$LiNbO_3$ Crystal

WISOPTIC Capabilities of $LiNbO_3$

- Various sizes of finished components for different applications.
- Strict quality control
- Very competitive price and reliable delivery
- Technical support at any time

WISOPTIC Standard Specifications of $LiNbO_3$

Dimensions	(4×4~9×9)×25 mm
Dimension Tolerance	± 0.1 mm
Angle Tolerance	± 0.5°
Flatness	< λ/8 @ 632.8 nm
Surface Quality	< 20/10 [S/D]
Parallelism	< 20″
Perpendicularity	≤ 5'
Chamfer	≤ 0.2mm @ 45°
Transmitted Wavefront Distortion	< λ/4 @ 632.8 nm
Capacitance	20 pF
Electrodes	Gold
λ/4 Voltage	~1.5 kV (@ 1064 nm)
Dynamic Extinction Ratio	20 dB (@ 1064 nm)
Clear Aperture	8.5 mm (> 90% central area)
Coating	AR coating: R < 0.2% @ 1064 nm, R < 0.5% @ 532 nm
Laser Damage Threshold	LN 100 MW/cm^2 @ 10ns, 10Hz, 1064nm MgO : LN 150 MW/cm^2 @ 10ns, 10Hz, 1064nm

Please note: PPLN/PPMgLN and SLN/MgSLN (Stoichiometric LN) is available.

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PP-$LiNbO_3$ & PP-MgO:$LiNbO_3$

Chip Lay-out

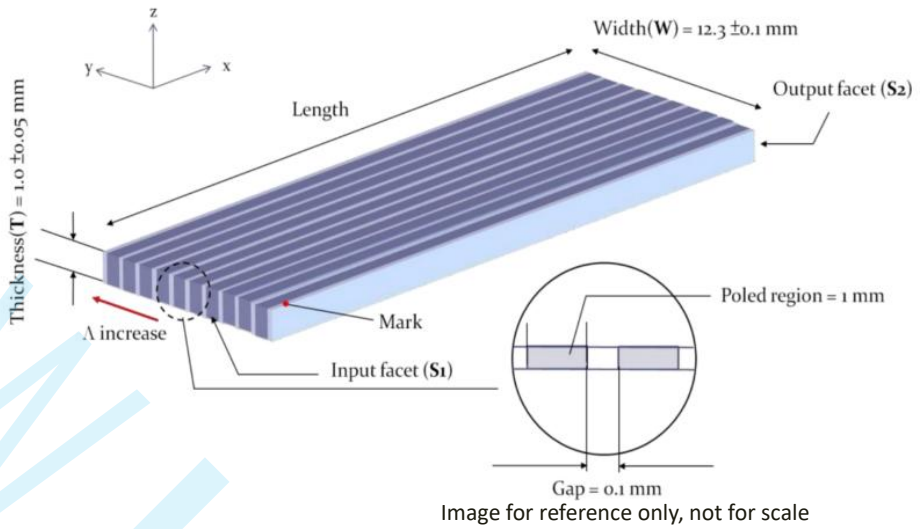
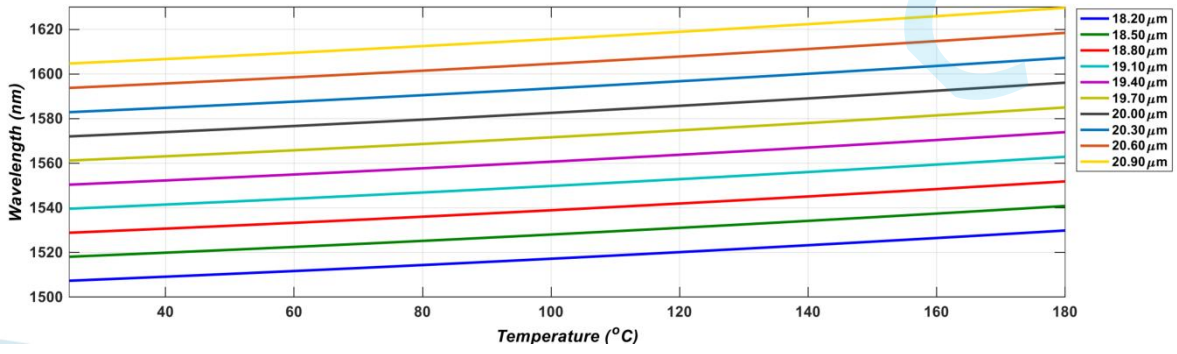


