



## Photonic Integrated Comb Source

Pilot Photonics' photonic integrated circuit (PIC) comb laser incorporates a monolithically integrated comb source and demux that supplies four or more simultaneously generated coherent, phased matched outputs on separate fibers ideal for Beyond 100G Optical Transmission and Elastic Optical Networking. The patented technology is unique in the market and offers the ability to tune the wavelength separation of the four outputs, while maintaining the coherent and phase-matched characteristics. The device is encased in a compact hermetically sealed package with internal isolators. It is provided with polarization maintaining fiber outputs for use with external modulators and each wavelength can be independently modulated with modulation formats up to PM-16QAM.

### Features

- Four or more coherent, phase locked wavelengths on separate fibers from a single package
- Channel spacing (FSR) adjustable from 10 to 37.5 GHz via provision of an RF Clock
- Output power of more than +10 dBm per channel
- High per channel SMSR >35 dB
- Narrow Linewidth <300kHz per line
- Low power dissipation <2 W per channel (25C)
- Compact, hermetic laser package with internal optical isolators
- Wavelength Spacing Adjustment via K-connector
- Stable centre wavelength operation, within 2.5 GHz over life for the full-comb
- Wavelength Spacing (FSR) Accuracy < 200MHz
- Polarization maintaining fiber

### Applications

- Beyond 100G Superchannel Tx & Rx LO
- Software Defined Optics/Elastic Optical Networking
- Laser Array replacement
- NG-PON2
- Data Centre Interconnect

Channel Spacing	6.25 – 37.5 GHz
Number of Channels	4, 8, 10, 12, 16
Output Power per Channel	>10dBm
Per Channel SMSR	>35 dB
Linewidth per line	<300kHz
Wavelength Spacing Accuracy	+/- 200MHz
Per Channel Power dissipation	<2W