DATASHEET

1310 nm 2.5G FP LASER DIODE EPI-WAFER

KEY FEATURES

- **MOCVD Epitaxy.**
- **2/3/4 Inch.**
- **2.5G High-Speed.**
- **High Uniformity & Reliability.**

APPLICATIONS

- **Telecommunications**

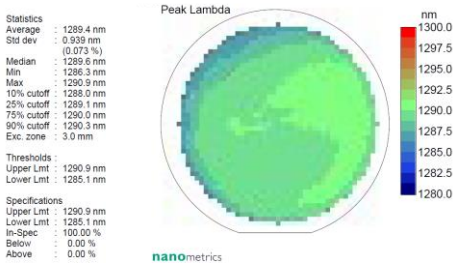
PRODUCT DESCRIPTION

The 1310 nm 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.

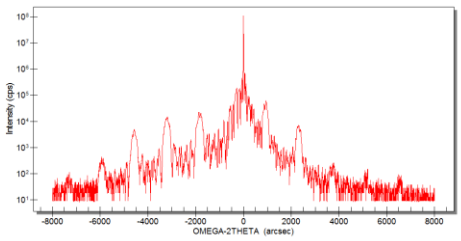
EPITAXY STRUCTURE

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

WAFER CHARACTERIZATION



Photoluminescence (PL) of 2-inch epi-wafer



X-ray diffraction (XRD) of 2-inch epi-wafer

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℃	< 10mA
Wavelength	1310 nm
Slope efficiency	0.25 W/A per facet
Characteristic temperature	>85 K
Serial resistance	< 10 Ω
Operating temperature	-20℃ ~ +85℃
Ridge waveguide	2 μm×250 μm, as cleaved

华兴激光
HUAXING OPTO

FOCUSING ON EPITAXIAL WAFER

PRECISE, EFFICIENT AND PROFESSIONAL