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EPIC Members New Product Release

VLC PHOTONICS

Wafer level testing capabilities for edge coupling

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Sales Manager

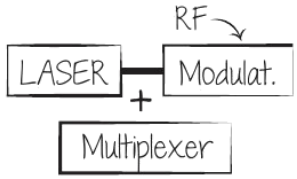
Supported by

EPIC
European Photonics Industry Consortium

Company overview

- VLC Photonics is a fabless company offering Photonic Integrated Circuit (PIC) development services, focused on design and testing.
- Company founded in 2011.
- Offices and clean-room labs in Valencia Technological Campus.
- 16 members of extensive academic and industrial experience, and keep growing.
- Part of Hitachi High-Tech group since 2020.

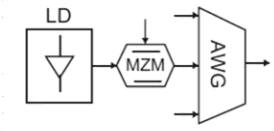
Services overview



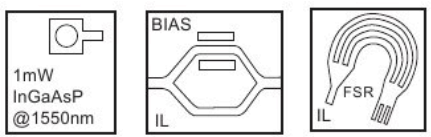
System concept

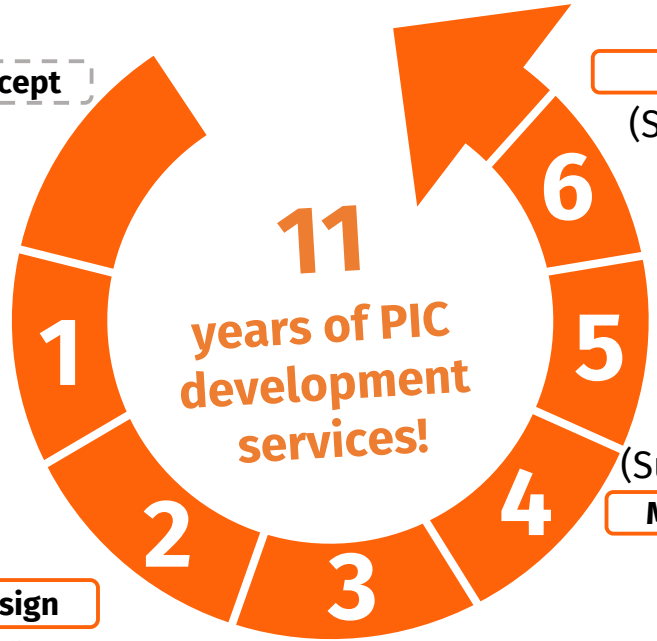
Consultancy

SOI
InP
SiN
PLC
Etc.

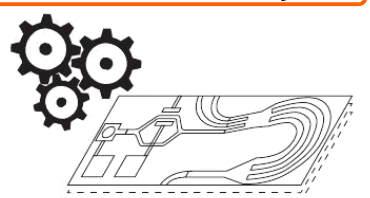


Component modeling and design



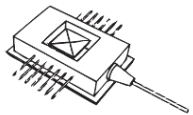


Circuit simulation and layout

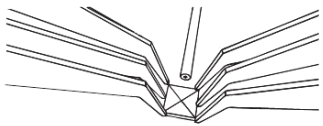


Packaging

(Subcontracted)



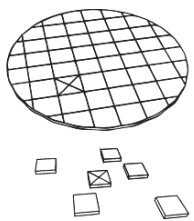
Chip/Wafer characterization



ISO 9001:2015

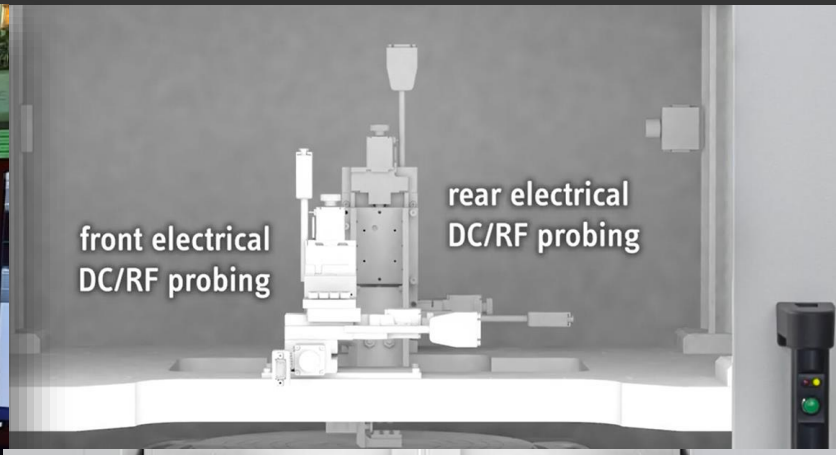
(Subcontracted)

