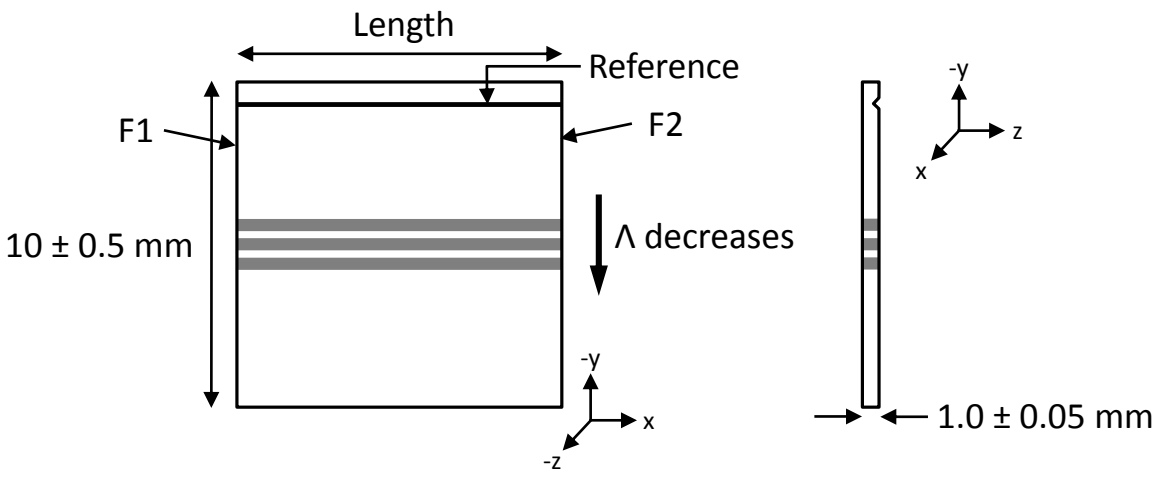
Device Specification

MSHG1020-1.0-xx

version 1.0/2016



[Image for reference only. Not to scale.]

Description	MgO doped PPLN SHG crystal for 1020nm pump
Thickness(z)	1.0mm±0.05mm
Width(y)	10mm±0.5mm
Length(x)	12mm±0.2mm, 9mm±0.1mm, 5mm±0.1mm, 3mm±0.1mm
Periods(Λ)	5.84, 5.98, 6.08µm

NOTES:

1 The SHG device material is congruently grown MgO doped Lithium Niobate with three periodically poled gratings. Each grating is 1.0mm wide with individual periods as listed above. A saw-cut reference mark is provided on the +z face of the crystal to determine the largest grating period (see above diagram). Each poled grating is separated by 0.2mm wide regions of unpoled material.

2 The average mark-to-space ratio of each grating is better than 70:30.

3 Each device is etched to make the poled gratings visible. Due to the wet-etch nature of this process the top and bottom surface finish of each device may appear cloudy or uneven.

4 Perpendicularity of input/output facets F1 and F2 to gratings is within ±0.15°. Parallelism between end facets F1 and F2 is within ±5 minutes.

5 Optical finish of facets F1 and F2 is within 20/10 scratch dig with λ/4@633nm. No more than two 100µm size chips per end facet.

