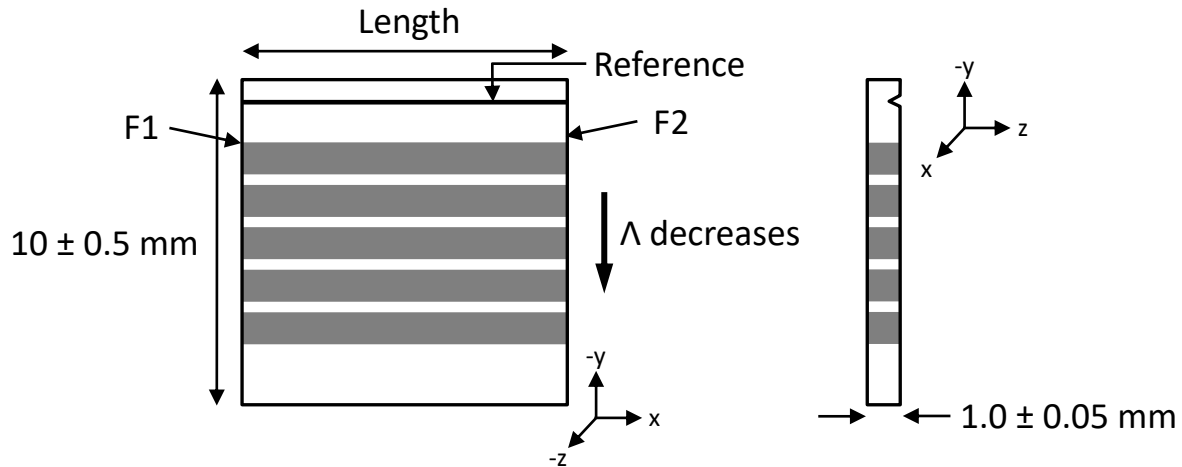


Device Specification

MDFG3-1.0-xx

Version 2.0/2021



[Image for reference only. Not to scale.]

Description MgO doped PPLN DFG crystal for 1064nm and 1480-2128nm pump

Thickness(z) $1.0\text{mm} \pm 0.05\text{mm}$

Width(y) $10\text{mm} \pm 0.5\text{mm}$

Length(x) $40\text{mm} \pm 0.5\text{mm}$, $20\text{mm} \pm 0.5\text{mm}$, $10\text{mm} \pm 0.2\text{mm}$, $5\text{mm} \pm 0.1\text{mm}$, $3\text{mm} \pm 0.1\text{mm}$, $1\text{mm} \pm 0.1\text{mm}$

Periods(Λ) 29.52, 29.98, 30.49, 31.02, 31.59 μm

NOTES:

- 1 The DFG device material is Magnesium doped Lithium Niobate with five 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 $\pm 0.15^\circ$. 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 $\lambda/8@1064\text{nm}$. No more than two $100\mu\text{m}$ size chips per end facet.
- 6 AR coated to $R < 1.5\%$ @ 1064nm & to $R < 1\%$ @ 1400-1800nm & $T \sim 6\%$ - 3% @ 2600-4800nm, on both input/output facets.

