact, we contemplate Meller for most optics, even when Sapphire is not required, simply because of their favorable commercial practices compared to all other optics vendors.

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HoodTech Vision

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Our Customers

Meller has been in business since 1921 and has a long list of happy Customers.

We have been working with many of our Customers for well over 40 years.

Here is a list of some of our larger Clients:

- US Navy
- Lawrence Livermore
- UTC Cloud Cap
- Elbit Systems
- Coherent Lasers
- General Sandia Labs
- Lockheed Martin
- Sierra-Olympic Tech
- Materion
- L-3 KEO