1546→773nm Fiber-Coupled PPLN Waveguide Device

Email: info@liniobate.com.com
Phone:(+65) 31638599
Company Address:288 Woodlands Loop #04-00, Singapore 738100

LINIOBATE
Power Next Gen Photon

www.liniobate.com

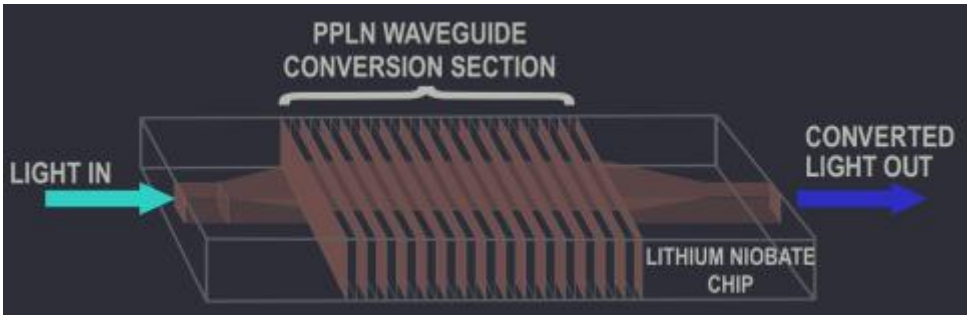
Overview

Linibate produce periodically-poled lithium niobate (PPLN) in two forms: as a bulk crystal with a thickness of up to 1 mm, and as a waveguide device. PPLN devices are tailored for the production of tunable midwave-infrared (MWIR) radiation through pumping by commonly-available lasers with wavelengths near 1 micron.

Features

Bulk PPLN devices can produce several Watts of average power between wavelengths of 2 and 4 microns. Waveguide frequency converters are fabricated using a process called Reverse Proton Exchange (RPE). The increased optical mode confinement in the resulting waveguide enables higher conversion efficiency devices that can be pumped with 100 mW class semiconductor lasers used for fiber-optic and free-space telecommunications.

Working Theory



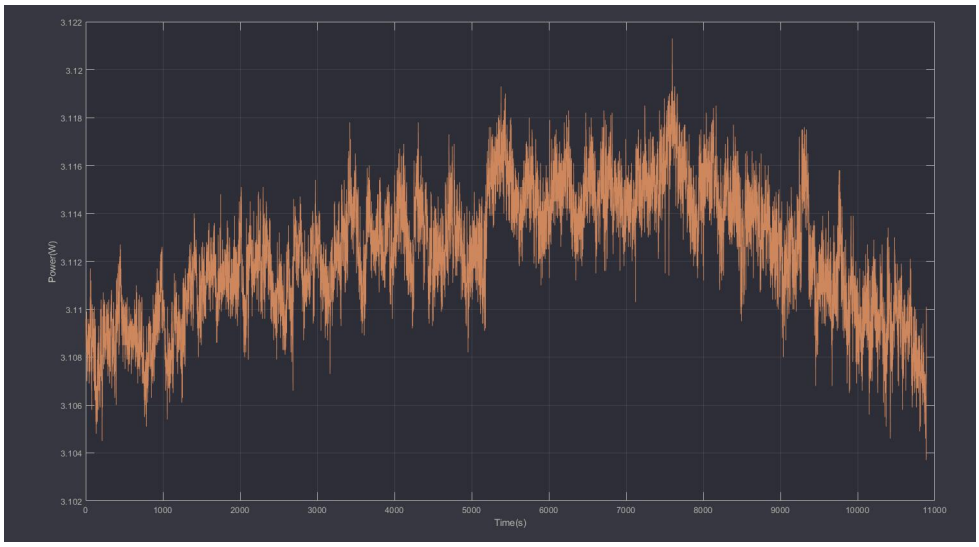
Standard Specifications

Item	SHG773
Input Maximum IR Power	< 8W
Input Fiber Type /Operational Polarization Axis	PM1550/Slow
SHG Wavelength	773nm
Back Reflection	> 35dB
Polarization Extinction Ratio	>20dB(PM Fiber output)
Beam Waist Diameter（1/e2）	1mm
M2	<1.1
Beam Divergence Nominal	<1.15mrad
Beam Waist Location From The Front Plate	0 to 1000mm
Beam Ellipticity	<10%
Static Beam Position	< ±0.5mm
Static Beam Angle	< ±5mrad

