

Press Release

Lightip releases low cost tunable SFP transceivers for WDM-PON at OFC2016

Anaheim, California, March 22, 2016 – Lightip Technologies today announced the availability of tunable small form-factor pluggable (SFP) transceivers based on its proprietary V-cavity laser. The tunable transceiver is especially suited for next-generation wavelength division multiplexing based passive optical networks (WDM-PON).

Low-cost tunable transceiver modules are key enablers for wide deployment WDM based fiber access and high bandwidth mobile networks. Currently tunable transceivers are mostly deployed in long-haul optical transmission systems and metro networks due to the high cost resulting from fabrication complexity of tunable lasers. For wide deployment of the WDM technology in access networks and short distance communications, the cost reduction of tunable transceivers has become essential.

Lightip's tunable SFP transceiver is based on its patented proprietary technology, the half-wave coupled V-cavity laser (VCL). The laser structure does not involve any grating or epitaxial regrowth, and has only three electrodes for wavelength control, gain and direct modulation, with a total size of only about $500\mu\text{m} \times 300\mu\text{m}$. With the advantages of compactness, fabrication simplicity and easy wavelength control of the VCL, this tunable transceiver offers a cost-effective solution for tunable applications in access, mobile fronthaul and backhaul, data center and metropolitan DWDM networks.

The single mode tunable SFP transceiver is hot-pluggable 20-pin duplex SFP module compliant with SFF-8472 MSA. It is based on a Lightip's TLDX15 series tunable XMD TOSA, co-packaged with a PIN ROSA, and an SFP MSA compatible interface. Currently it supports 2.5Gbps to 3.125Gbps data rates with error free transmission over 25km single mode fiber, and can provide 16~32 channels at 100GHz spacing or 32~64 channels at 50GHz spacing in C- or L- band with a customer specified starting wavelength. The transceiver module can be operated under ambient operating temperature between 0 and 70°C. The size of the module is $69 \times 13.7 \times 13.3\text{mm}^3$.

“Preliminary reliability tests have shown excellent wavelength stability even though no wavelength locker is used, thanks to the built-in etalons in the laser itself”, said Dr. Jian-Jun He, Founder and CTO of Lightip. “Since the VCL is much simpler and more compact compared to widely tunable lasers existing in the market, the VCL-based tunable SFP modules are currently the most suitable for low-cost mass deployment in WDM-PONs as well as mobile access networks”.

“We have received great interests from many customers in our distinctive tunable laser products and have system design-ins which are now in advanced test stage with operators. The availability of the tunable-SFP will expedite the system trials with new customers and help accelerate the deployment of WDM based next generation PONs”, said Zhong L. Hou, CEO of Lightip.

Lightip is exhibiting at OFC in booth #1354 at the Anaheim Convention Center, March 22-24, 2016. In addition to the tunable SFP, it is also showing tunable laser To-can, To-can based tunable TOSA and BOSA, XMD based tunable TOSA, as well as polarization maintaining fiber pigtailed butterfly packaged tunable laser for sensing applications.

About Lightip Technologies

Lightip Technologies provides high-performance, low-cost and ultra-compact tunable semiconductor lasers and photonic integrated devices for data center, FTTH access, metro networks, and optical interconnects, as well as for biomedical and environmental applications. Lightip Technologies is incorporated in Ontario, Canada, and Hangzhou, China.