

## Laser Rods

You can find a list of common laser rods in the following table.  
 Additional laser rods not listed here are available upon request.

Detailed specifications as well as a list of crystal properties can be found  
 in the datasheets on our website.



Crystal	Laser Wavelengths [nm]	Typ. Pump Wavelength [nm]	Details
Nd:YAG	946, 1064, 1319	808	Most important laser crystal, output unpolarized, for high power laser
Nd:YVO <sub>4</sub>	914, 1064, 1342	808	Output polarization parallel to the optical axis (c-axis), higher efficiency than Nd:YAG
Nd:Ce:YAG	1064		Strong absorption in UV range at flash lamp pumping, for high power with high beam quality
Nd:Ce:Tb:YAG	1064		Thermally stable
Nd:GdVO <sub>4</sub>	1062.9	808	Output polarization parallel to the optical axis (c-axis)
Cr <sup>4+</sup> :YAG	1350 – 1600	1064	Excellent crystal for passively Q-switching Nd or Yb doped lasers at wavelengths from 1 – 1.2 μm
Yb:YAG	1030	940, 970	Often used for disk lasers, high absorption bandwidth
Ti:Sapphire	660 – 1050 (peak: 795)	within 400 – 600 (max. efficiency 488), typ. 532	Widely used laser crystal for widely tunable and ultrashort pulsed lasers with high gain and high power outputs

Crystal	Laser Wavelengths [nm]	Typ. Pump Wavelength [nm]	Details
Nd:YLF	1047, 1053	792, 797	For low power but better beam qualities, birefringent, polarization emissions perpendicular to each other
Er:YAG	2940	600 – 800	For medical applications
Ho:Cr:Tm:YAG	2097	781	Wide applications in surgery, dentistry, atmospheric testing, etc.

The following information is required when requesting a quotation:

- Type of crystal
- Doping (atm. %)
- Dimensions (e.g. diameter x length)
- End surfaces (plane, Brewster angle, or similar)
- Coating of end surfaces

### Typical Specifications

- Diameter tolerance:  $\pm 0.1$  mm
- Length tolerance:  $\pm 0.5$  mm
- Surface figure:  $\lambda/10$  at 633 nm
- Surface quality: 10-5 per MIL-O-1380A
- Parallelism:  $<10$  arc sec
- Perpendicularity:  $<5$  arc min
- Chamfer:  $<0.1$  mm at  $45^\circ$