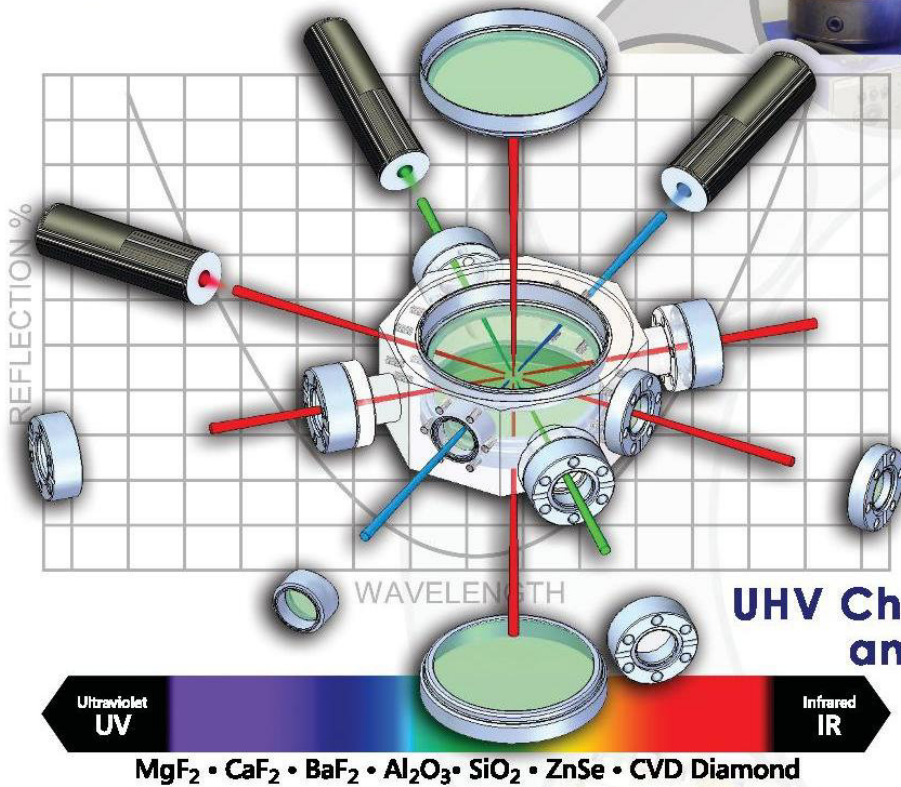


UHV Viewports
Laser Windows
AR Coatings

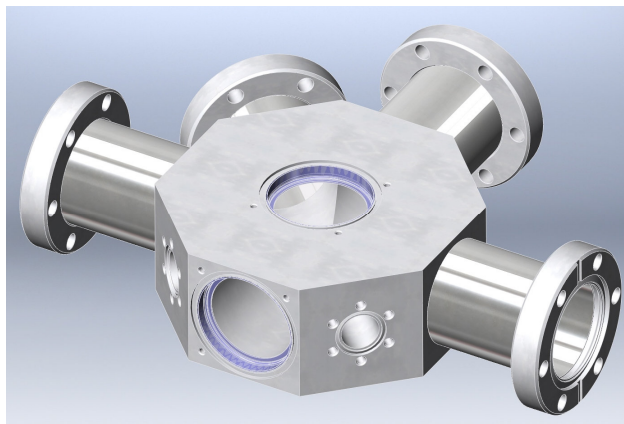


UHV Chambers Design and Manufacture

ITO Coatings
Hermetic Seals
Thin Film Coatings
Lead Glass Viewports
Electro Optics and Sensors

Anti-reflective coated viewports for Ultracold Atoms Applications

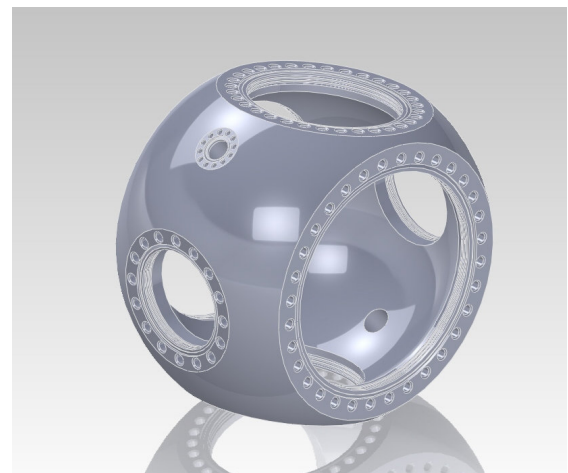
New technology, especially semiconductor laser development has revolutionized atomic physics during the past two decades and some Ultracold Atoms Researcher Groups are now able to build apparatus that can routinely cool certain gases to ultra low temperatures very close to absolute zero (~50 nano Kelvin). At such low temperatures, the scientist can trap atoms with light, magnetic and/or electric fields and study their behavior in detail. A fascinating example of a collective effect at ultracold temperatures is the phenomenon of Bose-Einstein condensation, a novel quantum state of matter. In such ultra high vacuum and cold temperatures the researcher can investigate the fundamentals of quantum mechanics by manipulating the atoms and observing their behavior.



Hositrad Vacuum Technology

provide these types of customized chambers for Ultracold Atoms Applications.

We are offering to weld optic assemblies directly in to the chamber (instead of a flange) to reduce the size. For nonmagnetic assemblies we use tantalum weld rings, 316L /316LN bodies and 316LN flanges.



A wide range of optics is available, i.e. fused silica viewports with anti-reflective coating minimizing the reflectance for the cooling laser at 780nm. Please tell us your requirements and we are able to offer you complete solutions with optics and vacuum chambers.