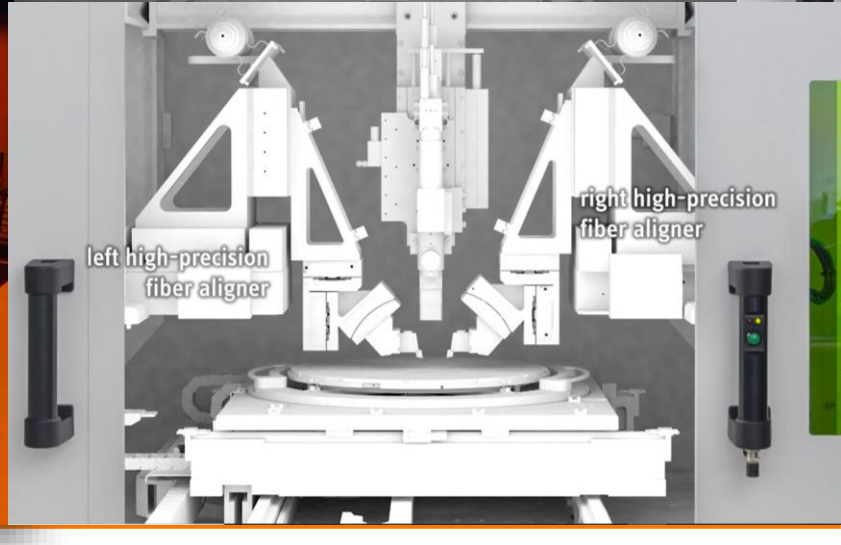
Manufacturing



Automated Wafer-level testing (WLT)

