

## AT A GLANCE

Tunable lasers as building blocks of polymer-based hybrid PICs

### Features

- Design variations for C and L bands available
- 10 Gbit/sec modulation (DBR laser)
- 150 kHz linewidth (DBR laser)
- 100 nm tuning range (GADC-SG laser)

### Applications

- Transceiver for telecom/datacom networks
- Transceiver for next generation 5G networks
- THz generation
- Sensing and spectroscopy

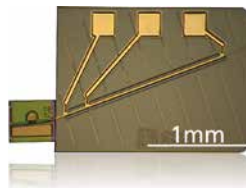
### Technical Background

The PolyBoard technology allows combining InP broadband gain chips with highly-efficient polymer-based thermo-optical elements for different tunable laser implementations. These tunable lasers can be used both as stand-alone elements and as optical building blocks in PolyBoard PICs.

## References

- Innovative Regional Growth Core PolyPhotonics Berlin (funded by BMBF)
- R&D Project Phonograph (funded by BMBF)

## DBR Tunable Laser



- 20 nm tuning range (C/2 band)
- 10 Gbit/sec directly-modulated
- Linewidth down to 150 kHz in CW version

## Y-Laser



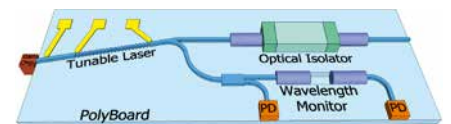
- 50 nm tuning range (C+ band)
- CW operation

## GADC-SG Laser



- 100 nm tuning range (C+L band)
- CW operation

## Part of the PolyBoard PICs



- All tunable lasers combinable with all PolyBoard building blocks
- Other wavelengths possible on request (e.g. 1064 nm)

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