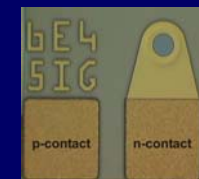
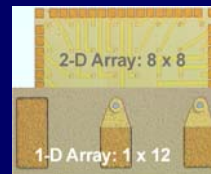


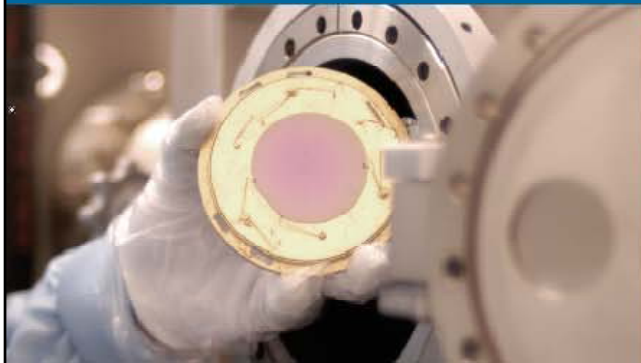


Demonstration of 12.5 Gbps 1310 nm InP BTJ-VCSEL for Optical Interconnects





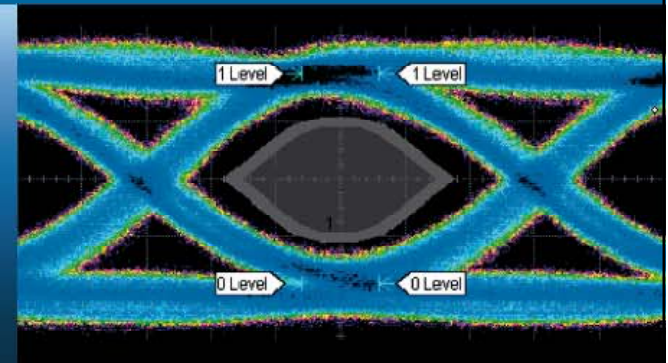
VCSEL Diodes for Data Communications
LAN, SAN, MAN, FTTx, Interconnect
1310 nm, 1490 nm, 1550 nm, CWDM



InP VCSEL



Packaging Options



10 Gbps Performance

High Data Rate Laser Diodes from 1 Gbps to 10 Gbps

Ultra Low Power Consumption of 25 mW (typ.)

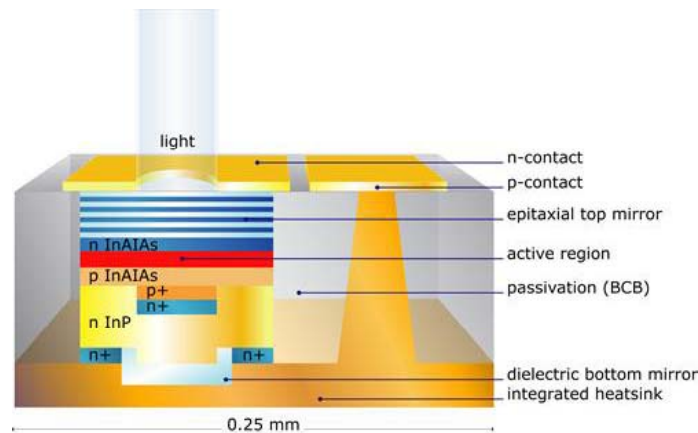
Enabling 10 Gbps Optical Modules with $P_{diss} < 750$ mW

VERTILAS' Unique Technology Offers Major Advantages

VERTILAS' Advantages – VCSELS from 1.3 μ m to > 2 μ m

Cost effective

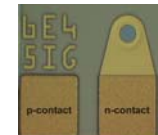
**Very low
power dissipation**



**Very high
performance**

**Very high
integration**

BTJ – Buried Tunnel Junction – made by VERTILAS



InP VCSEL 1310 nm in LC TOSA

10.3 Gbps and 12.5 Gbps

Product Information

Single-Mode VCSEL	10 Gbps
1310 nm	LC TOSA
VL-1310-10G-P2-LC	TO-46



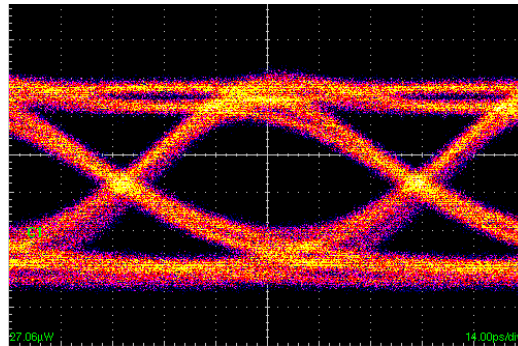
Key Features

- 1310 nm single-mode VCSEL in LC receptacle
- TO-46 form factor
- Operating temperature:
 - -20 to +70 °C,
 - extended -40 to +85°C
- High data-rate modulation: 10.3 Gbps and 12.5 Gbps
- Low power dissipation of typ. 30 mW
- Low drive currents
- Low threshold voltage
- Integrated monitoring diode



Demonstration of 1310 nm InP BTJ-VCSEL at 12.5 Gbps

Eye Diagram
BTB



Eye Diagram
SSMF 3km

