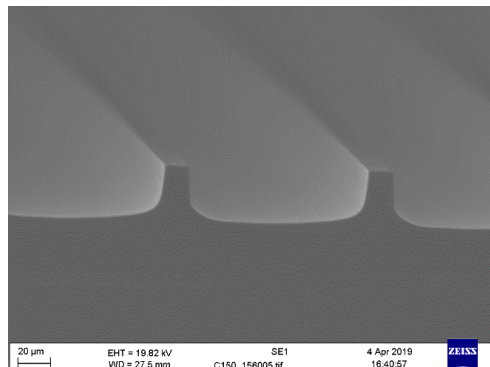
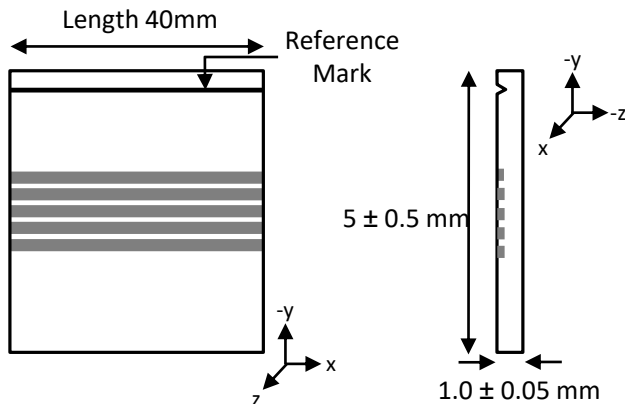


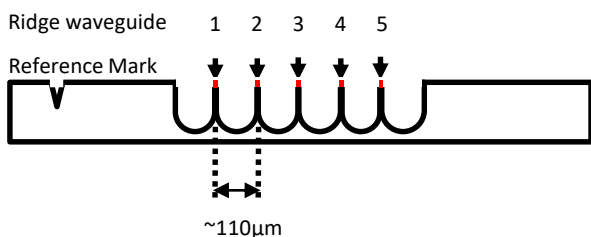
Ridge Waveguide WG-SHG1560-40

V. 5.0/2019

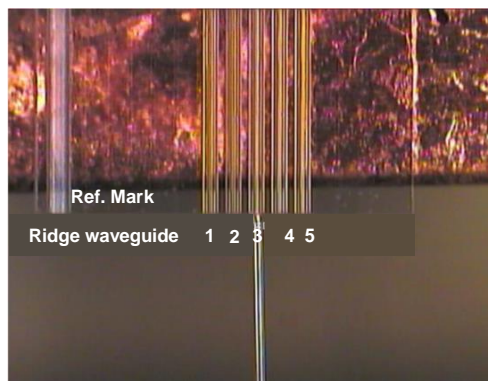


SEM photograph of ridge waveguide

Side view



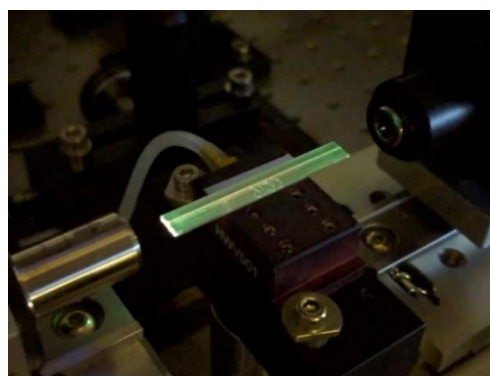
[Image for reference only. Not to scale.]