Full production enclosure wafer-level tester

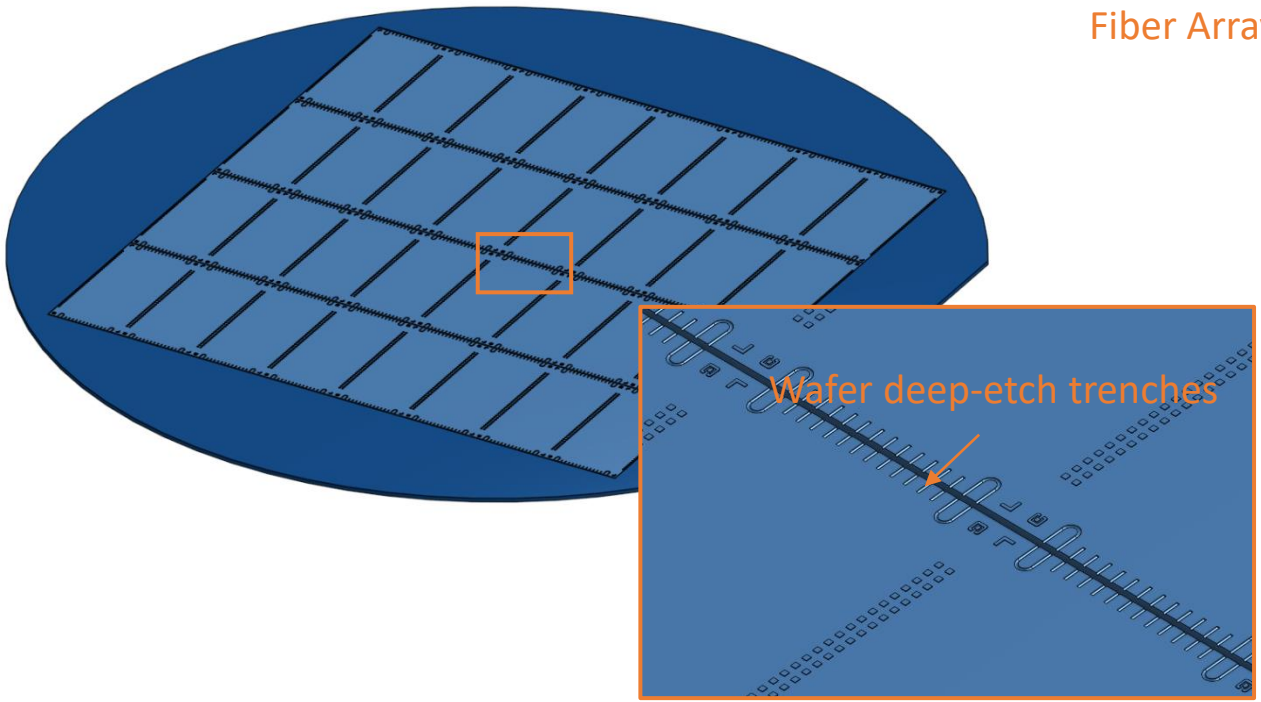




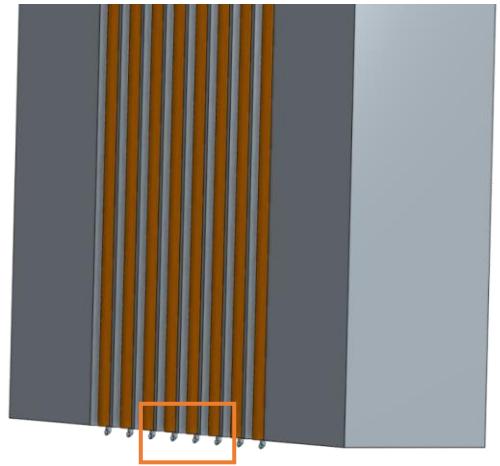
NEW

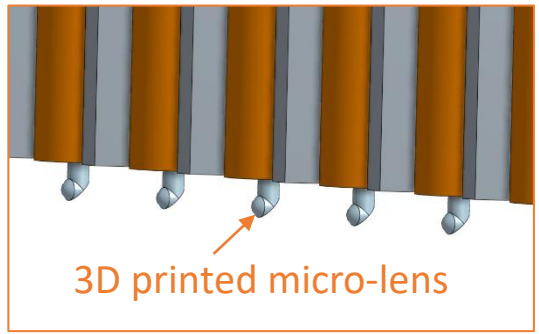
Edge coupling WLT

