

Optical Wavelength Comb Source

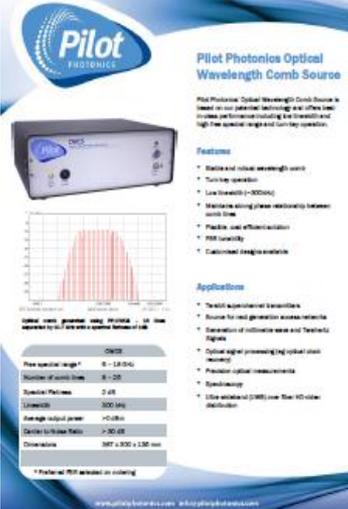
Pilot Photonics Ltd was founded in August 2011 by former CTVR post-doctoral researcher, Dr Frank Smyth and colleagues at Dublin City University and the Tyndall National Institute. The company is based in the *Invent* business incubation centre on Dublin City University campus. It is privately held and offers unique optical comb source subsystems that will be a key enabler for the next generation of high density optical networking transmission solutions.

With its patent pending technology, *Pilot Photonics* delivers robust and cost-effective optical comb sources, which emit highly stable, low line-width, phase-matched wavelength combs suitable for multicarrier optical transmission systems including coherent optical OFDM, Coherent WDM and Nyquist WDM.

2012: New Funding, New CEO, New Products

Pilot Photonics was founded in August 2011 and completed a successful funding round in early 2012. In August 2012, Dr Stan Lumish was hired as CEO. Dr Lumish, has held leadership positions at AT&T, Bell Labs, Lucent Technologies and JDSU and brings over 25 years experience in optical networking to the company

In September 2012, the team demonstrated their latest products, a C-band tunable optical comb source and a four-channel 28-GHz optical comb source. Lumish commented: "By offering C-Band tunability, along with 28-GHz channel spacing, our products work to meet the needs of future industry demands". The four channel 28-GHz optical comb is an extension of the company's current fixed comb product, introduced at OFC/NFOEC 2012. This optical comb is particularly relevant to designers of 400 Gbps transmission systems and will facilitate the creation of a stable testing environment.



Pilot Photonics Optical Wavelength Comb Source

Pilot Photonics Optical Wavelength Comb Source is based on our patented technology and offers low phase noise performance, stability and high optical power over a wide range of tunable operation.

Features

- Stable and narrow linewidth comb
- Tunable operation
- Low line-width ($\sim 30\text{GHz}$)
- Excellent timing phase relationship between comb lines
- Flexible comb configuration
- High tunability
- Customised integration available

Applications

- Testbed experimental environments
- Source for next generation access networks
- Generation of reference wave and testbed signals
- Colour light processing (optical data storage)
- Precision optical measurements
- Spectroscopy
- Time resolved (200) over 100 GHz resolution

Specifications

Free spectral range	8 - 120 GHz
Number of comb lines	8 - 120
Line width	2 GHz
Line spacing	300 MHz
Average optical power	$>10\text{dBm}$
Carrier to noise ratio	$>30\text{dB}$
Dimensions	180 x 300 x 130 mm

* Product not available in Ireland

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Pilot Photonics CTO, Dr Frank Smyth demonstrates Pilot Photonics' *Optical Wavelength Comb Source* to EU Commissioner for Research, Innovation and Science, Maire Geoghegan-Quinn



Dr Stan Lumish (CEO) and Dr Frank Smyth (CTO) at the *Pilot Photonics* Twitter Wall, ECOC 2012 in Amsterdam.

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