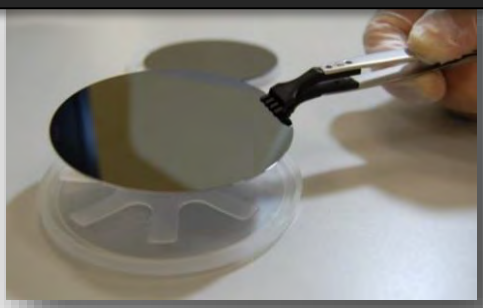
After customer design, QD Laser, Inc. can offer epitaxial wafers for opto-electronics and electrical device application with quantum dots/quantum wells on GaAs substrates with molecular beam epitaxy. We are realizing unique semiconductor lasers with such cutting-edge epitaxial technology.

QDLASER

High quality epitaxial wafers

- **For laser diodes and light emitting devices**
  - Layer structure for Fabry-Perot lasers (quantum dot/quantum well) (quantum dot/well active layers with AlGaAs cladding layers)
  - Layer structure for DFB lasers (quantum dot/quantum well) (quantum dot/well active layers with bottom AlGaAs cladding layer)
  - VCSEL structure, DBR-incorporated structure
- **Application for photo-detection**
  - PIN photo-diode structure
  - Layers with quantum dots/wells
- **Electrical device applications**
  - Resonant Tunneling Diode structure
  - HEMT layer structure
- **Other custom structure (on an epitaxial substrate with InGaP layer can be possible)**

High-quality, high-uniformity epitaxial layers



Multi-wafer molecular beam epitaxy system at QD Laser, Inc.

- **Base substrate : 3-inch GaAs wafer** (n-, p- or un-doped)
- **Wafers per batch : 1～5 wafers**
- **Possible grown layers**
  - GaAs
  - $Al_xGa_{1-x}As$ ($0 < x \leq 1$)
  - InAs quantum dots
  - InGaAs quantum dots (RT-PL wavelength : 1120 ～ 1290 nm)
  - InGaAs quantum wells (RT-PL wavelength : 1000 ～ 1160 nm)
  - For doping, n-type with Si or p-type with Be

◆ Original high-quality is approved via mass-productive 1.3-μm high-temperature data-com quantum dot lasers and short-pulse 1.06μm quantum well lasers for seed lasers for fiber lasers and various gas sensing.

QD Laser, Inc.
Keihin Bldg. 1F, 1-1 Minamiwataridacho, Kawasaki-ku,
Kawasaki, Kanagawa 210-0855 JAPAN
TEL : +81-44-333-3338 FAX : +81-44-333-3308 E-mail : info@qdlaser.com http://www.qdlaser.com

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