

KEY FEATURES

- MOCVD Epitaxy.
- 2/3/4 Inch.
- 10G High-Speed.
- High Uniformity & Reliability.

APPLICATIONS

- Telecommunications

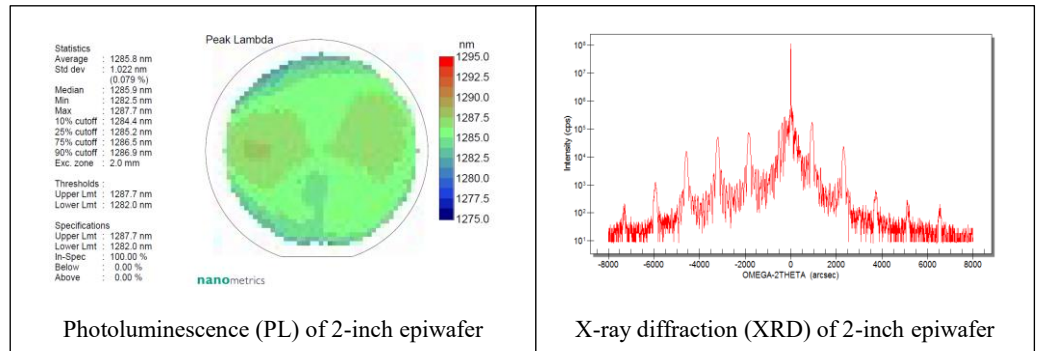
● PRODUCT DESCRIPTION

The 1310 nm 10G Fabry-Perot (FP) laser diode (LD) epi-wafer, designed especially for the high-speed fiber-optic communications, is grown by metal-organic chemical vapor deposition (MOCVD) by Huaxing OPTO, with strained InAlGaAs or InGaAsP multiple quantum wells (MQWs) as the active layer.

● EPITAXY STRUCTURE

| |
|-------------------|
| p+-InGaAs Contact |
| p-InP Cladding |
| Waveguide |
| MQWs |
| Waveguide |
| n-InP Cladding |
| n-InP Buffer |
| n-InP Substrate |

● WAFER CHARACTERIZATION



● TYPICAL EPITAXY PARAMETERS

| Parameters | Typical Values |
|--------------------------------|---|
| Thickness control | <±5% |
| Thickness uniformity | <±3% |
| PL wavelength uniformity | <±5 nm for 2-inch epiwafer |
| Doping control | <±30% |
| p-InP carrier concentration | 1E17 cm ⁻³ ~ 2E18 cm ⁻³ |
| n-InP carrier concentration | 1E16 cm ⁻³ ~ 5E18 cm ⁻³ |
| p-InGaAs carrier concentration | 1E19 cm ⁻³ ~ 2E19 cm ⁻³ |

● TYPICAL DEVICE PERFORMANCE

| Parameters | Typical Values |
|----------------------------|-------------------------|
| Threshold current@25°C | < 14mA |
| Wavelength | 1310 nm |
| Slope efficiency | 0.25 W/A per facet |
| Characteristic temperature | >85 K |
| Serial resistance | < 10 Ω |
| Operating temperature | -20°C ~ +85°C |
| Ridge waveguide | 2 μm×250 μm, as cleaved |



FOCUSING ON EPITAXIAL WAFER

PRECISE, EFFICIENT AND PROFESSIONAL