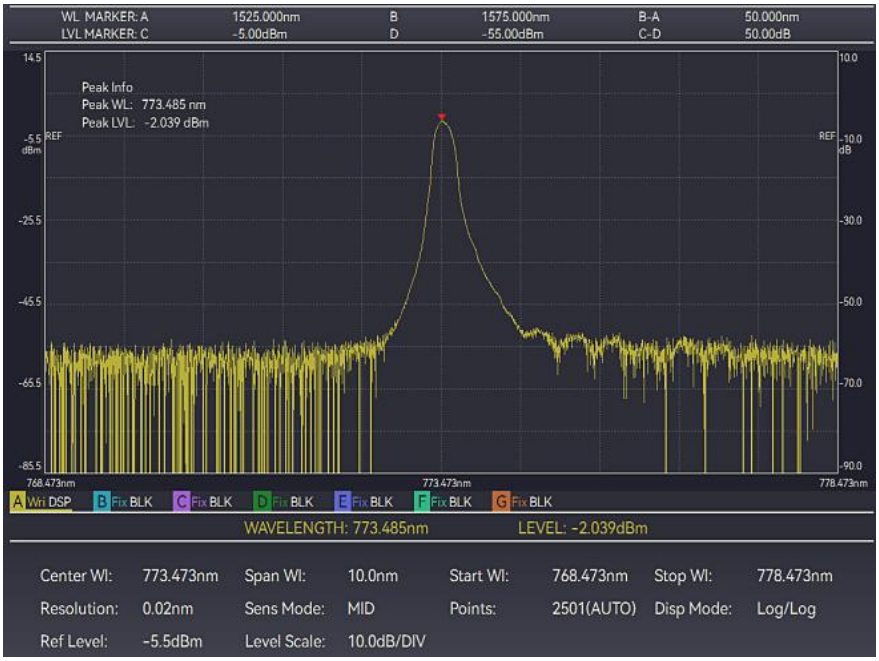
Beam Pointing Stability（Stable Temperature）	< 10mrad
Beam Pointing Stability（Temperature Changing）	< 10urad/degC
Output Power Stability	< 1％ over 8 hours
Operational Ambient Temperature Range	10 to 40 degC
Storage Temperature	—40 to 60 degC

As for SHG77X, Liniobate can supply you with not only PPLN—UNIT but also PPSLT—UNIT. For this case, you can input IR power up to 10W and you will get over 4W of SHG output power.

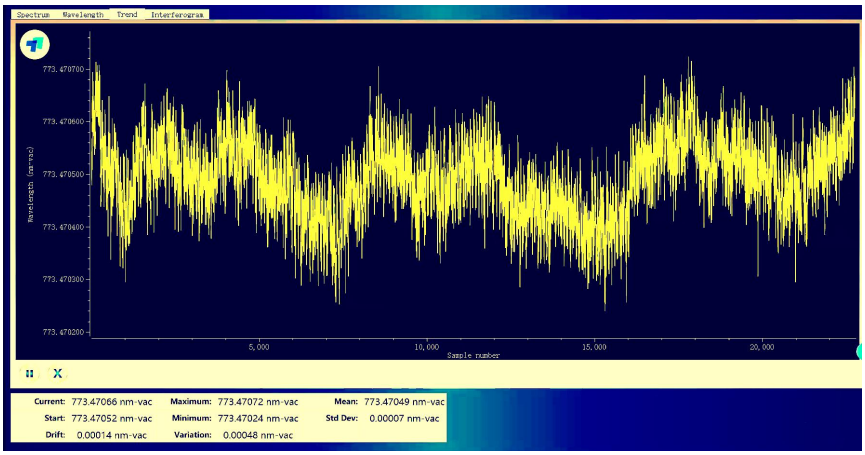
SHG773 Power Stability



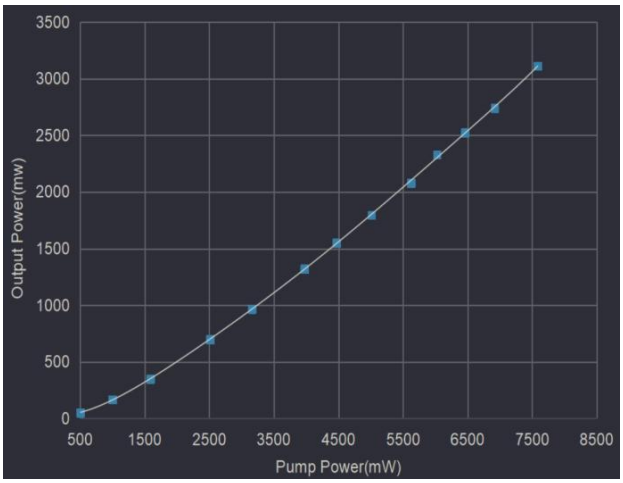
Spectrum and Tuning Range



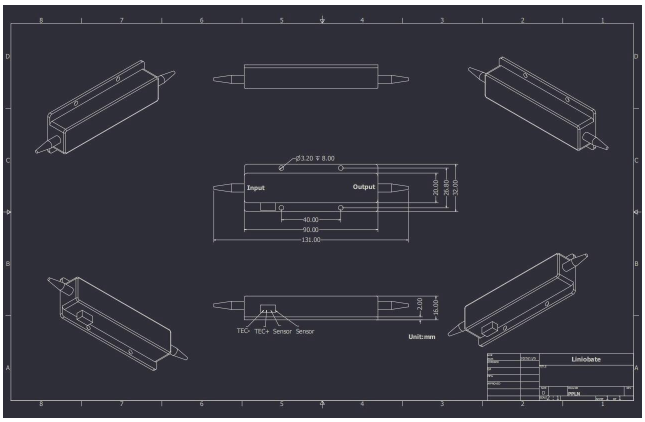
Frequency Stability



PPLN Pump and Signal Power Conversion curve



Dimensions and Pin definitions（Unit in mm)



Ordering info

PN#SHG773　1546→773nm Fiber-Coupled PPLN Waveguide Device

FC/APC Connector (Both ends), Input Fiber :PM 1550 fibers with Slow axis alignment,Output Fiber:PM780 fibers with Slow axis alignment，PER＞20dB,Max Handling Power: 8W,Output Power:＞3000mW.