6 Triple band AR coating to less than R<0.2% at 1020nm and R<0.5% at 510nm on both input/output facets.

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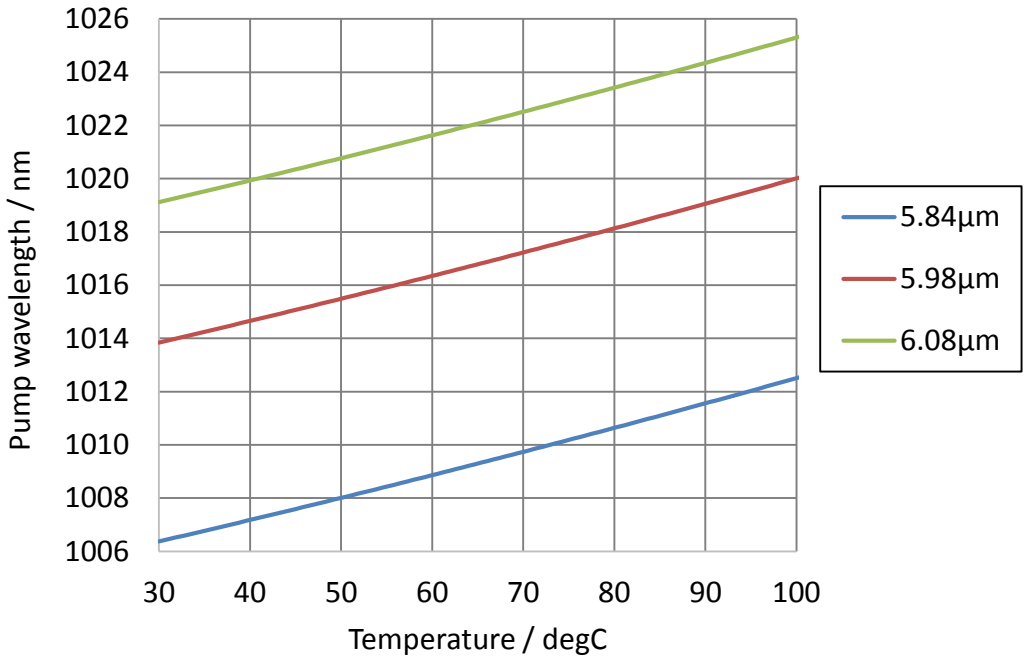
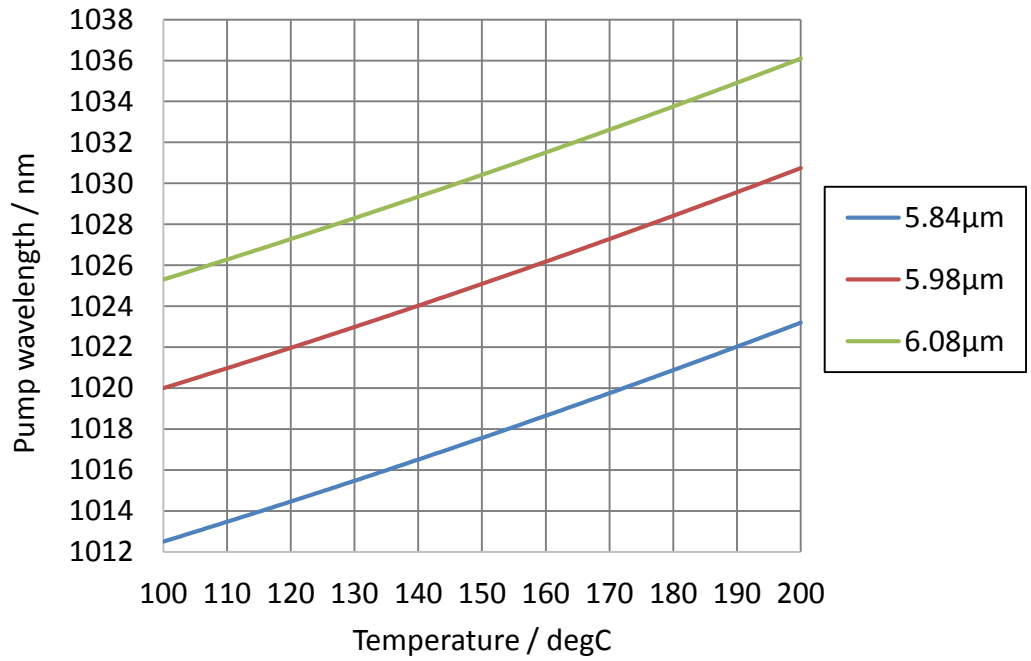
SHG Tuning Curve for 1020nm Pump





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