

# PP-Mg:SLT waveguide

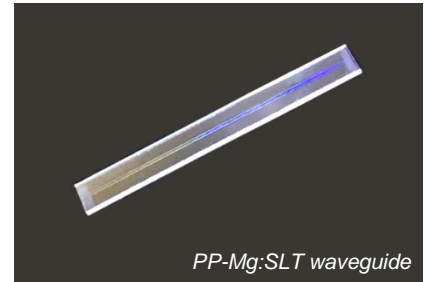
For High Power and High Conversion Efficiency in UV, Visible - MIR Range

Reference exhibit

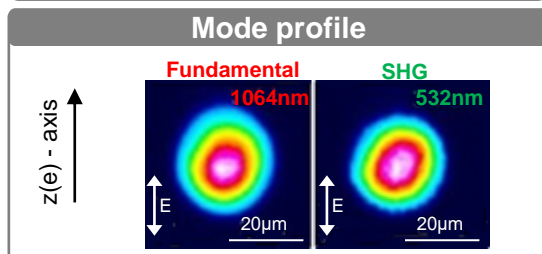
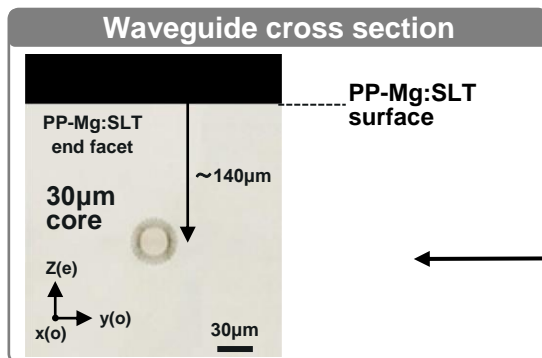
## Features

- ✓ Femtosecond-Laser-Written Waveguide inside PP-Mg:SLT
- ✓ Available for Watt Class Frequency Conversion
- ✓ Available for UV, Visible - MIR Range
- ✓ Circular output beam
- ✓ Keep bulk damage threshold

Suitable for high power,  
high conversion efficiency

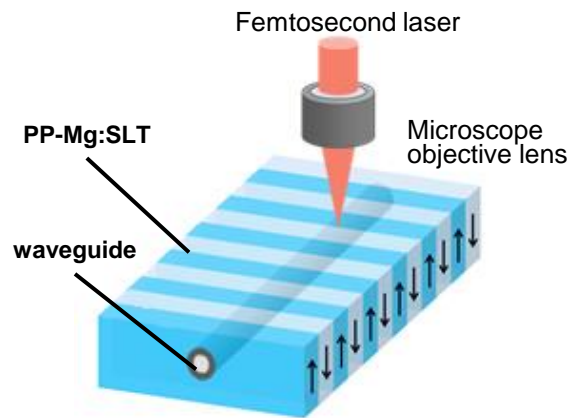


## SHG performance example of PP-Mg:SLT waveguide



**Normalized external conversion efficiency**

**Bulk 0.76 %/W (typ.)**  
 ↓ ~ 19 times  
**Waveguide 14.3 %/W**



### Performance Example

Sample	Core diameter (µm)	30.0
	Waveguide length (mm)	20.0
	Poling period (µm)	7.98
	with AR coating for 1064nm and 532nm	
Fund.	MFD (µm)	21.2
	Insertion loss (dB)	0.6
	Propagation loss (dB/cm)	< 0.30
	Wavelength (nm)	1064.7
SHG	MFD (µm)	20.0
	Normalized external conversion efficiency (%/W)	14.3
	conversion efficiency (%/W/cm <sup>2</sup> )	3.6
	QPM Temperature (°C)	40.63
	Wavelength (nm)	532.35

Above products are based on results obtained from a project commissioned by the New Energy and Industrial Technology Development Organization (NEDO).

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