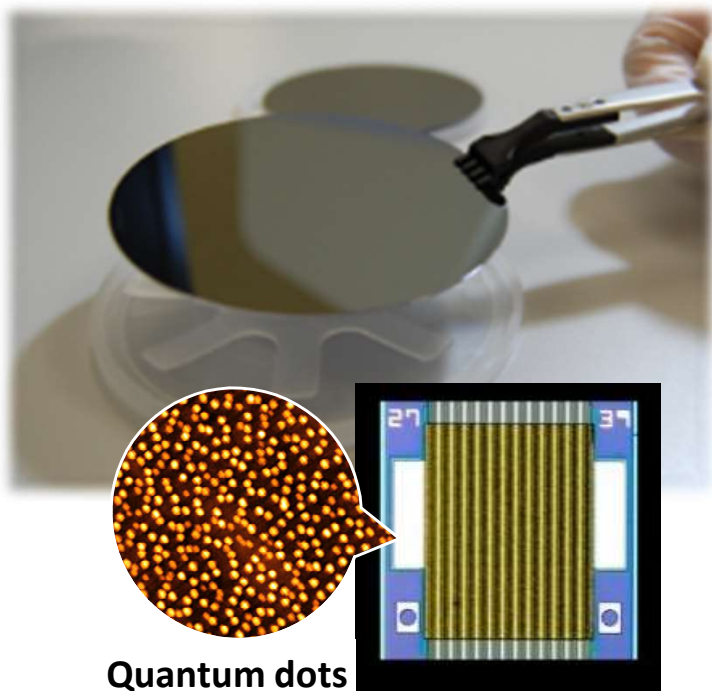


Quantum Dot Laser

Epitaxial Wafer / Foundry Service

1300nm Quantum Dot Laser for Silicon Photonics

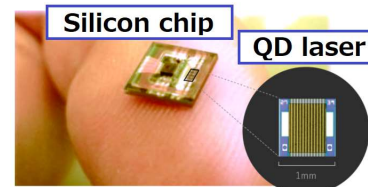
- High-temperature operation for densely integrated optoelectronics
- High optical feedback tolerance for removing isolator from your system
- Full-service foundry of customized epitaxial wafer and wafer process from development to mass production



Quantum dots

Application examples

- Silicon photonics
 - Intra-data center comm.
 - High performance computer
 - LiDAR (FMCW, ToF)
 - Intra-vehicle comm.
 - Mobile infrastructure
- Underground resources exploration (175-200°C)



Quantum dot laser, gain chip

- Operation up to 200°C, enabling densely packed laser array
- High optical feedback-tolerance ($< -130\text{dB/Hz}$. Cf. QW $< -120\text{dB/Hz}$ at -30dB)
- Highly reliable at high temperatures (Est. lifetime $> 300\text{Khrs}$ at 85°C)
- Customized wide-band gain spectrum upon request

Epitaxial wafer / Foundry service

- Epitaxial wafer (w/, w/o grating), wafer process, facet coating available
 - Wafer for wafer bonding, FP/DFB laser, gain chip
 - Multi-channel laser array, laser for flip-chip bonding
- Customized epitaxial wafer and chip design
- Full-service foundry from development to mass production



Product Lineup*

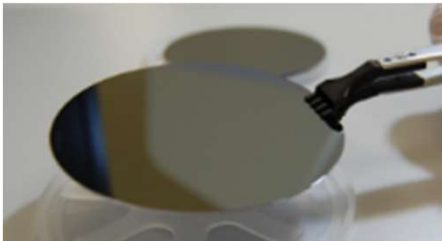
| Wavelength | Type | Form | Output Power (mW) |
|-------------|-----------------|--------------|-------------------|
| 1300nm | FP | Chip, TO-CAN | >10 |
| 1300nm | DFB | Chip, TO-CAN | >10 |
| 1240nm | DFB | Chip, TO-CAN | >10 |
| 1120-1310nm | Epitaxial wafer | Wafer | n/a |

Foundry Service*

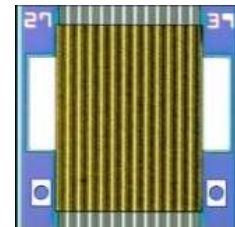
| Menu | Description |
|------------------------------|--|
| Epitaxial Wafer | Epitaxy on 3inch GaAs substrate |
| Epitaxial Wafer with Grating | 1 st epi, grating formation, regrowth |
| Wafer Process | CAD, photo mask, wafer process |
| Chip Fabrication | Bar cleaving, facet coating, chipping |

Product Family

Quantum dot wafer



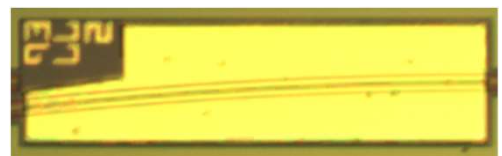
Laser chip



TO-CAN package



Gain chip



*Please contact us for other wavelengths and options