- Tool adapted for optical edge coupling.
  - Wafer V-groove trenches



Fiber Array Unit

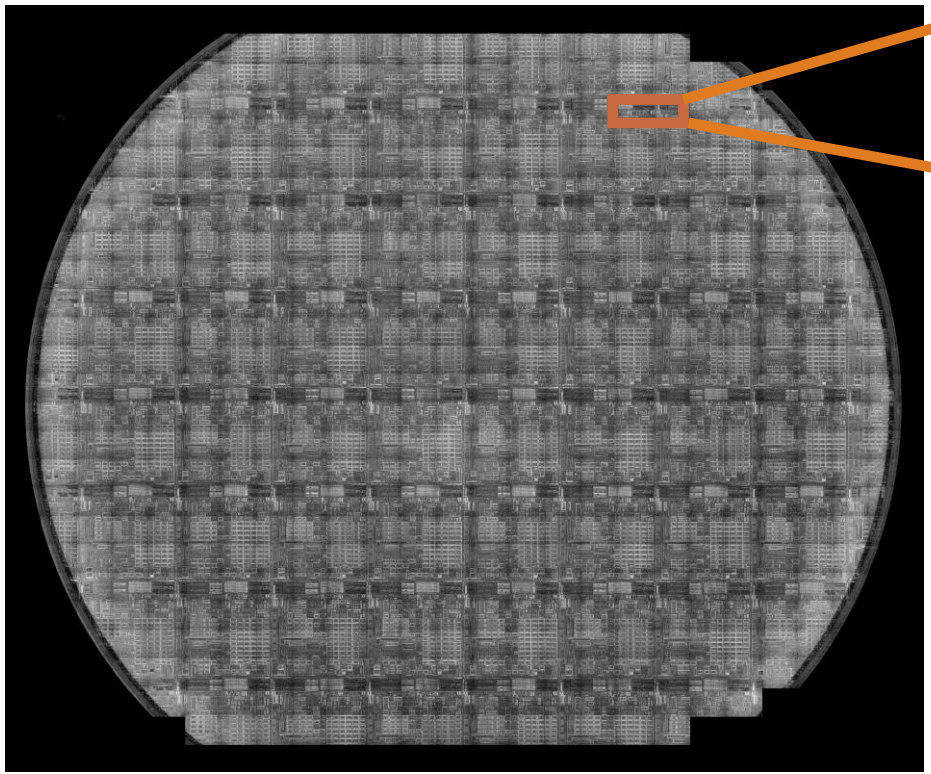




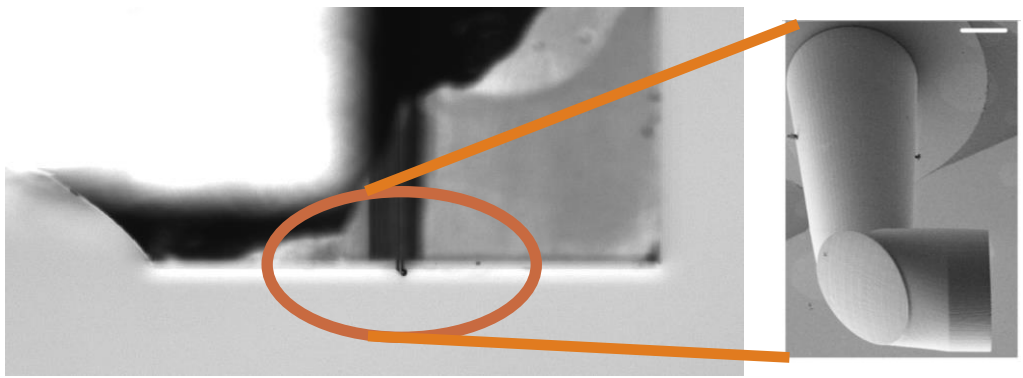
Edge coupling WLT (II)

