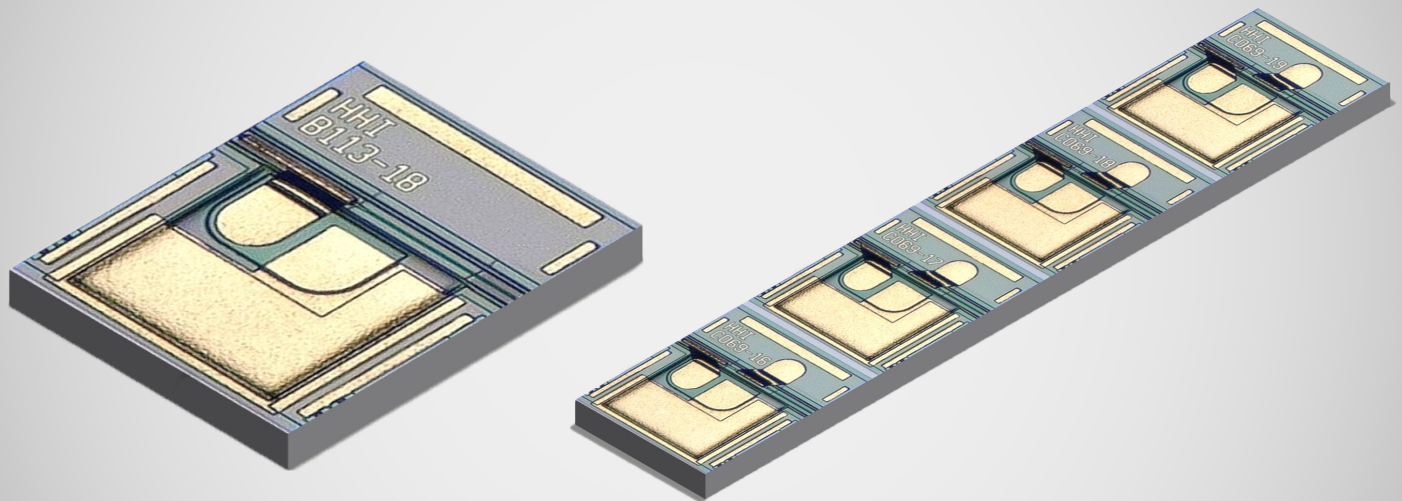


DIRECTLY MODULATED LASER FOR UNCOOLED 40 GBPS AND COOLED 106 GBPS ARRAY



AT A GLANCE

High speed DML transmitter for direct detection schemes



Features

- Wavelength in O-band, possible in C-band
- **Uncooled 40 Gbps DML (PPR):**
Operation temperature: 20 °C to 70 °C
Modulation Bandwidth > 30 GHz @ 70 °C
Output power > 10 mW
Threshold current < 15 mA
- **Cooled 106 Gbps DML Array:**
4 Channel
Operation temperature: 20 °C
Modulation Bandwidth ~ 55 GHz
Output power > 20 mW
Threshold current < 10 mA

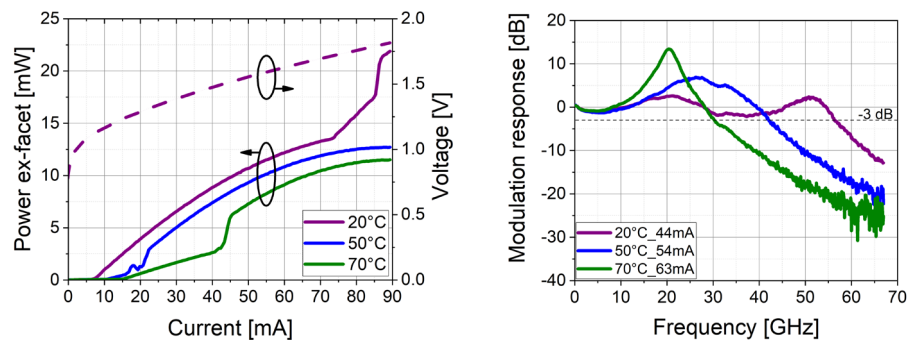
Applications

- Telecom/Datacom
- Analog photonic transmitter
- Gas sensing

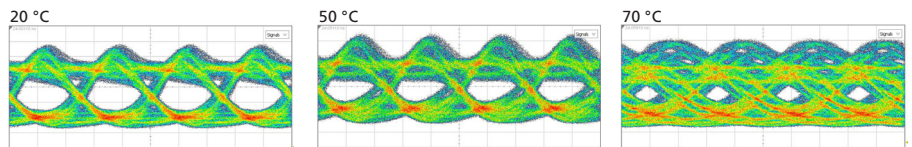
Technical Background

- Active layers based on InAlGaAs multi quantum wells
- Aluminum free output facets

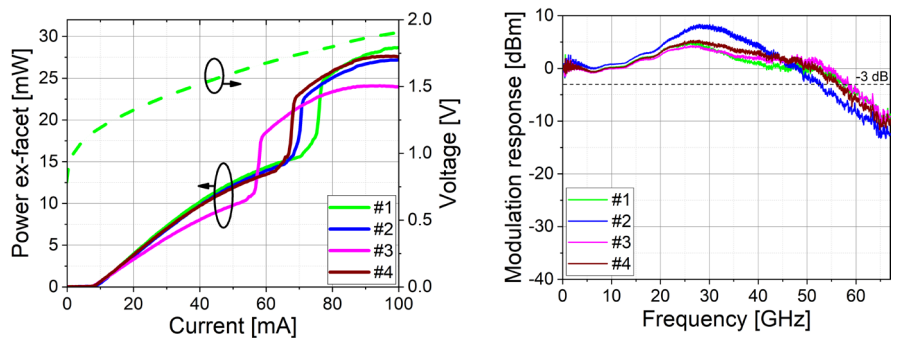
Uncooled 40 Gbps DML:



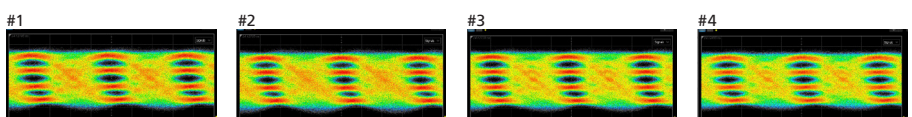
Example of 40 Gbps NRZ optical eyes:



Cooled 106 Gbps DML array:



Example of 106 Gbps PAM4 optical eyes:



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