



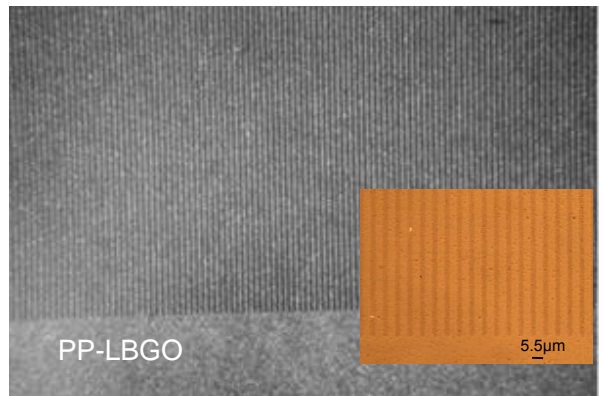
PP-LBGO

(Periodically-poled LaBGeO5)
Novel QPM device for UV Applications

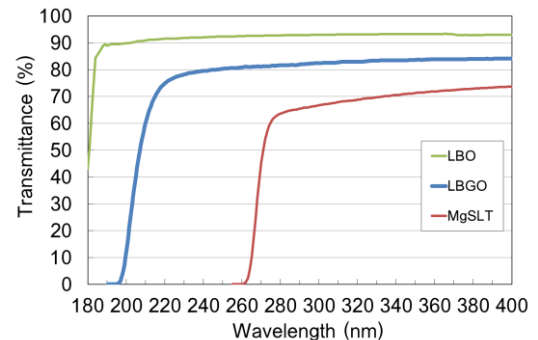
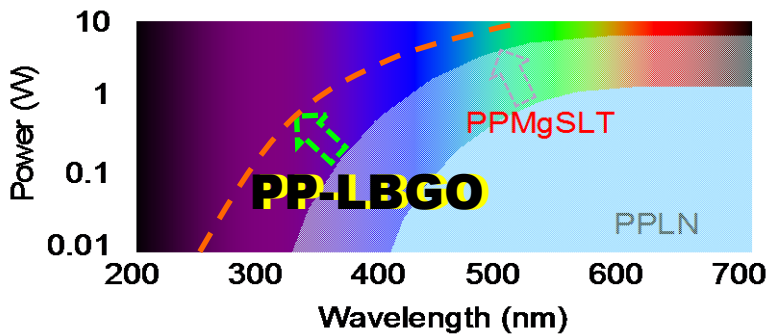
Preliminary

Remarkable Features

- Non-Walk-Off (QPM)
- Non Hygroscopy
- Shorter Cut-Off Wavelength (<200nm)



Available Range



Material Parameters

		LBO Type I	LBO Type II	BBO	CLBO	PP-LBGO* d33 based	PP-LBGO* d31 based	PPMgSLT (3rd order)
Walk-off ρ	(mrad)	18.15	9.37	72.30	37.13	Non	Non	Non
Nonlinear coefficient d_{eff}	($\mu\text{m}/\text{V}$)	0.72	0.53	2.02	0.52	0.36 (d33=0.57)	0.43 (d31=0.68)	3.00
QPM periodicity Λ	(μm)					6.4	3.7	6.6
Cut-off wavelength	(nm)	160	160	185	180	195	195	265
Hygroscopy		Weak	Weak	Strong	Very strong	Non	Non	Non

Above parameters are examples for 355 nm generation.
* A. A. Kaminskii et al., phys. stat. sol (a) 125, 671 (1991).

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Contents are things of 10-June-2014.

please fill in the questionnaire sheet below

QPM Device Questionnaire

Customer code	
Customer name	
Corresponding person	
Date	

SUBJECTS			REQUESTS				
Your setup condition	Conversion Type	SHG/SFG/DFG/OPO/OPA/OPG/others					
	Expected or requested output	Converted wavelength			nm		
		Power			mW		
		Conversion efficiency			%		
		Transform-limited pulse (Yes/No)					
	Input laser 1	Common parameter	CW / Pulsed				
			Wavelength			nm	
			Linewidth			nm	
			M2				
			Average Power			W	
			Polarization (linear or random)				
		Focusing condition (if any)					
		Pulsed only	Peak Power			W	
			Pulse energy			mJ	
			Rep.rate			MHz	
			Pulse width			ns	
			Pulse shape				
			Input laser 2 (in the case of SFG, DFG, OPA)	Common parameter	CW / Pulsed		
		Wavelength				nm	
	Linewidth					nm	
	M2						
	Average Power					W	
	Polarization (linear or random)						
	Focusing condition (if any)						
Pulsed only	Peak Power				W		
	Pulse energy				mJ		
	Rep.rate				MHz		
	Pulse width				ns		
	Pulse shape						
	Your device requests.	Material (MgSLT / MgLN / MgLN waveguide/ LBGO)					
Type of QPM grating period (single, multiple, chirped, fan-out, hybrid)							
Dimension		(L1) x (W1) x (T1)			mm		
Phase-matching Temperature				degree C			
Periodicity (um)				um			
Polishing		Input facet (S1) (flat/angle)					
		Output facet (S2) (flat/angle)					
AR coating		Input facet (S1)					
		Output facet (S2)					
Quantity				pc			
Requested delivery time				weeks			
Accessories	QPM Mount with TEC				pc		
	5-Axis Stage				pc		
	Temp. Controller				pc		
Other Requests							
Your budget for this request		(Ex. Approximately 1M JPY)					
Quantities of future demand		(Ex. 10 pieces/year, 50 pieces/year)					