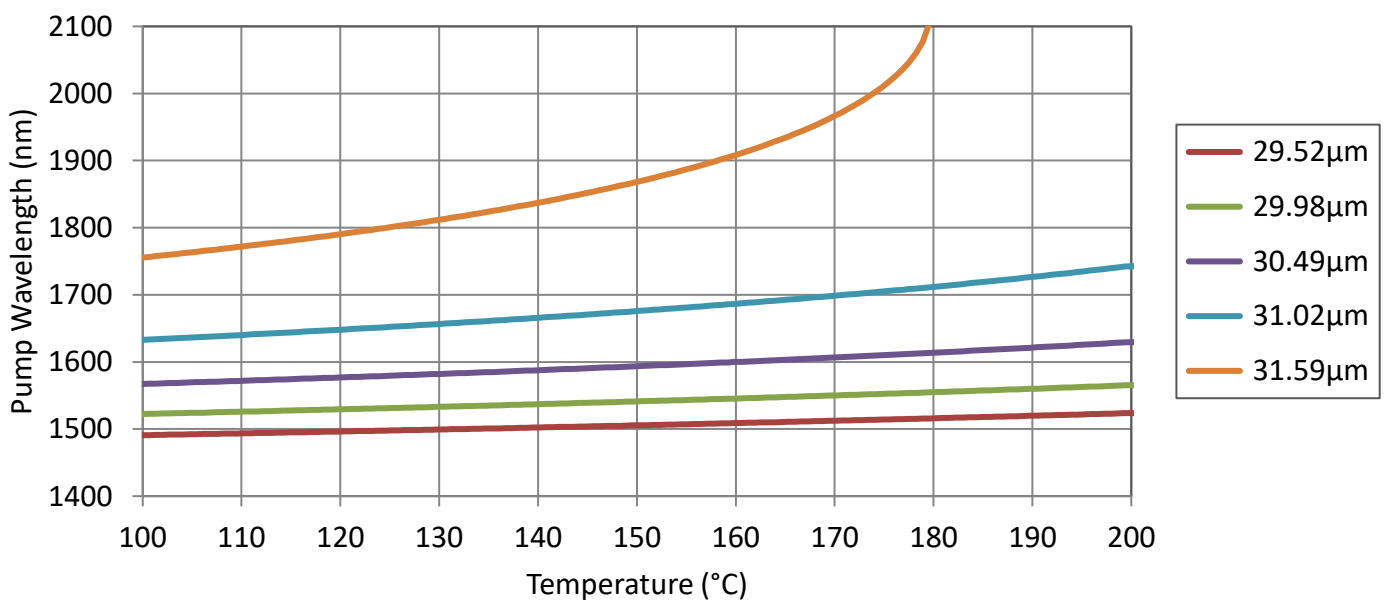
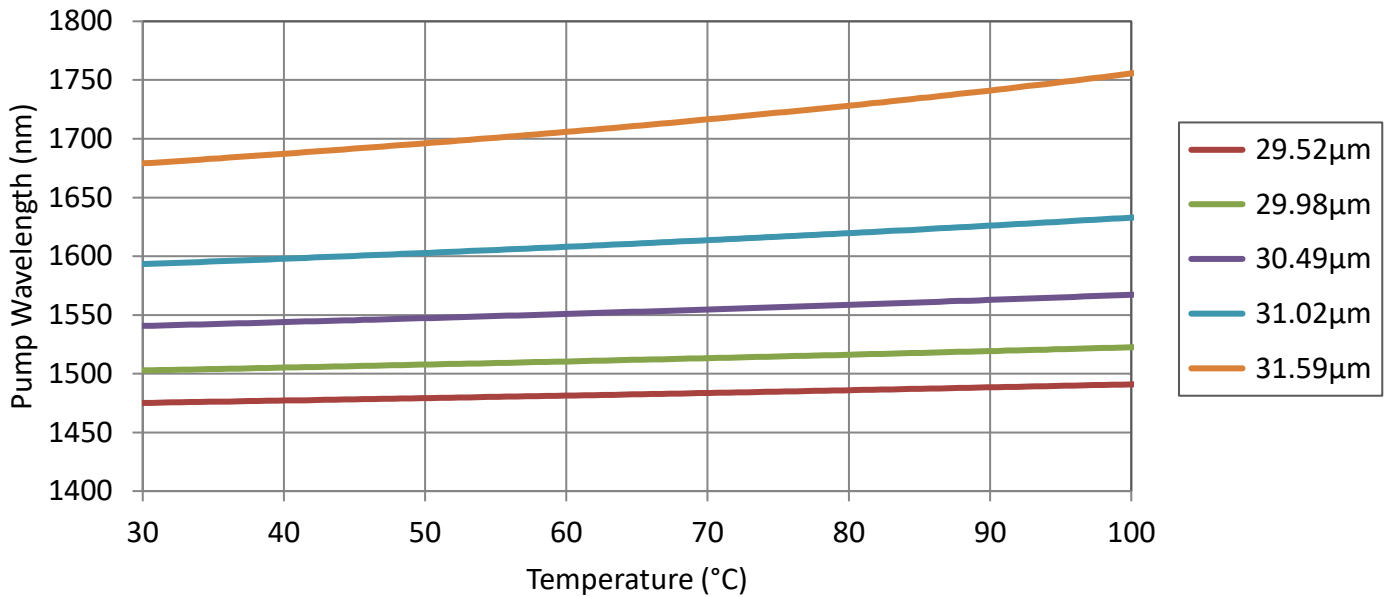


Device Specification

MDFG3-1.0-xx

version 2.0/2021

DFG Tuning Curve 1064nm Pump



Please note these are calculated tuning curves only and actual values may vary.

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