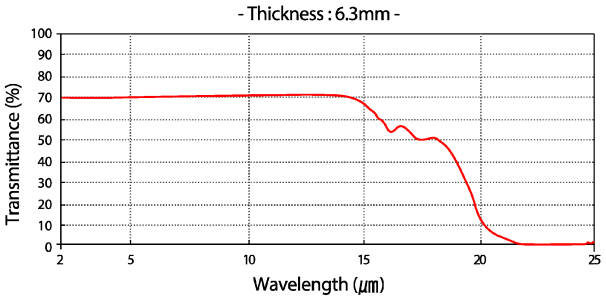
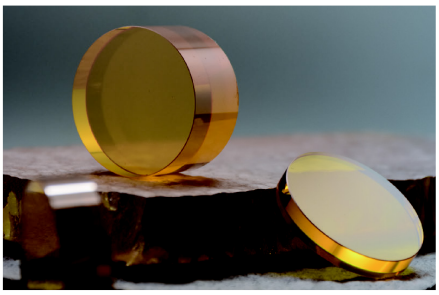
Zinc Selenide (ZnSe)

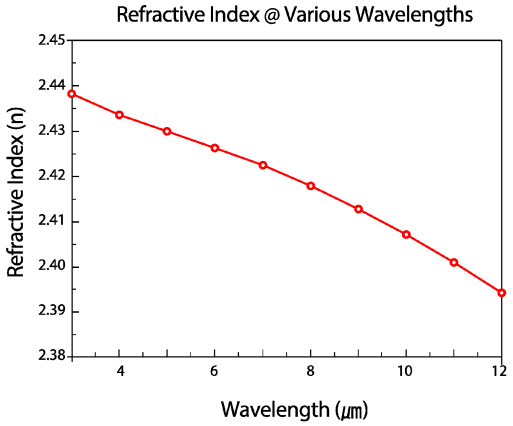
Chemical Vapor-Deposited ZnSe has very low bulk absorption at 10.6 μm.
It is suitable for high-power CO2 lasers and high-resolution infrared optical components.

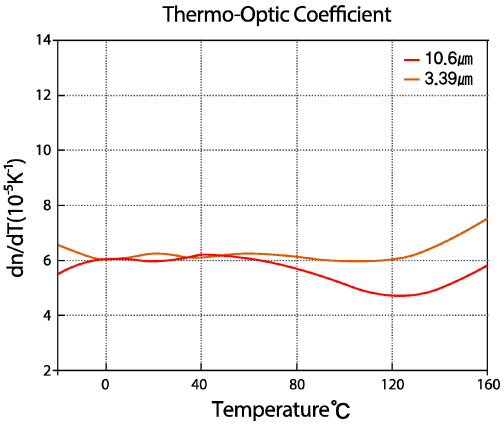




Material Properties

Optical Properties	Refractive Index @ 10.6μm		2.403
	Refractive Index Inhomogeneity @0.6328μm	ppm	〈 3
	Bulk Absorption Coefficient @ 10.6μm	cm^{-1}	〈 0.0005
Physical Properties	Crystal Structure		Cubic
	Grain Size	μm	〈 100
	Density	g/cm^3	5.27
	Chemical Purity	%	〉 99.999
	Inclusions	mm	None 〉 0.05
	Resistivity	Ω cm	〉 10^{12}
Thermal Properties	Coefficient of Thermal Expansion @ 293K	K^{-1}	7.48 x 10^{-6}
	Thermal Conductivity @ 298K	W/mK	20
	Heat Specific	J/gK	0.377
Mechanical Properties	Knoop Hardness	kg/mm^2	110
	Flexural Strength (3 pt.)	MPa	54
	Fracture Toughness	$MPam^{1/2}$	1.1
	Young's Modulus	GPa	71
	Poisson's Ratio		0.32





Refractive Indices @ 23℃

Wavelength (㎛)	n
3	2.438034
4	2.433621
5	2.429995
6	2.426309
7	2.422390
8	2.417920
9	2.412854
9.4	2.410666
10	2.407196
10.6	2.403427
11	2.400807
12	2.393692

Available Maximum Size

- Ø800 x 30mmT
- Dome and special shape: Consult us