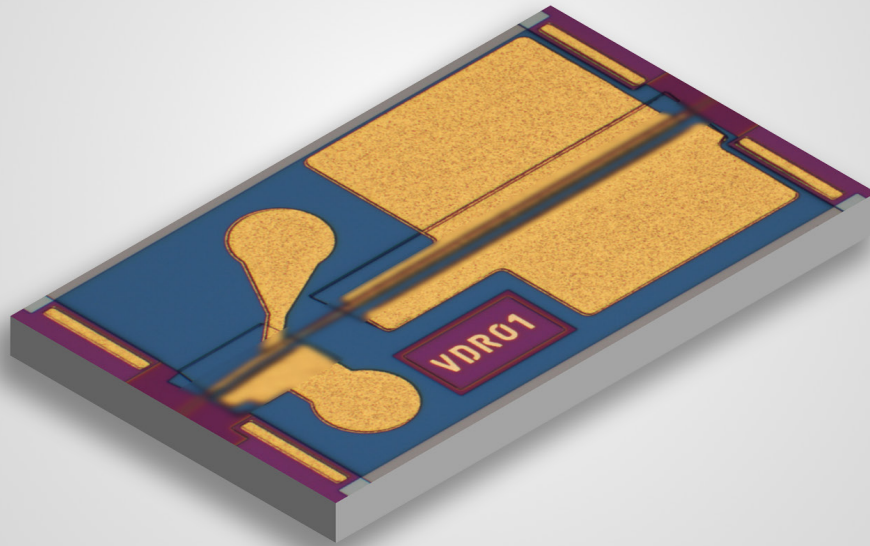


# HIGH-SPEED DIFFERENTIAL EMLs



## AT A GLANCE

Fraunhofer HHI supplies differential driven electro-absorption modulation lasers (EMLs) for high-speed data center communication.



### Technical Background

Electro-absorption modulation lasers (EMLs) with differential drive offer significant advantages for high-speed data communication, including enhanced modulation efficiency, improved signal clarity, and lower power consumption. The differential EMLs are based on mature InP technology and are fabricated at the wafer process line of Fraunhofer HHI, offering Telcordia and space-qualified processes.

### Services

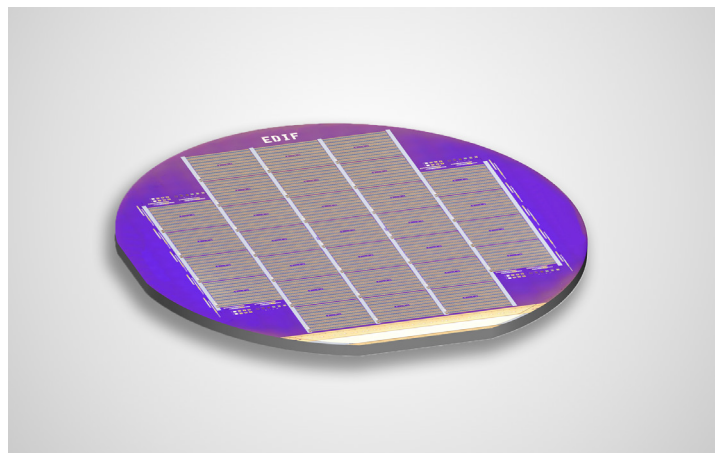
- Wavelengths across O-Band, C-Band, and L-Band supported
- Modulation bandwidth exceeding 50 GHz
- Operation up to 100 Gb/s NRZ and 200 Gb/s PAM4
- Compact footprint
- Low power consumption through reduced driving voltage
- Enhanced signal integrity with minimal crosstalk
- Fully customizable

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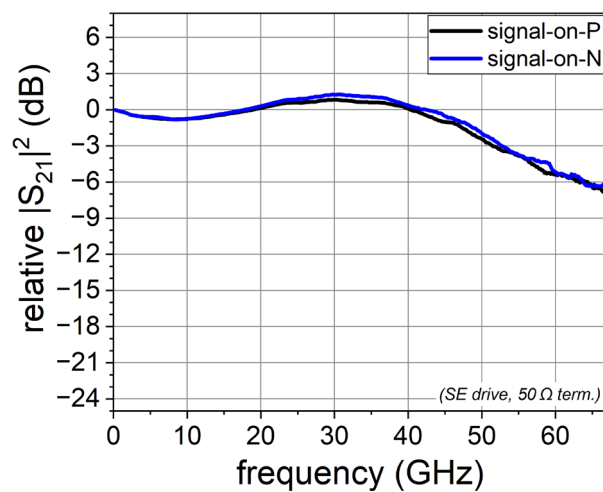
### Applications

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- High-speed datacom networks
- Telecommunication infrastructure



*Fully processed differential EML wafer*



*Frequency response of differential EML*



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