

## KEY FEATURES

- MOCVD Epitaxy.
- 3/4/6 Inch.
- High Efficiency.
- Low Power Consumption.
- High Uniformity & Reliability.

## APPLICATIONS

- Telecommunications
- Gesture Recognition
- 3D Imaging

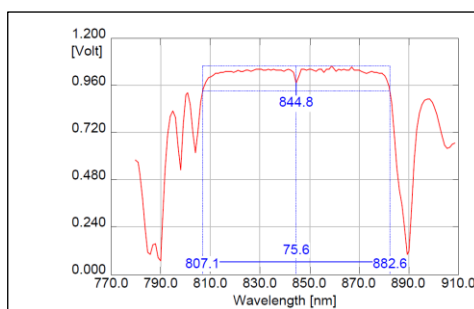
## ● PRODUCT DESCRIPTION

The 850 nm vertical-cavity surface-emitting laser (VCSEL) epi-wafer, designed especially for the telecommunication/gesture recognition/3D imaging applications, is grown by metal-organic chemical vapor deposition (MOCVD) by Huaxing OPTO, with GaAs/AlGaAs multiple quantum wells (MQWs) as the active layer.

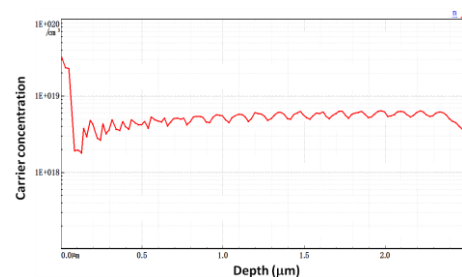
## ● EPITAXY STRUCTURE

p+-GaAs
P-AlGaAs
P-DBR
Al <sub>0.98</sub> GaAs
MQWs
AlGaAs
n-DBR
n-GaAs buffer layer
n-GaAs substrate

## ● WAFER CHARACTERIZATION



Reflectivity spectrum of 4-inch epi-wafer



Concentration depth profile of 4-inch epi-wafer

## ● TYPICAL EPITAXY PARAMETERS

Parameters	Typical Values
SB center	< ±10 nm
Thickness uniformity	< ±2.5%
PL wavelength uniformity	< ±1.5 nm
Doping control	< ±30%
Mole Fraction (x) Tolerance	< ±2%

## ● TYPICAL DEVICE PERFORMANCE

Parameters	Typical Values
Threshold current@25°C	< 2 mA (15μm aperture)
Wavelength	845-855 nm
Slope efficiency	> 0.5 W/A
Operating temperature	0°C ~ 80°C



FOCUSING ON EPITAXIAL WAFER

PRECISE, EFFICIENT AND PROFESSIONAL



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