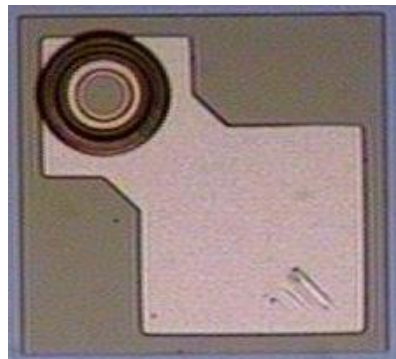




Features

- : 940nm wavelength range
- : 8mW VCSEL
- : Multi_mode beam profile
- : High reliability
- : Other configurations available on request

Description



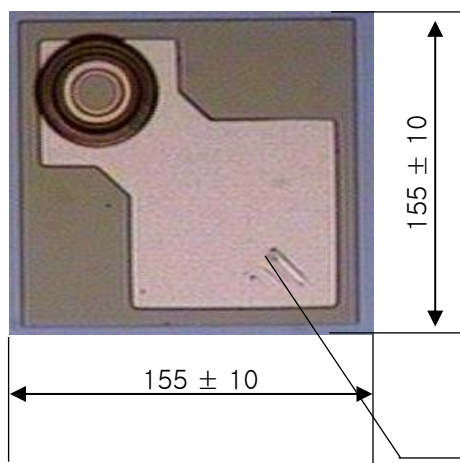
Applications

- : Consumer electronics
- : Safety sensor
- : Illumination light source
- : Proximity sensor light source

Absolute Maximum Ratings

| Parameter | Rating |
|----------------------------|--------------|
| Storage Temperature | -40 to 85 °C |
| Operating Temperature | -10 to 70 °C |
| Continuous Forward Current | 15mA |

Dimensions



Unit : μm
 DIE Height : $150 \pm 15 \mu\text{m}$

Anode pad , $85 \times 85 \mu\text{m}^2$

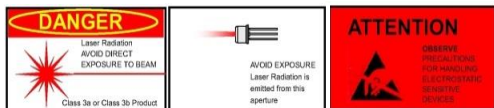


Electro-Optics Characteristics ($T_a=25\text{ }^\circ\text{C}$ unless otherwise stated)

| Parameters | Symbol | Specified | | | Unit | Test Conditions |
|---------------------------------|----------------------------|-----------|------|------|----------------------|---|
| | | Min. | Typ. | Max. | | |
| Threshold Current | I_{th} | | 1.5 | | mA | CW |
| I_{th} Temperature Variation | ΔI_{th} | | 2.0 | | mA | $T_a = -10$ to $70\text{ }^\circ\text{C}$ |
| Slope Efficiency | η | | 1.0 | | W/A | $I_f = 10$ mA |
| η Temperature Variation | $\Delta\eta / \Delta T$ | | -0.5 | | % / $^\circ\text{C}$ | $T_a = -10$ to $70\text{ }^\circ\text{C}$ at 10mA |
| Optical Output Power | P_o | | 8 | | mW | $I_f = 10$ mA |
| Peak Wavelength | λ_p | 930 | 940 | 950 | nm | $I_f = 10$ mA |
| λ Temperature Variation | $\Delta\lambda / \Delta T$ | | 0.06 | | nm/ $^\circ\text{C}$ | $T_a = -10$ to $70\text{ }^\circ\text{C}$ at 10mA |
| Spectral Bandwidth (RMS) | $\Delta\lambda$ | | | 2 | nm | $I_f = 10$ mA |
| Beam Divergence | \ominus | | 20 | | $^\circ$ | $P_o = 10$ mW (FWHM) |
| Operating Voltage | V_f | | 2.1 | 2.3 | V | $I_f = 10$ mA |
| Breakdown Voltage | V_b | -7 | | | V | |
| Dynamic Resistance | R_d | | 60 | | Ohm | $I_f = 10$ mA |

Notes

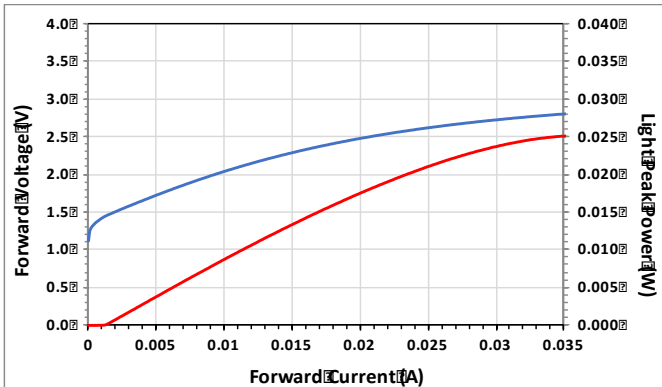
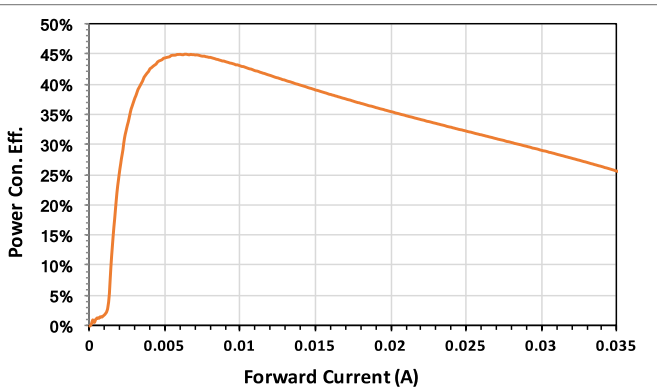
* These specifications are subject to change without notice.



| | |
|---------------|--|
| NOTICE | The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product |
| DANGER | The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself. |



Characteristics Curves

| LIV Curve | Power conversion efficiency |
|--|---|
|  <p>Test PKG sample : To-Can type, To-46 Test condition : CW Mode : IF step interval 0.45mA, Delay time 2msec</p> |  <p>Test PKG sample : To-Can type, To-46 Test condition : CW Mode : IF step interval 0.45mA, Delay time 2msec</p> |
| | |