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

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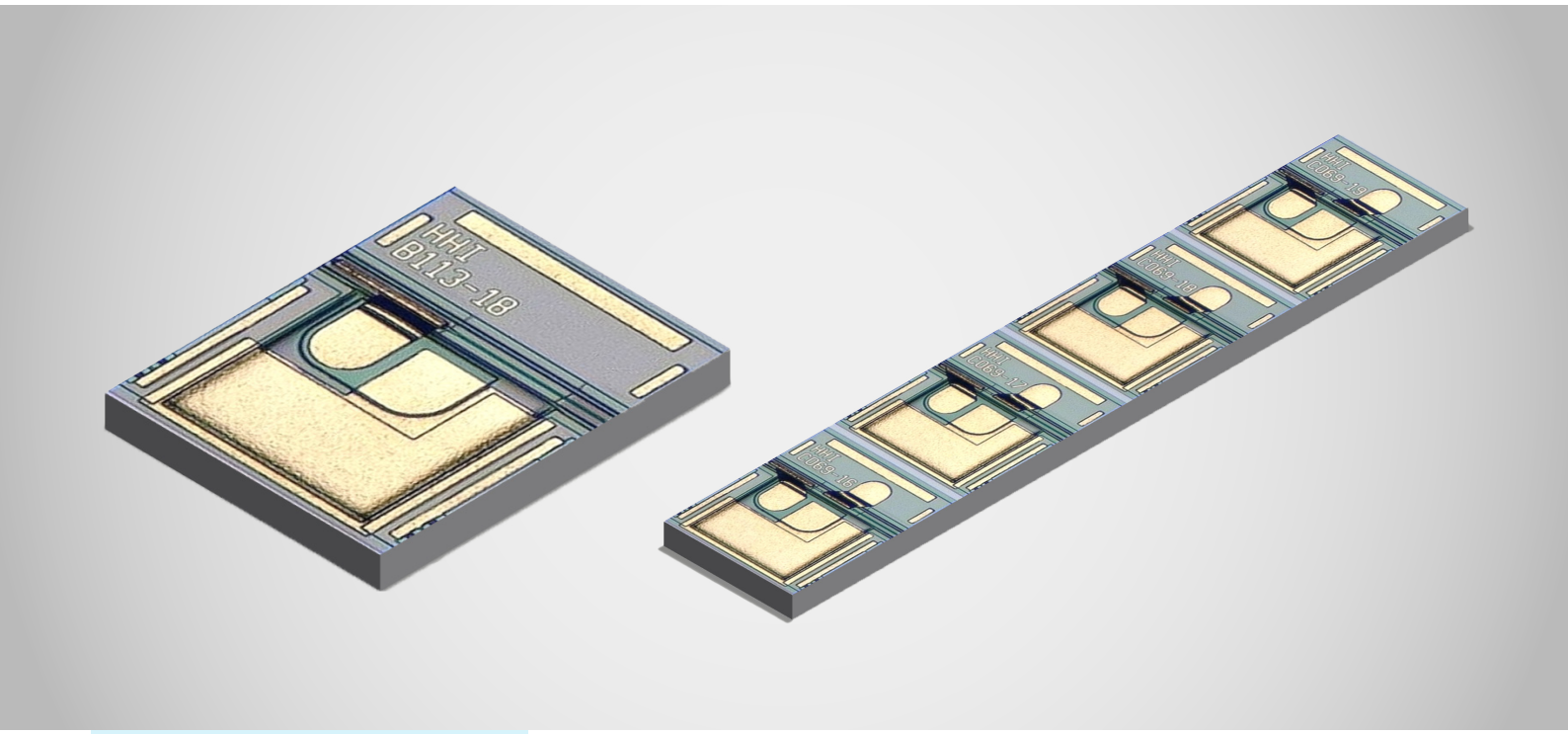

AT A GLANCE

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

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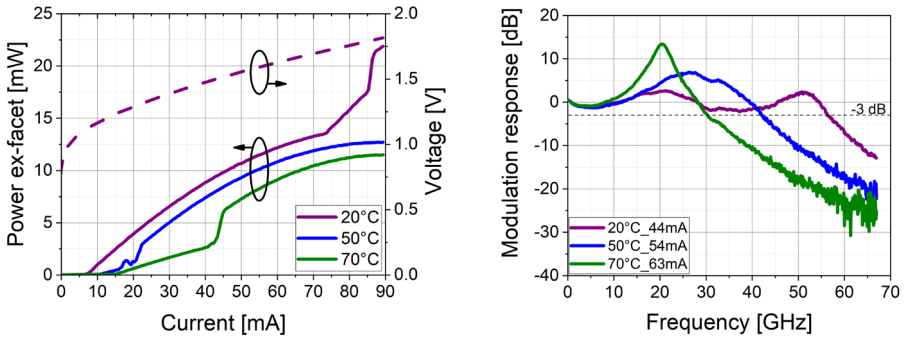
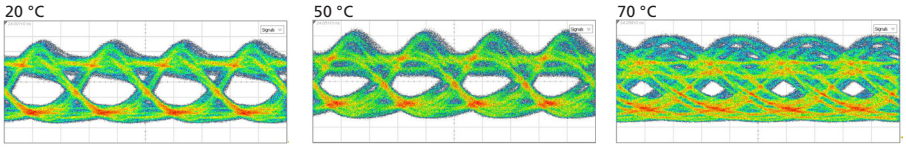
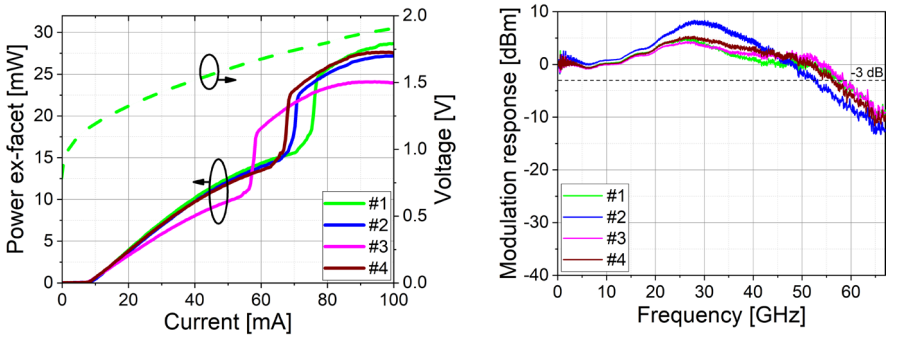
Uncooled 40 Gbps DML:



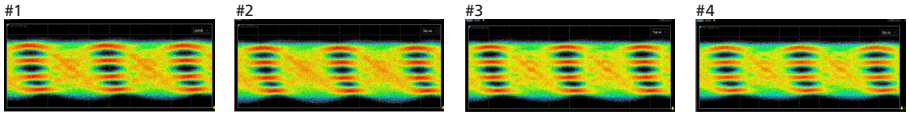
Example of 40 Gbps NRZ optical eyes:



Cooled 106 Gbps DML array:



Example of 106 Gbps PAM4 optical eyes:



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