Top view of chip layout with butt coupled fibre launch

AR coated SHG waveguide chip

Waveguide length [mm]	40
Available pump wavelength by chip selection [nm]	1535-1565
Temperature tuning Coeff. [nm/°C]	0.15
Standard temperature tuning range [°C]	50 +/- 20
CW pump launch [mW]	300
Coupling efficiency [%]	75 +/- 5
CW SHG output [mW]	40 +/- 5
Typical efficiency [%/W]	45
Waveguide NA and ω_0 [μm] (@1.56μm)	0.12 / 4.5



Set-up for lensed launch testing

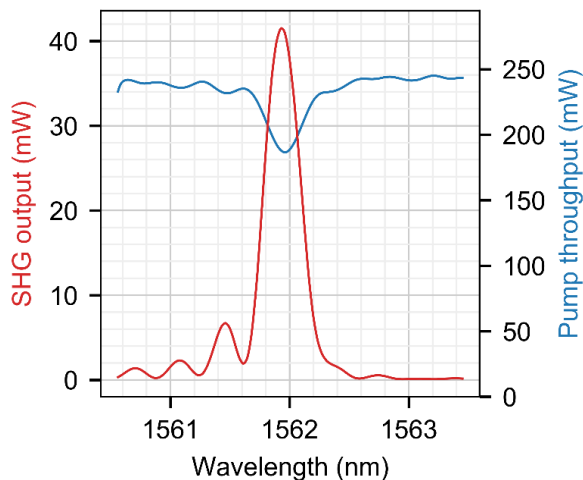
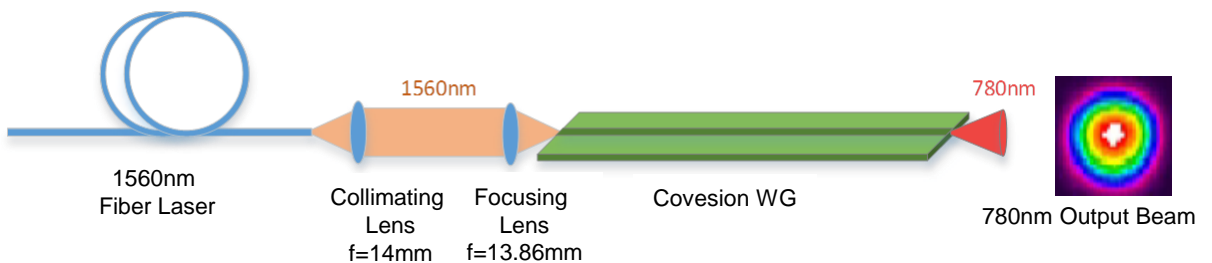
Ridge Waveguide WG-SHG1560-40

V. 5.0/2019

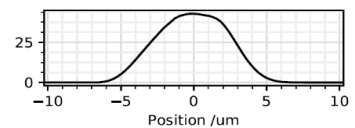
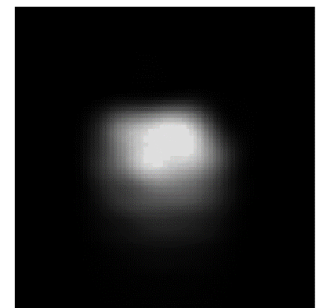
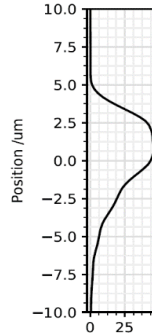
Waveguide dimensions

Substrate Thickness(z) 1.0mm±0.05mm
Substrate Width(y) 5mm±0.2mm
Waveguide Chip Length(x) 40mm±0.5mm

- The SHG device base material is 5% Magnesium doped Lithium Niobate
- A Zinc indiffused planar layer and diced ridge structures define the waveguides
- Typical coupling efficiencies with a lensed launch: ~75%
- Launch fibre for tests: OzOptics PMF-1550-8/125-0.25-L (MFD 10.5 μm)
- Set-up for lensed Launch, Thorlabs lens: Zoom collimator C220-TMD-B; Aspheric focusing: C560-TME-C



Phase matching scan at 50 °C



1560nm output beam
Mode Field Diameter : 9 μm

For more information, please contact us at:

tel: +44 (0)1794 521 638

fax: +44 (0)8709 289 714

email: sales@covesion.com

www.covesion.com

Covesion Ltd. Unit A7, The Premier Centre, Premier Way, Romsey, SO51 9DG, UK

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