NEW

- Tool adapted for optical edge coupling.
  - Wafer V-groove trenches



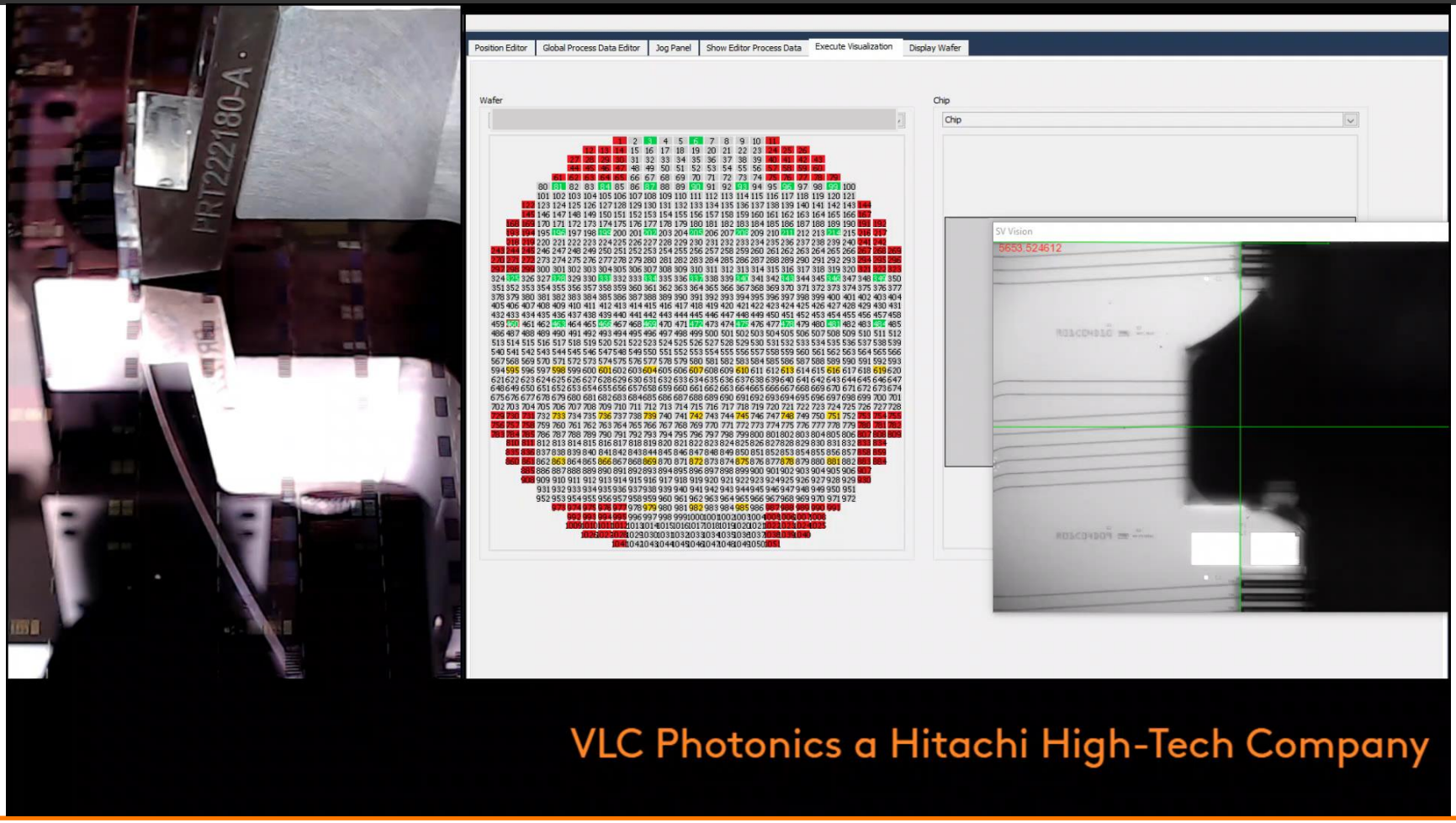
V-groove trenches



3D printed micro-lens

MFD 2.3-10.4 µm

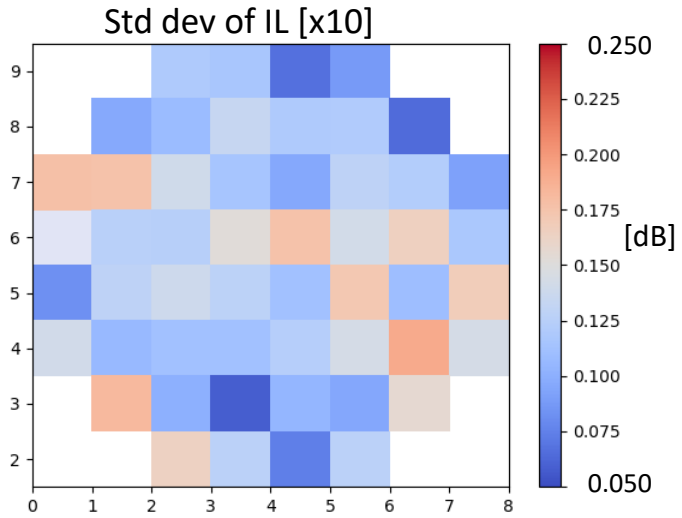
Our Edge coupling WLT in action



Main benefits

- Capture massive data allowing for statistical analysis.
  - Close design loop from fab to validated designs towards mass production.
- Fast and repeatable automated probing and trace acquisition:
  - <4s I/O optical align and measure,
  - 0.1-0.4 dB repeatability (dep. on I/O coupler design).
- Provide feedback for yield improvement to foundries, accelerating product development and volume ramp up.
- Automated identification of KGD/KGW for sorting in production, and towards packaging. Complementing the PCM and metrology done by foundries.

DUT	Struct.	Measur.
Six 6'' wafers, >300 dies	>5k	~50k
Two 8'' wafers, >1800 dies	>14.5k	~58k
>50 dies	>140	>31k



Thank you for your attention!

VLC PHOTONICS

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