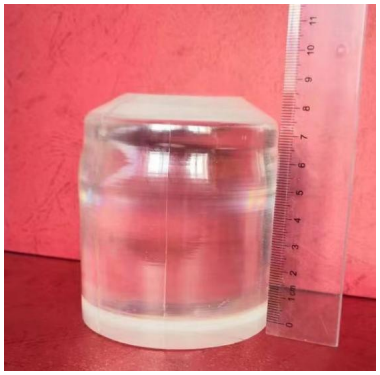
TeO2

TeO2 crystal is a kind of acousto-optic material with high quality factor. It has good birefringence and optical rotation, and the sound velocity is slow along the direction [110]. If the aperture of light is the same, the resolution of the device made of TeO2 single crystal can be improved by orders of magnitude, the response speed is fast, the driving power is small, the diffraction efficiency is high, the performance is stable and reliable.



Main features:

- Wide wavelength tunability
- Absorption pump bandwidth
- Short excited state lifetime (3.2mm)
- High damage threshold and excellent output efficiency
- Excellent thermal conductivity

Typical applications:

- Acousto-optic modulator and acousto-optic harmonics
- Optical communication
- Optical microscopic imaging

Technical Parameters

Parameters	Values & Ranges
Density(g/cm3)	6
Melting point (℃)	733
Mohs hardness(Mohs)	4
Colour	Transparent (colorless)
Transparency band (mm)	0.33~5.0
Light transmittance @ 632.8 nm	> 70%
The refractive index @ 632.8 nm	ne = 2.411; no = 2.258
Coefficient of thermal conductivity(mW/cm·℃)	30
Sound velocity (km/s)	0.617 for shear wave along <110> 4.26 for longitudinal wave along <001>
Sound and light quality factors(10-18 sec3/g)	1200 for shear wave along <110> 34.5 for longitudinal wave along <001>