Image for reference only, not for scale

Main Specifications

Items	Properties	Inspection
Material	5 mol.% MgO:LN	NA
Period (Λ, μm)	18.20, 18.50, 18.80, 19.10, 19.40, 19.70, 20.00, 20.30, 20.60, 20.90	Microscope
Main Function	Second Harmonic Generation	NA
Parallelism/Perpendicularity	≤5'/21'	Autocollimator
Flatness	≤λ/6 (λ=633nm)	Interferometer
Scratch/Dig	≤20/10	Microscope
Optical coating (S1/S2 facets)	S1/S2 @750-810(R<0.5%) /1500-1620(R<0.5%) nm	Spectral Analyzer
Aperture Size	12.3 x 1.0 mm² (W x T)	Cutting Machine
Available Length	10/25/50 ± 0.2 mm	
Channel Clear Aperture	≥80% (T), ≥90% (W)	NA

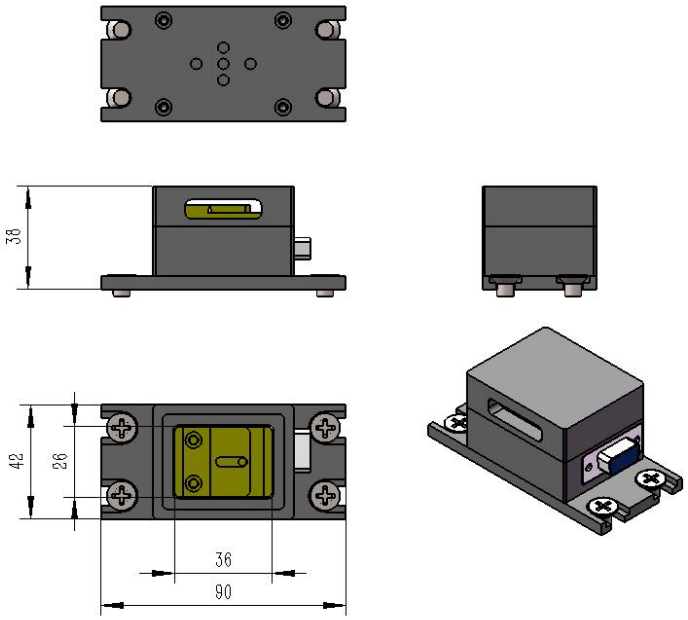
Phase Matching Tuning Curve



Oven and temperature controller

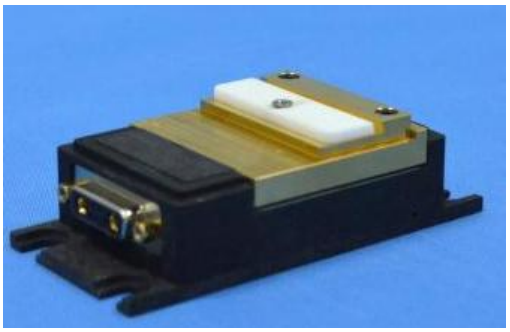
The Temperature Controller is designed to offer optimum temperature control of the PPLN crystal within the oven.

Specifications	
Temperature Controller	**Oven**
• Purpose ASIC processor • PID control • RS-232 interface (optional) • Programmable (optional) • Stability: 0.1 C/±0.01 C • Size:70×145×150mm^3 • Normal Package Standard • Voltage: 220V AC	• Design: Radioactive heat compensation • Plane temperature distribution • Size: 38×42×90mm^3 38×54×112mm^3 33×70×110mm^3 • Sensor: Pt100 thermocouple • Working temperature: ≤100 C/≤200 C



Applications:

Heating nonlinear crystals is usually employed in NCPM, OPO, OPA, etc.



Note:

1、Please confirm it when order and check it before plug in the power. Burned and other damages, which caused by improper power selection, are not guaranteed to repair.

2 、Special oven size, holder of crystals and right-angle support setting applications are available upon request.

Operation description:

1. Connect "AC220V" power line and " 6 PIN with D89" splice to the temperature control furnace.
2. The electric power will come when you push "switch" to "—", after that the screen will display "N： 25.0℃" and "S：25.0℃ ", the "N" and "S" represent the present temperature and the setting temperature respectively.
3. Press the "set" button once, the cursor will be on hundreds of temperature numbers, you can set this number, with "Add" button you can increase the setting temperature, with "Sub" button you can decrease it.
4. Press the "set" button twice, you can set the tens of temperature numbers.
5. Press the "set" three times, you can set the single digit of temperature numbers.
6. Press the "set" four times, the temperature control furnace start to work.