Photonic integration specialists

Mitigate PIC development risks, reduce time-to-market, and cut unnecessary costs by working with us:

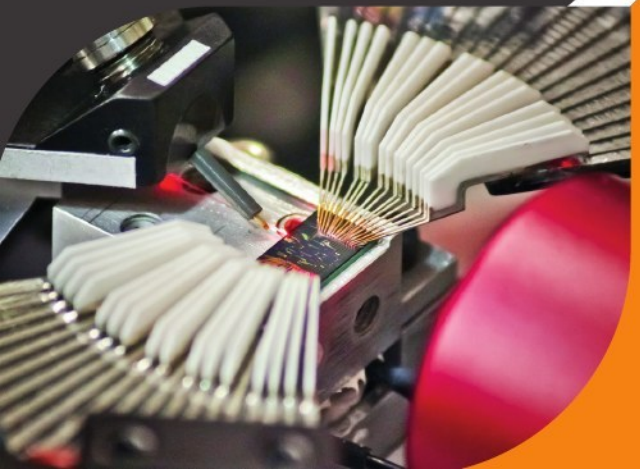
- +12 years working in the field.
- Full PIC development lifecycle support.
- Tape-outs with more than 20 foundries.
- Volume production ramp-up support.

Design and test expertise in all platforms

- III-V materials (InP, GaAs)
- Silicon photonics (SOI and SiNx)
- Silica / PLC

Proprietary component libraries

- **Passive devices:** Multi-mode interferometers, splitters / combiners, spot-size converters, Wavelength division mux/demux devices, resonators, filters, etc.
- **Active devices:** Lasers, modulators, photodetectors, phase shifters, etc.



Let's get in touch

+34 96 133 78 84

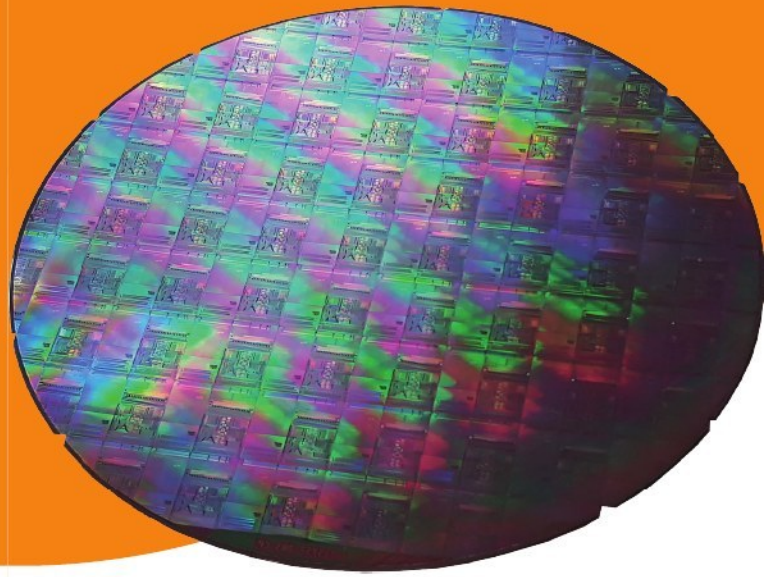
vlcphotonics.com

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Follow us on:

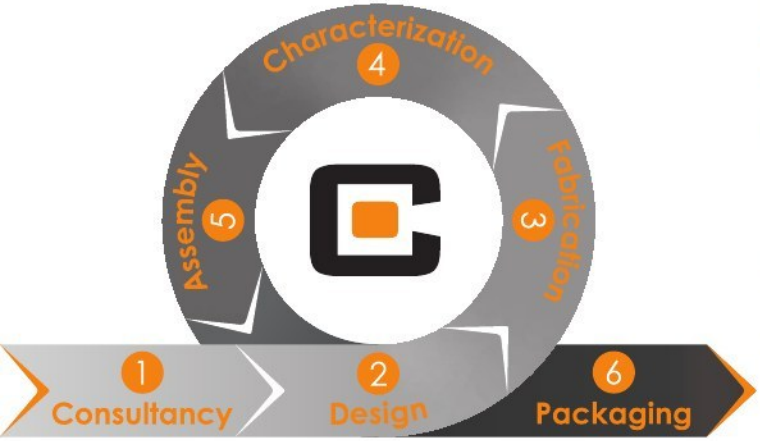
One-Stop Services for Photonic Integrated Circuits



VLC PHOTONICS
A Hitachi Group Company



Services for the entire PIC development cycle

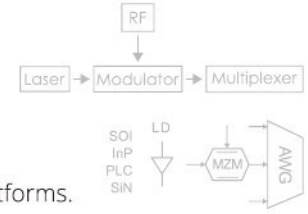


"From prototype to volume production"

Main applications:

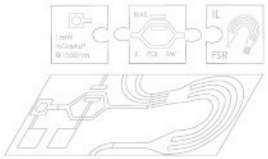
Optical transceivers ▪ LiDAR ▪ Quantum ▪ Co-packaged optics ▪ Gyroscopes ▪ Instrumentation ▪ Wearable & consumer healthcare sensing ▪ AI ▪ AR/VR

1 Consultancy



- Analysis of specifications.
- Advise on PIC technologies and platforms.
- Foundry and packager analysis and selection.
- PIC design review towards testing and packaging.
- PIC development and production planning and cost estimates.

2 Design



- Photonic modeling and simulation.
- Custom component design.
- Circuit layout.
- Design support for in-house teams.
- Process Design Kit (PDK) development.
- Design IP available for licensing.

3 Fabrication



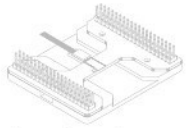
- PIC manufacturing via world leading foundries.
- Multi-project, engineering/pilot, and volume production runs.
- All main Photonic Integration open platforms:
  - III-V materials (InP, GaAs)
  - Silicon photonics (SOI and SiNx)
  - Silica / PLC
- Other new disruptive platforms (Polymer, LNOI, Graphene, BTO).

4 Characterization and testing



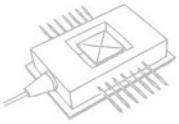
- Test plan development.
- Die and wafer level characterization and testing:
  - Optical and electrical (DC & RF) probing.
  - Vertical and edge PIC-to-fiber coupling.
  - Automated data collection and processing.
- Root cause analysis (RCA).

5 Test assemblies



- Standard low-cost test assemblies for easy functional characterization, including:
  - Chip bonding into PCB or ceramic carriers for DC and RF operation.
  - Electrical wire bonding or flip-chip.
  - Connectorization.
  - Thermal management.
  - Fiber array pigtailing.

6 Packaging



- Package design and development via third parties.
- Packaging production ramp-up via high-volume partners.

