

# Ti:Sapphire Crystals



## Description

Titanium doped sapphire ( $\text{Al}_2\text{O}_3:\text{Ti}^{3+}$ ) is widely used for generating ultra short femtosecond pulses and wavelength tunable lasers. It has remarkably high gain. Ti:Sapphire crystals can be effectively pumped by short pulse flash lamps in powerful laser systems.

Also these crystals combine supreme physical and optical properties with the broadest lasing range. Its indefinitely long stability and useful lifetime are an additional advantage. Medical laser systems, LIDARs, laser spectroscopy, direct femtosecond pulse generation by Kerr-type mode-locking - these are a few of the existing and potential applications.

## Features

- Broad lasing range: 660-1050 nm band
- Perfect for ultrashort pulse generation
- $\text{Ti}_2\text{O}_3$  concentration 0.03-0.25 wt.%
- Figure of merit (FOM) up to 300 available
- Sizes up 50x50x30 mm or larger are available upon request

## Standard specifications

Orientation	Optical axis C normal to rod axis
Absorption @ 532 nm on crystal length	>90%
Dimensions tolerance	+0/-0.1 mm
Length tolerance	±0.1 mm
Surface quality	10-5 S-D
Surface flatness	< $\lambda$ /10 @ 632.8 nm
Transmitted wavefront distortion (TWD)	< $\lambda$ /4 @ 632.8 nm
Parallelism error	<30 arcsec
Protective chamfers	<0.1 mm x 45°