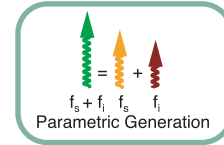




PPLN Optical Parametric Oscillator Crystals For High Power Applications

- Components are Available From Stock
- Crystals Supplied AR Coated
- Mounted Crystals for Alignment-Free Insertion into Temperature Controlled Oven
- High Efficiency Wavelength Conversion

We are pleased to introduce a new range of Periodically Poled Lithium Niobate (PPLN) crystals which are specifically designed for use in higher power Optical Parametric Oscillator applications. The increase in thickness to 1mm, from the standard 0.5mm, allows the use of larger spot sizes and hence higher total powers can be used. The three new OPO PPLN crystals have been designed, when pumped with a 1064nm source, to output wavelengths which are suitable for a range of applications including Atmospheric Transmission, LIDAR, Gas Monitoring and Biomedical.

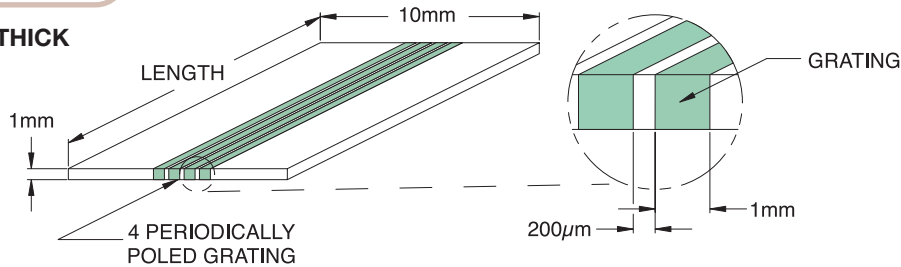


Specifications

- AR Coated <1% at Specified Pump, Signal and Idler Wavelengths
- Polished to 20-10 Scratch-Dig
- Flatness: $\lambda/4$ @ 633nm
- Fewer Than 2 Edge Chips Larger Than 100 μ m Per Face
- Faces Parallel to Within ± 5 Minutes

Three types of 1mm thick OPO PPLN crystals are available from stock. Each is 10mm wide, contains 4 different period gratings that are 1mm wide and are available in standard lengths of 20mm and 40mm. The crystals (see below) are all AR coated on both facets at the specified Pump, Signal and Idler wavelengths. Custom crystals are available if these crystals do not meet your needs. Please contact our technical support to discuss your PPLN crystal requirements.

SCHEMATIC OF PPLN 1mm THICK CRYSTAL FOR OPO'S



Atmospheric Transmission PPLN Optical Parametric Oscillators

1mm thick PPLN crystal designed to generate wavelengths within the 3.7 to 4.0 μ m atmospheric transmission window.

- Suitable for wavelengths from 3.7 to 4.0 μ m

ITEM	PPLN PERIODS (μ m)	LENGTH (mm)	TEMPERATURE RANGE ($^{\circ}$ C)	PUMP (nm)	SIGNAL (μ m)	IDLER (μ m)
OPO4-20	28.26, 28.39 28.52, 28.65	20	160 - 200	1064	1.491-1.459	3.715-3.932
OPO4-40	28.26, 28.39 28.52, 28.65	40	160 - 200	1064	1.491-1.459	3.715-3.932

LIDAR and Gas Monitoring PPLN Crystal

1mm thick PPLN crystal designed to generate wavelengths around 3.3 μ m, allowing access to various Hydrocarbon absorption lines.

- Suitable for producing wavelengths from 3.2 to 3.45 μ m

ITEM	PPLN PERIODS (μ m)	LENGTH (mm)	TEMPERATURE RANGE ($^{\circ}$ C)	PUMP (nm)	SIGNAL (μ m)	IDLER (μ m)
OPO5-20	29.44, 29.55 29.66, 29.78	20	160 - 200	1064	1.595-1.538	3.197-3.450
OPO5-40	29.44, 29.55 29.66, 29.78	40	160 - 200	1064	1.595-1.538	3.197-3.450

Biomedical and CO₂ monitoring PPLN Crystal

1mm thick PPLN crystal designed to generate wavelengths within 2.6 to 3.0 μ m used in various biomedical and CO₂ monitoring applications.

- Suitable for producing wavelengths from 2.6 to 3.0 μ m

ITEM	PPLN PERIODS (μ m)	LENGTH (mm)	TEMPERATURE RANGE ($^{\circ}$ C)	PUMP (nm)	SIGNAL (μ m)	IDLER (μ m)
OPO6-20	30.26, 30.39 30.52, 30.67	20	160 - 200	1064	1.801-1.637	2.6-3.04
OPO6-40	30.26, 30.39 30.52, 30.67	40	160 - 200	1064	1.801-1.637	2.6-3.04

ITEM #	\$	£	€	¥	DESCRIPTION
OPO4-20	\$ 2,000.00	£ 1,500.00	€ 2,100.00	¥ 340,000	OPO PPLN Crystals
OPO4-40	\$ 2,500.00	£ 1,875.00	€ 2,625.00	¥ 425,000	OPO PPLN Crystals
OPO5-20	\$ 2,000.00	£ 1,500.00	€ 2,100.00	¥ 340,000	OPO PPLN Crystals
OPO5-40	\$ 2,500.00	£ 1,875.00	€ 2,625.00	¥ 425,000	OPO PPLN Crystals
OPO6-20	\$ 2,000.00	£ 1,500.00	€ 2,100.00	¥ 340,000	OPO PPLN Crystals
OPO6-40	\$ 2,500.00	£ 1,875.00	€ 2,625.00	¥ 425,000	OPO PPLN Crystals

- Optical Systems
- PPLN Devices**
- Spherical Singlets
- Multi-element Lenses
- Cylindrical Lenses
- Aspheric Lenses
- Mirrors
- Windows & Diffusers
- Prisms
- Gratings
- Diffractive Optics
- Polarization Optics
- Beamsplitters
- Filters & Attenuators
- Gas Cells