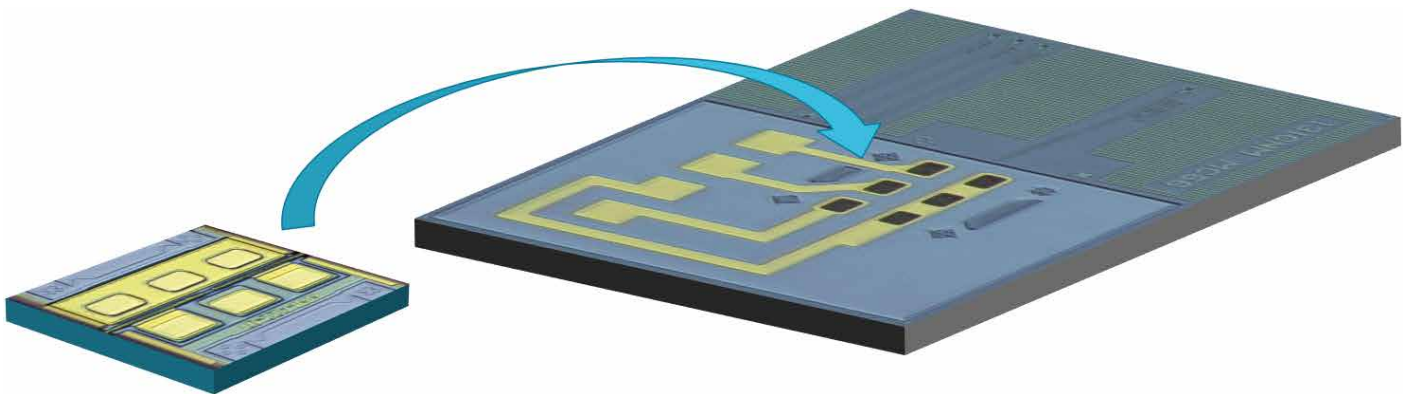


InP-TRANSMITTER CHIPS FOR HYBRID INTEGRATION



AT A GLANCE

InP light sources for application in photonic multi-chip approaches

Features

- flip-chip configuration
- horizontal and vertical integration (2D and 3D)
- integrated taper for low optical coupling
- patented alignment structures for lateral & vertical positioning
- etched facets on request
- flexible adaption of devices corresponding to customer's photonic platforms

Applications

- Telecom/Datacom
- Sensors

Technical Background

- InGaAsP MQW device
- n-InP substrate

Functionality

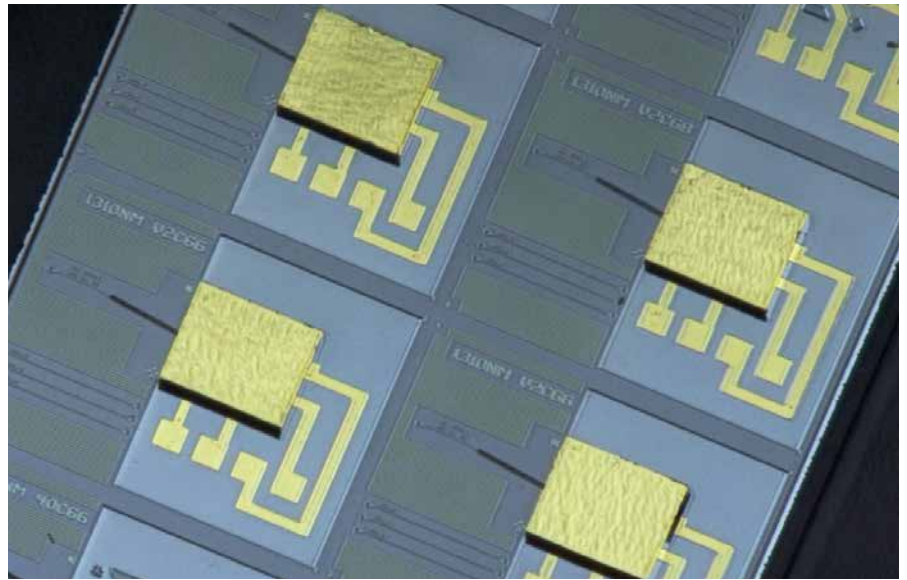
- high power DFB-lasers
- high power gain chips
- high speed gain chips
- semiconductor optical amplifiers (SOAs)

Configuration

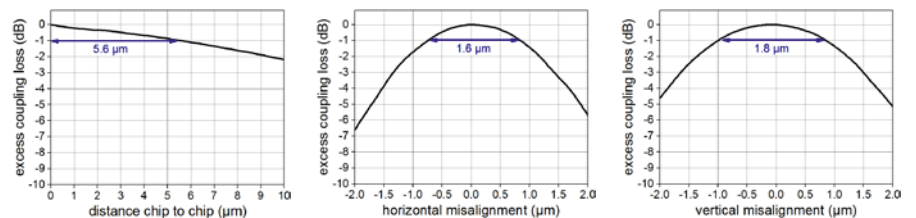
- horizontal and vertical emitters
- single chips and array

Photonic platforms

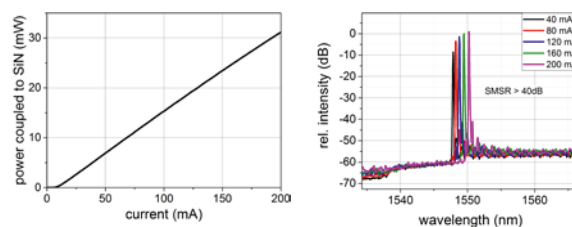
- Silicon on Insulator (SOI)
- Silicon-Nitride (SiN)
- Glass
- Polymer



Example: Tolerant low-loss-butt-joint coupling of InP chip to SOI-waveguide



Measured alignment tolerance of DFB laser to SOI waveguide



Power coupled to SiN-waveguide and optical spectra for flip-chip integrated DFB laser

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