

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 loss & relaxed alignment tolerance
- lateral & vertical positioning
- etched facets on request
- flexible adaption of devices corresponding to customer's photonic platforms

Application

- Telecom/Datacom
- Sensors

Photonic platforms

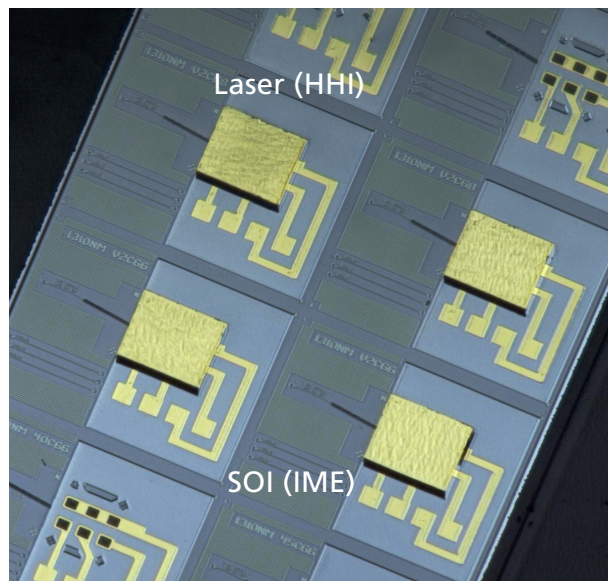
- Silicon on Insulator (SOI)
- Silicon-Nitride (SiN)
- Lithium Niobate-On-Insulator (LNOI)
- Glass
- Polymer

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



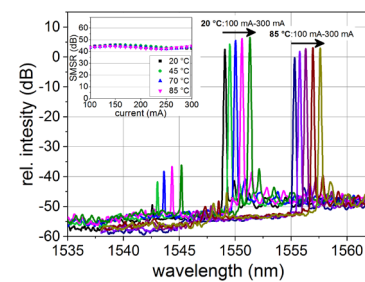
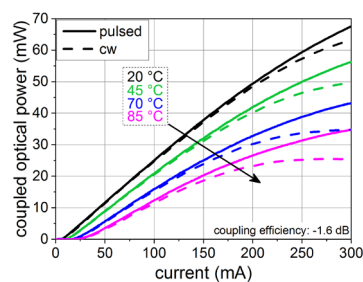
Example: Tolerant low-loss-butt-joint coupling of InP chip to SOI-waveguide

Dr. Martin Moehrle
 InP and RF Department

Phone +49 30 31002-724
 martin.moehrle@hhi.fraunhofer.de

Fraunhofer Heinrich Hertz Institute
 Einsteinufer 37, 10587 Berlin
 Germany

www.hhi.fraunhofer.de/pc



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