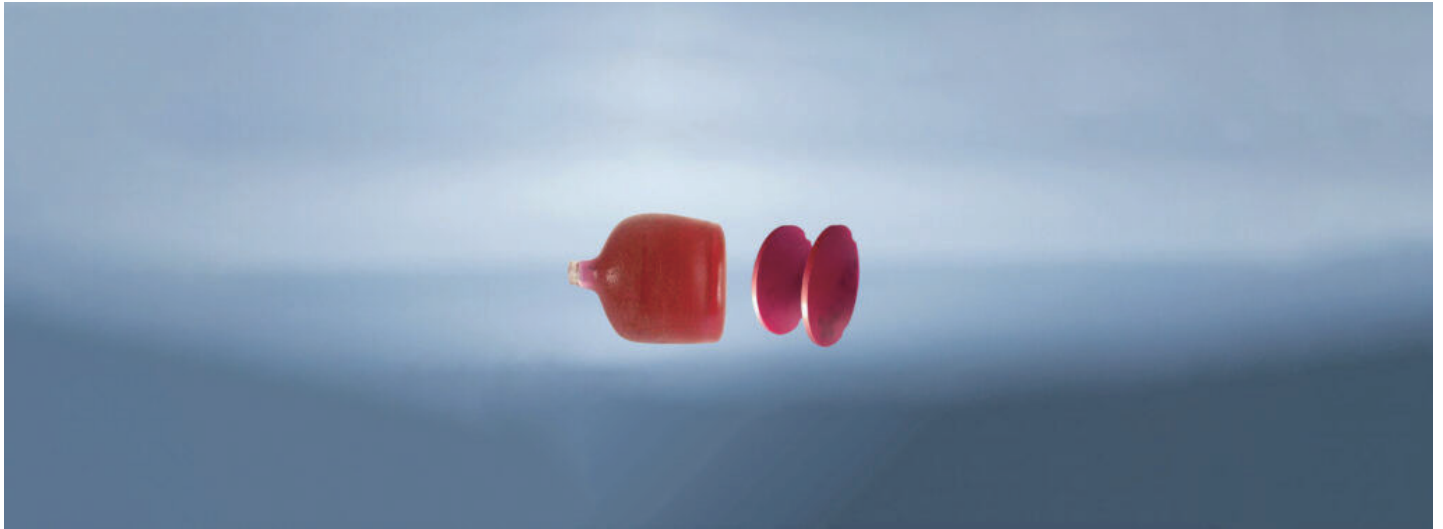


# Cr:Al<sub>2</sub>O<sub>3</sub>



## DESCRIPTION

CRYLINK's Cr:Al<sub>2</sub>O<sub>3</sub> crystal products, also known as Ruby. It is a kind of laser crystal product with excellent comprehensive performance. It is widely used in optics and solid-state lasers. The product has the characteristics of high hardness and obvious dichroism. Can be used in optical glass, watch parts, ruby laser products.

## FEATURES

- Hardness is high
- Obvious dichromeity

## APPLICATIONS

- Solid lasers
- Watch parts
- Optical glass

## PARAMETERS

### BASIC PARAMETERS

Tuning Range (nm)	680 – 1100
Pump Range (nm)	450 – 532
Absorption Coefficient @510 nm (cm <sup>-1</sup> )	0.5 – 2.5
FOM	>200
Orientation	90° to c axis
Geometry	flat-flat / Brewster
Parallelism	10"
Flatness	0.2
Orientation Tolerance	< 5°
Wide-band AR coating (%)	< 0.2
Dia (mm)	(3 – 40) ± 0.1
Length (mm)	(10 – 140) ± 0.5



# Cr:Al<sub>2</sub>O<sub>3</sub>

## BASIC PARAMETERS

Chemical Formula	Cr <sup>3+</sup> :Al <sub>2</sub> O <sub>3</sub>
Crystal Structure	Hexagonal
Lattice Constant (Å)	a = 4.748; c = 12.957
Crystal System	Triangular
Axial Propertie	Uniaxial
Growth method	CZ
Melting Point	2040°C
Refractive Index	n <sub>p</sub> = 1.759; n <sub>m</sub> = 1.767
Birefringence	0.0082
Density (g/cm <sup>3</sup> )	3.98
Mohs Hardness	9
Specific Heat Capacity @18°C (J kg <sup>-1</sup> K <sup>-1</sup> )	761
Thermal Conductivity @25°C (W cm <sup>-1</sup> K <sup>-1</sup> )	
Perpendicular to the C axis	0.35
Parallel to the C axis	0.33
Thermal Expansivity (20 – 100°C)	
Perpendicular to the C axis	4.78×10 <sup>-6</sup> K <sup>-1</sup>
Parallel to the C axis	5.31×10 <sup>-6</sup> K <sup>-1</sup>

## SPECTRA

