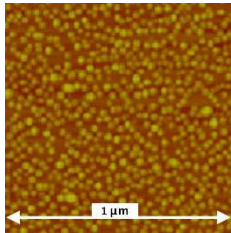


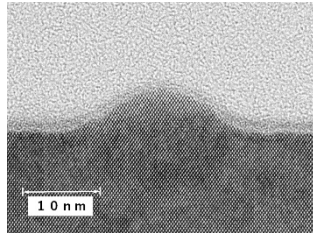
Quantum Dot Wafer

We manufacture and sell compound semiconductor products using our MBE equipment. Custom manufacturing of quantum dot wafers is also available. If you have a preferred structure, please contact us.

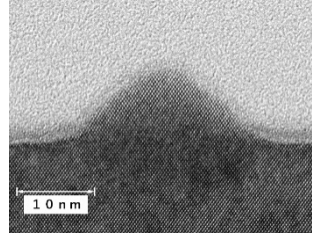
Quantum Dot Structures



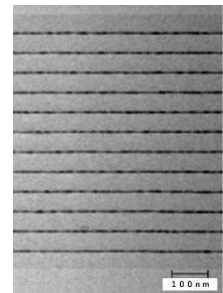
Quantum Dot surface(AFM)



Quantum Dot (TEM)



Quantum Dot (TEM)



Quantum Dot layer(TEM)

Multi-layer stacked structure available

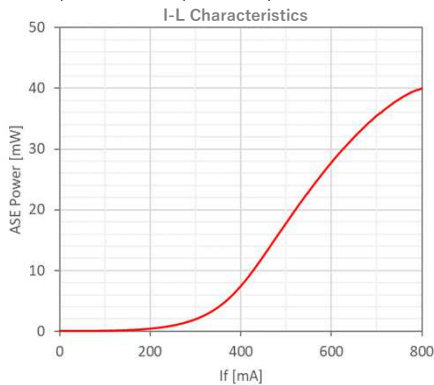
----- Quantum Dot Examples of Fabrication -----

Wafer Fabrication Overview

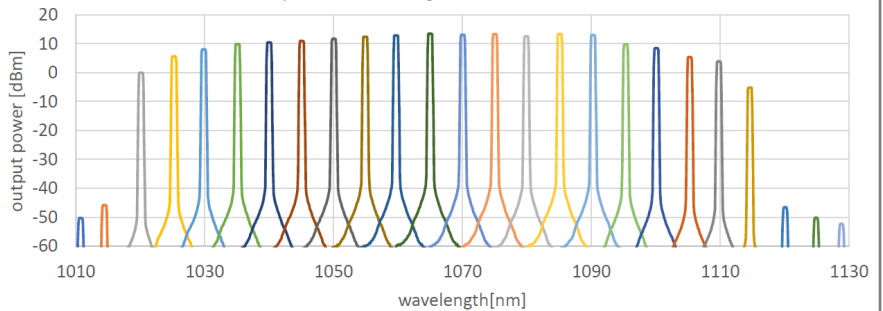
Wafer Diameter : 2 inch
 Available elements : Ga, In, Al, As, Sb, Si (n-type dopants), Be (p-type dopants)
 Structural Example : Quantum dots in double heterostructure, etc.

Examples of stacked structure :
 $p^+ - \text{GaAs} (\sim 200\text{nm}) / p - \text{AlGaAs} (\sim 2000\text{nm}) / (\text{GaAs} / \text{InAs-QD}) \times N (300 \sim 500\text{nm}) / n - \text{AlGaAs} (\sim 2000\text{nm}) / n - \text{GaAs} (\sim 200\text{nm}) / n - \text{GaAs-wf}$

Example of ASE output when processed into SOA chip



Example of wavelength tunable laser with SOA



Wavelength/bandwidth characteristics adjustment is available upon request. (1.0 - 1.3um band)

Examples of Applications

- Quantum dot laser
- Quantum dot SOA
- Quantum well laser
- Others Research and development

Quantum Dot Laser

