

Features

- Large effective nonlinear coefficient
- High damage threshold and inertness with respect to moisture
- Promising doubling crystal to produce blue laser
- Strict quality control
- Large crystal size up to 10 x 10 x 15 mm³
- AR-coating, mounts and repolishing services



Specifications

Dimension tolerance	(W±0.1mm)x(H±0.1mm)x(L+0.5/-0.1mm) (L≥2.5mm) (W±0.1mm)x(H±0.1mm)x(L+0.1/-0.1mm) (L<2.5mm)
Clear aperture	central 90% of the diameter
Flatness	less than $\lambda/8$ @ 633nm
Transmitting wavefront distortion	less than $\lambda/8$ @ 633nm
Chamfer	≤0.2mm@45°
Chip	≤0.1mm
Scratch/Dig code	better than 10/ 5 to MIL-O-13830A
Parallelism	better than 20 arc seconds
Perpendicularity	≤5 arc minutes
Angle tolerance	$\Delta \theta \leq 0.25^\circ$, $\Delta \phi \leq 0.25^\circ$
Damage threshold [GW/cm]	>0.3 for 1064nm, TEM ₀₀ , 10ns, 10HZ
Quality Warranty Period	one year under proper use.

Optical / Nonlinear Optical Properties

Transparency Range	286 - 2500 nm
Absorption Coefficient	<0.1 %/cm at 1064 nm
Physical Axis	X//b,(Z,a)=31.6°, (Y,c)=47.2°
SHG of 1064/532	Phase matching angle: 168.9° from z axis in YZ plane Deff: 3.0+/-0.1 pm/V Angular acceptance: 2.32 arad-cm Walk-off angle: 25.6 mrad temperature acceptance: 2.17°C -cm

Sellmeier coefficients	$n_i^2(\lambda)=A+B/(\lambda^2-C)-D\lambda^2$			
	A	B	C	D
n_1				
n_2	3.6545(4)	0.0511(2)	0.0371(3)	0.0226(1)
n_3	3.0740(3)	0.0323(1)	0.0316(3)	0.01337(6)
n_4	3.1685(3)	0.0373(1)	0.0346(3)	0.01750(8)

Chemical and Structural Properties

Crystal Structure	Monoclinic, Point group 2
Lattice Parameter	a=7.116 Å, b=4.993 Å, c=6.508 Å, $\beta=105.62^\circ$, Z=2
Melting Point	726°C
Mohs Hardness	5 - 5.5
Density	5.033 g/cm ³
Thermal Expansion Coefficient	$\alpha_a=4.8 \times 10^{-5}/K$, $\alpha_b=4.4 \times 10^{-6}/K$, $\alpha_c=-2.69 \times 10^{-5}/K$