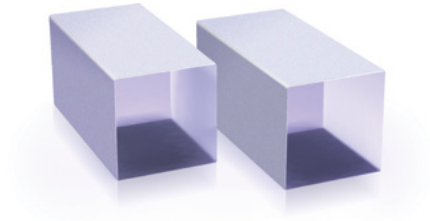


# KTP Crystals



## Description

Single crystal **Potassium Titanyl Phosphate** is an excellent non-linear crystal. KTP is a standard crystal with the parameters mostly used in extracavity configuration when a single pass through the crystal is required.

It exhibits high optical quality, broad transparency range, relatively high effective SHG coefficient (about 3 times higher than that of KDP), rather high optical damage threshold, wide acceptance angle, small walk-off and Type I and Type II non-critical phase-matching (NCPM) in a wide wavelength range. KTP is the most commonly used material for frequency doubling of Nd:YAG lasers and other Nd-doped lasers, particularly at the low or medium power density range.

## Features

- Efficient frequency conversion and large non-linear optical coefficients
- Wide transmission region from 350 nm to 4400 nm
- Wide angular bandwidth and small walk-off angle
- Broad temperature and spectral bandwidth
- Low cost compared to BBO and LBO

## Standard specifications

Transparency range	350-4400 nm
Dimensions tolerance	+0/-0.1 mm
Length tolerance	±0.1 mm
Orientation accuracy of cut angle	<30 arcmin
Surface quality	20-10 S-D
Wavefront distortion	<λ/8 @ 632.8 nm
Parallelism error	<20 arcsec
Perpendicularity	<5 arcmin
Protective chamfers	<0.1 mm x 45°
Material optical damage threshold	>500 MW/cm <sup>2</sup> for 10 ns pulses @ 1064 nm