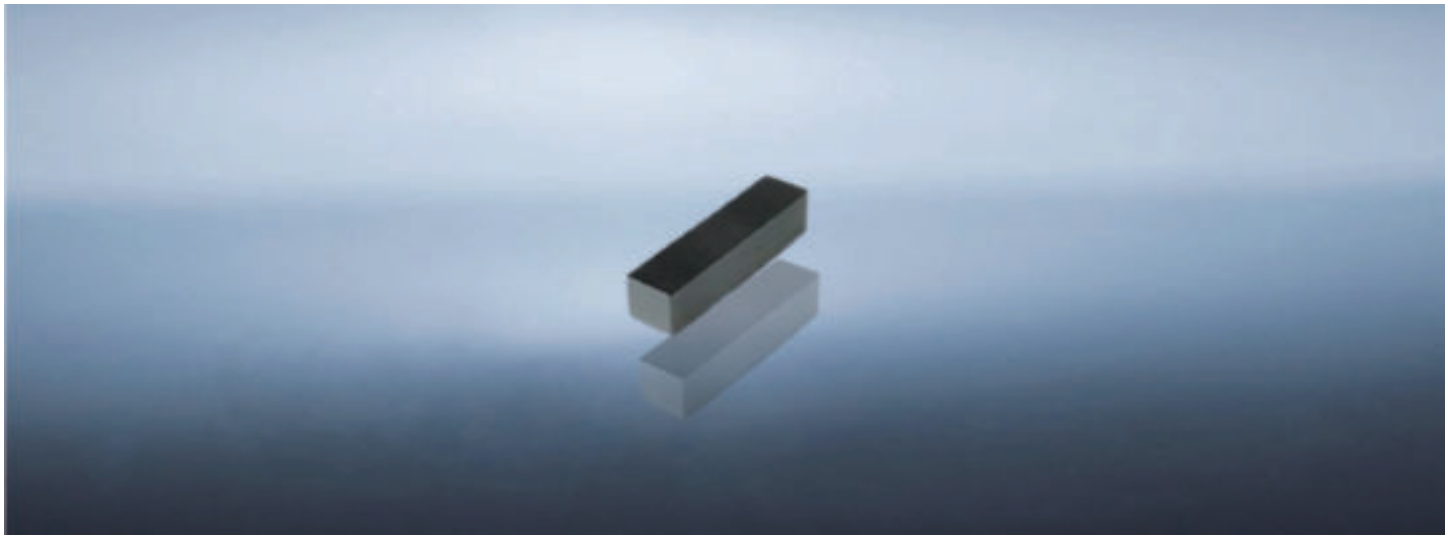
GaSe



DESCRIPTION

GaSe crystals are a nonlinear optical material with high damage broadening resistance, a large nonlinear coefficient (54 pm/V), a transmission band between 0.65 and 18 μm, and an ultra-low absorption coefficient, which makes them very important for mid-infrared broadband electromagnetic wave oscillations.GaSe crystals have achieved applications in: SHG of CO_2 lasers, conversion of CO_2 laser radiation conversion to visible or near-infrared wavelengths, mixing studies in the mid-wave infrared, OPG light generation in the 3.5-18 μm range, and efficient terahertz generation in the 0.2-5 THz range during femtosecond pulse pumping.

FEATURES

- Large nonlinear coefficient
- High damage threshold
- Wide transmission range
- Ultra low absorption coefficient
- Broadband terahertz oscillation
- SHG conversion efficiency of CO_2 laser reaches 9%

APPLICATIONS

- High power femtosecond laser
- Terahertz time domain system
- Mid far infrared gas detection
- SHG for CO, CO_2, dye lasers, etc
- Up conversion: infrared (IR) to near infrared (NIR) range
- Optical parametric generation (OPG) is in the range of 3 – 16 μ M

www.crylink.com
sales@crylink.com
+86-21-66566068
Building 7, No.718 Baoqi Road, Baoshan District, Shanghai, China

GaSe

PHYSICOCHEMICAL PROPERTIES

Material Science	GaSe
Transmission range（ μm ）	0.62-20
Nonlinear coefficient (pm/v)	d_{22}=54 @10.6 μm
Crystallographic system	Hexagonal system, 6m2 point group
Lattice parameter（Å）	a=3.74,c=15.89
Refractive index	no=2.6975,ne=2.3745（10.6μm）
	no=2.7233,ne=2.3966(5.3μm）
Damage threshold (mw/cm^2)	30（@1064nm,10ns)
walk away angle	4.1°
Mohs hardness	2
density	5.03 g/cm^3
Band gap width	2.2ev (at 300K)

SPECTRA