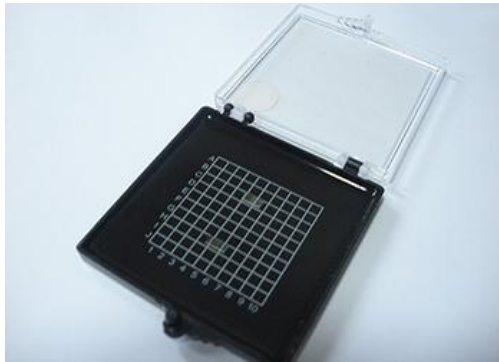


MgO:PPLN Crystal Chips for 488nm Laser Generation

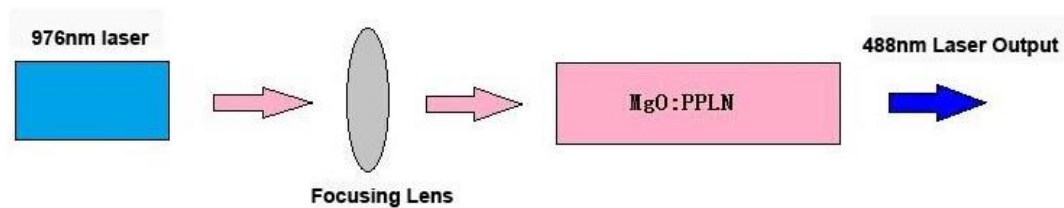
- High efficiency
- Small size for compact DPSS lasers

MgO doped periodically poled lithium niobate (or MgO:PPLN) crystals is a highly efficient nonlinear frequency conversion crystal. It can be used as SHG, DFG, SFG, OPO and OPA components in lasers. Hangzhou Shalom EO offers the blue **MgO:PPLN crystal** of SHG of 976nm laser which can generate 488nm laser, 488nm laser are widely used in the bio-detection applications. The crystals is small in size and easy to be assembled into your DPSS laser systems.



Application Notes

Typical Configuration of the 488nm laser using MgO:PPLN Chips



SPECIFICATIONS

Optical Specifications	
Length	10.0mm and 15.0mm
Width	2.0mm
Thickness	0.5mm
Coating on Input facet	AR@976nm + AR @488nm
Coating on Output facet	AR@976nm + AR@488nm
Operation Temperature	28~30°C and 48-50 °C

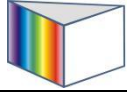
Note: The PPLN crystals with the Copper heat-sink packing is available.

Polishing Specifications	
Tolerance of Size	(Width±0.1mm) x (Thickness±0.05mm) X (Length±0.1mm)
Flatness	< Lambda/8 @ 633nm
Wavefront Distortion	< Lambda/6 @ 633nm
Chips	<0.1mm
Surface Quality	20/10 S/D
Parallelism	<10"
Perpendicularity	<10'

Basic Properties

Chemical and Physical Properties	
Melting Point	1255+/-5 °C
Curie Point/Temperature	1140+/-5 °C
Mohs Hardness	5
Density	4.648(5)g/cm ³
Thermal Conductivity	38W/m/K @ 25 °C
Coefficient of Thermal Expansion	//a, 2.0x10 ⁻⁶ /K //c, 2.2x10 ⁻⁶ /K

Optical and Nonlinear properties	
Wavelength range of Transmission	420nm ~ 5200nm
Nonlinear Coefficient	d ₃₃ = 34.4 pm/V d ₃₁ = d ₁₅ = 5.95 pm/V d ₂₂ = 3.07 pm/V
Optical Damaging Threshold	0.3GW/cm ²
Absorptive Coefficient	0.004/cm @ 1064nm



Shalom EO
Crystals, optics and components

Hangzhou Shalom Electro-optics Technology Co., Ltd.
