

# PPXX Crystals & Mixers

Bulk/ Waveguides

## PPMgO:LN & PPMgO:LT



Whispering Gallery Resonator



Waveguide



Single



Multiple



Fan-out



Cascade



Chirped



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# PPXX Crystals & Mixers

PPMgO:LN & PPMgO:LT

Bulk/ Waveguides



Waveguide Cross Section

	Bulk	Waveguide
Material	PPMgO:LN & PPMgO:LT	PPMgO:LN
Output wavelength	UV – THz	UV – THz
Pulse width	CW – ns	CW – fs
Normalized efficiency	Up to 4%/W/cm	> 1000%/W/cm <sup>2</sup>
Configuration	SHG, SFG, DFG, OPG, SHG+SFG ...	SHG, SFG
Chip length	1 – 80 mm	1 – 50 mm
Polishing	Flat, angled, Brewster	Flat, angled
Coating	AR & HR	AR & HR

Whispering Gallery



Single Multiple Fan-out Cascade Chirped

Plug-and-Play Fiber Solutions for Wavelength Conversion

## Bulk Mixers



fs SHG mixer



Bulk mixer (heater)



Bulk mixer (TE)

## Waveguide Mixers



1 x 0 WG mixer



1 x 1 WG mixer



1 x 1 WG mixer (TEC)

	Connectors	Temperature control	Input wavelength	Pulse width	Configuration	Conversion efficiency
Bulk	FC/APC, FC/PC	TE cooler/heater	UV – IR	CW – fs	SHG, SFG, DFG, OPG	Up to 50%
Waveguide	FC/APC, FC/PC	TE cooler/heater	UV – IR	CW – fs	SHG, SFG	Up to 50%