Advanced III-V Semiconductor Photonic Devices, from Design to High Volume Manufacturing

Sivers Photonics is the world's most advanced supplier of customised III-V semiconductor photonics devices, enabling next generation applications in optical communications and sensing markets, and a key strategic supplier to many Fortune-100 and Silicon Valley customers.

With over 20 years of expertise designing and manufacturing III-V photonic devices across diverse material systems, our foundry provides end-to-end in-house capability, from prototype design to qualified high-volume manufacturing.

With a particular focus on InP sources optimised for silicon photonics integration, we offer customisable high power, InP-based DFB lasers and gain chips, as single emitters or arrays, on our InP100 Product Platform.

IN-HOUSE DESIGN AND MANUFACTURING CAPABILITY

DESIGN

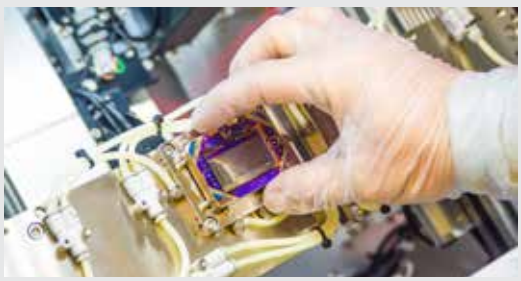
- Library of epitaxy designs for high-power, high-speed lasers
- Advanced chip design with focus on reliability and performance

PROTOTYPING

- Complex 3D architectures
- Add-on modules for application specific functionalities
- Full on-wafer front and back side processing
- Optical coatings for non-hermetic packaging
- Low volume samples

VOLUME PRODUCTION

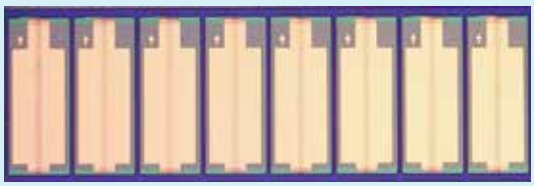
- 100mm/4" wafer processing
- Automated bar cleave and device singulation
- Automated test & inspection
- High-volume test capacity (>2M lasers/month)
- On-wafer optical testing
- GR468 qualification
- Damp-heat testing



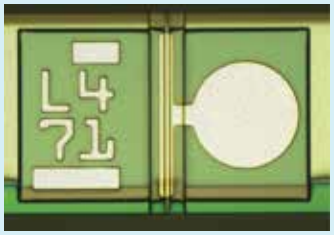
DEVICE TYPES

Optical Communications

High Power CWDM CW DFBs
400G / DCI



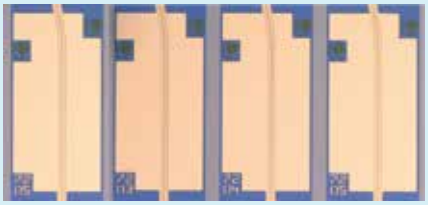
High Power CW DFB Arrays
Optical I/O / AI / HPC



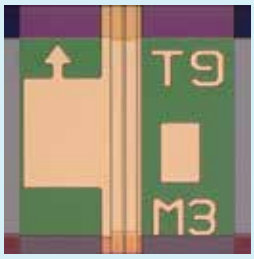
CWDM 25G DFBs
100G Ethernet PAM4

Optical Sensing

C-band High Power DFBs
FMCW LiDAR



Reflective SOA for Tuneable Lasers
Biosensing / Consumer Healthcare



Visible and NIR Laser Diodes
AR/VR / Displays

InP100 Product Platform

The InP100 Product Platform is a common design and manufacturing framework for InP photonics devices that uses established process modules to produce a broad range of device types on 100mm wafers.

KEY FEATURES

- 100mm wafer size
- Up to 125,000 die sites per wafer
- High yield, proven reliability
- Scalable to high volume
- Optimised architecture for SiPh flip-chip bonding
- On-wafer facet etch and optical coatings
- Non-hermetic compatibility
- Reduced time to market

SUPPORTED DEVICES

- DFB Lasers – CW to 28Gbit
- Rated power from 10mW to 100mW+
- Broad operating temperature range (-50°C to +95°C)
- Narrow linewidth (<300kHz)
- Reflective SOAs for external cavity tuneable lasers
- Single and Array output format

CW-WDM MSA

Co-founders of the CW-WDM MSA

Driving new industry standards for next generation optical laser sources

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