

# UNDOPED YAG CRYSTALS

Undoped YAG Crystal is an excellent material for UV-IR optical windows, particularly for high temperature and high energy density online\_orderings, The mechanical and chemical stability is comparable to sapphire crystal, but YAG is unique with non-birefringence and available with higher optical homogeneity and surface quality. Up to 3" YAG boule grown by CZ method, as-cut blocks, windows and mirrors are available from ultiQuest Technology.

## Physical and Optical Properties:

Properties	Values
Crystal structure	Cubic
Density	4.5g/cm <sup>3</sup>
Transmission Range	250-5000nm
Melting Point	1970°C
Specific Heat	0.59 W.s/g/K
Thermal Conductivity	14 W/m/K
Thermal Shock Resistance	790 W/m
Thermal Expansion	6.9x10 <sup>-6</sup> /K
dn/dt, @633nm	7.3x10 <sup>-6</sup> /K -1
Mohs Hardness	8.5
Refractive Index	1.8245 @0.8 m m, 1.8197 @1.0 m m, 1.8121 @1.4 m m

## Our Manufacture Technical Capabilities:

Properties	Values
Orientation	within 5°
Diameter	+/-0.1mm
Thickness	+/-0.2mm
Flatness	better than $\lambda/8$ @633nm
Parallelism	better than 30"
Perpendicularity	better than 5'
Scratch-Dig	10-5 per MIL-O-1383A
Wavefront Distortion	better than $\lambda/2$ per inch@1064nm

Please Contact ultiQuest for more information and technical supports.

## NOTES!

- Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.