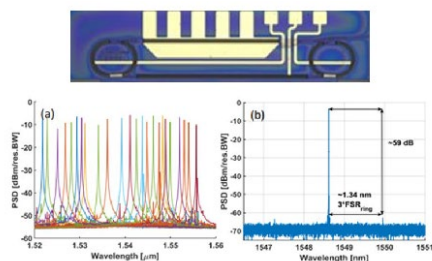


ENABLING HIGH SPEED COHERENT

SMART Photonics, the leading foundry for integrated photonics, expands its integration platform portfolio, by adding the new high speed >50GHz modulator, opening the route to 96 GBaud transmission.

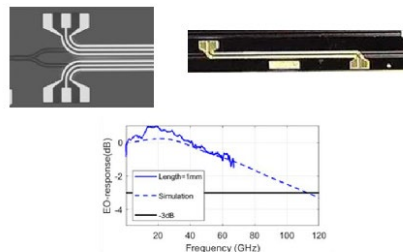
By combining our existing, large portfolio of components with this modulator, our high gain SOA and narrow linewidth tuneable laser, we enable a low cost, single chip, high speed coherent transceiver.

Narrow linewidth tuneable laser



- High SMSR
- Wide tuning range
- Linewidth down to ~100 kHz
- Fast switching speed, < 5 ns
- Patent pending

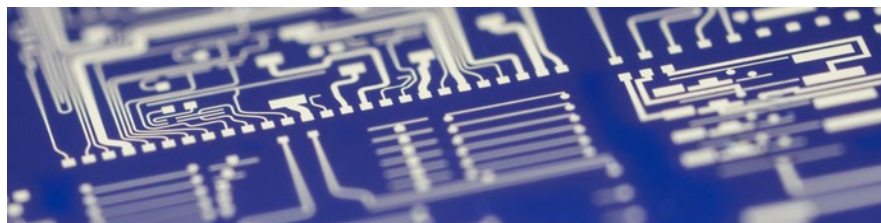
High speed modulator



- High speed modulator
- Optimized electrode design
- Suitable for >100 Gbaud per channel
- Patent pending

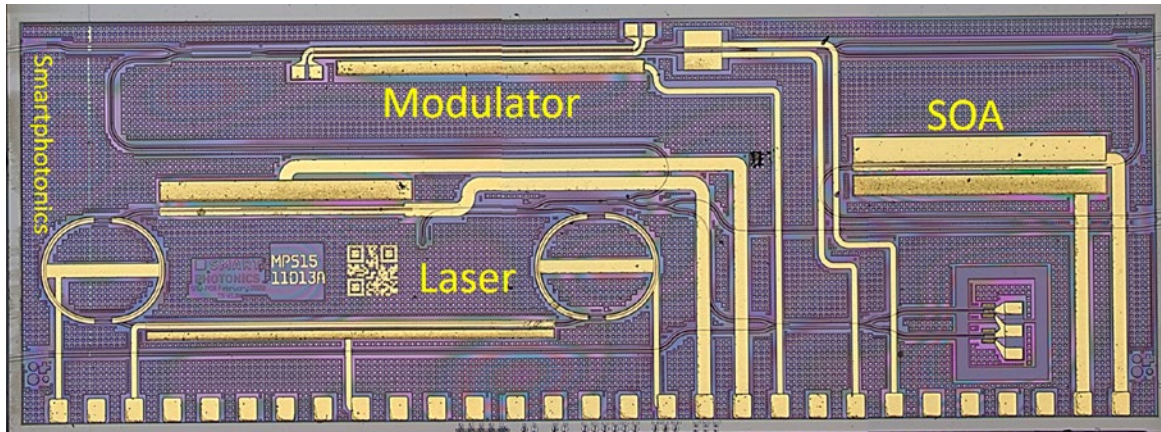
SMART Photonics' unique tuneable laser performance benefits are highlighted by our partner Pilot Photonics in Compound Semiconductor magazine, Vol 30, issue 2 and references its compatibility with Coherent applications through a demonstration of 480 Gb/s2, 16-QAM transmission.

Read more



>50GHz Modulator + High Gain SOA + Narrow Linewidth Tuneable Laser

All integrated on a single chip



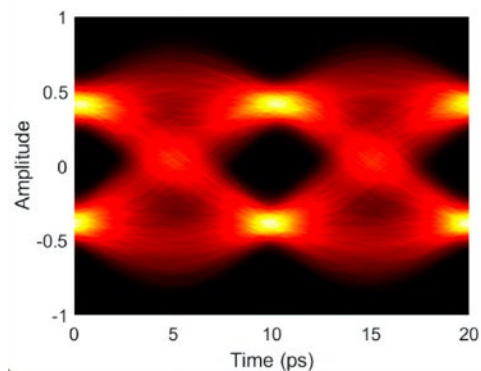
Laser + high speed modulator + SOA

Low power consumption

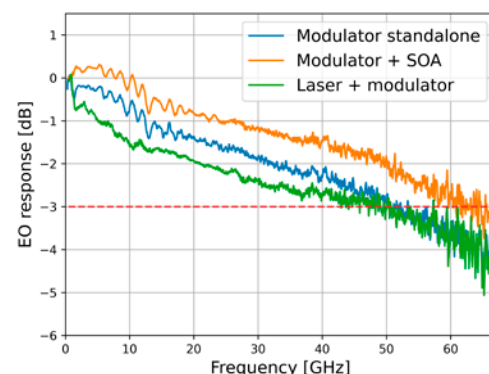
Modulators with lower $V_{\pi L}$ and $V_{\pi H}$ are essential to increase the density and energy efficiency of integrated circuits, enabling reduced power consumption and smaller form-factor, features which will become more critical as transmission rates increase to 1 Tb/s and beyond.

Our high-speed MZM modulator exhibits >50 GHz bandwidth enabling it to support >100 Gbd transmission rates. It also provides a low V_{π} of <5V providing energy-efficiency benefits and a highly linear response compared to Si-based modulators which reduces signal distortion and translates to reduced DSP demands and longer reach. It can be readily integrated with other active/passive components such as our tuneable laser and SOA, and implemented in an IQ configuration and is therefore compatible with the requirements for high speed > 800 Gb/s Coherent transmission.

sales@smartphotonics.nl



Eye-diagram -4 dBm (100G NRZ B2B)



Electro/optical BW of modulator with and without SOA

**SMART
PHOTONICS**

Bringing your innovation to life

Integrity is key in the services SMART Photonics offers. As an independent Pure Play InP Foundry, we work at the sole discretion of our customers and their businesses.

Teams of highly experienced experts support all of our clients' requests. Our production services range from epitaxial growth and regrowth to coating and testing of the individual chips. We accommodate both proof-of-concept and volume manufacturing.

We are a European based manufacturer with production and research facilities located in Eindhoven.

www.smartphotonics.nl

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