LIGHTIP TECHNOLOGIES

Press Release

Lightip Technologies announces the simplest and smallest tunable laser TOSA

San Francisco, California, March 12, 2014 – Lightip Technologies, a company headquartered in Hangzhou, China, today announced it has developed the simplest and smallest tunable laser based on its patented proprietary technologies. The product is now available for customer sampling.

Widely wavelength tunable semiconductor lasers are key components for next-generation optical networks. They can be used for WDM-PON, colorless ONU, DWDM sparing, dynamic wavelength provisioning, wavelength routing, etc. Conventional monolithically integrated tunable semiconductor lasers require complex fabrication processes such as non-uniform gratings and multiple epitaxial growths, and need multiple electrodes with complex control algorithms for wavelength tuning. As the dense wavelength division multiplexing (DWDM) technology extends towards access and data center networks, the cost reduction and operational simplicity become more and more important.

In partnership with Zhejiang University, Lightip has developed a simple and compact tunable laser based on its patented half-wave-coupled V-cavity structure. It has only three electrodes: one for gain and direct modulation, one for channel selection corresponding to the ITU grid, and the third for fine tuning when needed. The laser structure does not involve any grating or epitaxial regrowth, and has a size of only about 500μm × 300μm. The advantages of compactness, fabrication simplicity and easy wavelength control offer cost-effective tunable laser solutions for many applications in access and data center networks, and beyond.

The TLDX155 series TOSA module integrates a V-cavity tunable laser, a power monitoring photodiode, an isolator, and a TEC controller. The initial product can be tuned for up to 40 channels in the C- or L band with channel spacing of 100GHz and side mode suppression ratio (SMSR) of 40dB. The size of the 9-pin tunable TOSA module is only a small fraction of that of the conventional butterfly package for tunable lasers and can therefore be used in more compact transceiver designs. Tunable laser modules with self-contained control electronics and software, and even an integrated touch-screen portable PC are also available for TOSA evaluation and laboratory applications.

“Lightip’s simple and elegant approach to tunable laser is very unique in today’s market. It can offer significant cost reduction and enable many applications that have been constrained due to the cost issue,” said Dr. Jian-Jun He, Founder and CTO of Lightip. “With the introduction of such a simple and compact tunable laser, system designers can be more aggressive in using tunable lasers when devising their systems and creating standards for access and data center networks.”

Lightip is exhibiting at OFC in booth # 3250 at the Moscone Center in San Francisco, March 11-13, 2014. “We received exciting feedbacks on our tunable lasers during the first day of our exhibition at OFC, not only because of the significant room for cost reduction, but also for the simplification of control electronics and reduction of power consumption,” said Zhong L. Hou, CEO of Lightip.

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.