



S6530MG

- Red Laser Diode
- 660 nm, 30 mW CW
- Multimode
- 5.6 mm TO-Can, Flat Window
- Built-in Monitor PD



Description



S6530MG is a multimode Laser Diode emitting at typical 660 nm with rated output power of 30 mW CW at room temperature. The 5.6 mm TO package includes a cap and flat window, and contains a built-in **monitor PD**.

Maximum Ratings ($T_{CASE}=25^{\circ}C$)

| Parameter | Symbol | Values | | Unit |
|----------------------------|------------|--------|-------|-------------|
| | | Min. | Max. | |
| Optical Output Power | P_O | | 32 | mW |
| Reverse Voltage, LD | V_R | | 2.0 | V |
| Reverse Voltage, PD | V_{RPD} | | 30 | V |
| Operating Temperature | T_{CASE} | - 10 | + 50 | $^{\circ}C$ |
| Storage Temperature | T_{STG} | - 15 | + 85 | $^{\circ}C$ |
| Lead Solder Temperature *2 | T_{SLD} | | + 280 | $^{\circ}C$ |

*1 must be completed within 5 seconds

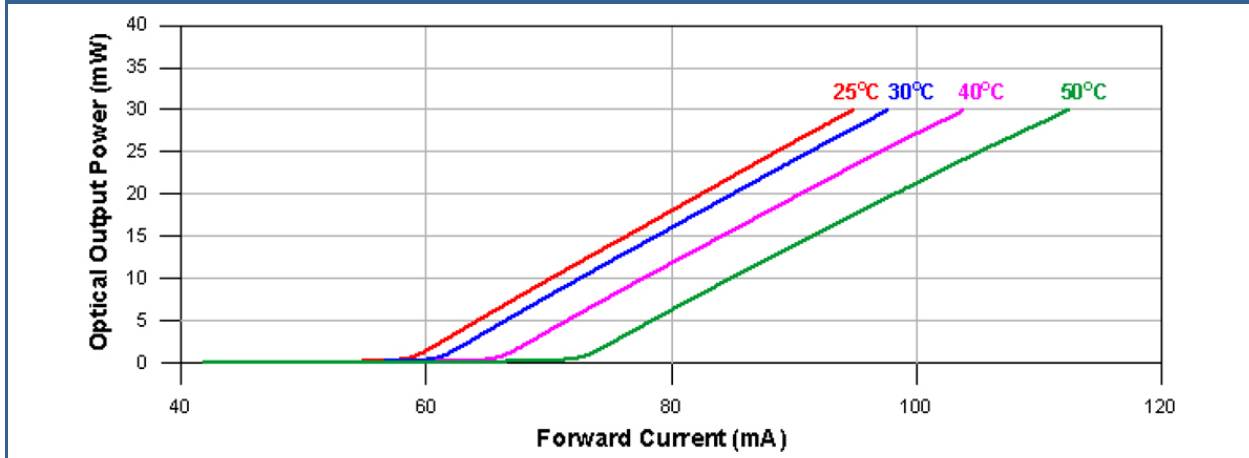
Electro-Optical Characteristics ($T_{CASE}=25^{\circ}C$)

| Parameter | Symbol | Min. | Values | | Unit |
|--------------------------------|------------------|------|-----------|------|------------|
| | | | Typ. | Max. | |
| Peak Wavelength | λ_P | 650 | 660 | 665 | nm |
| Optical Output Power | P_O | | 30 | | mW |
| Laser Beam Mode | | | Multimode | | |
| Threshold Current | I_{TH} | | 58 | 68 | mA |
| Forward Current | I_{OP} | | 95 | 105 | mA |
| Forward Voltage | V_{OP} | | 2.1 | 2.6 | V |
| Slope Efficiency | η | 0.5 | 0.8 | | mW/mA |
| Beam Divergence, Parallel | $\theta_{ }$ | 7 | 8 | 13 | $^{\circ}$ |
| Beam Divergence, Perpendicular | θ_{\perp} | | 28 | 35 | $^{\circ}$ |
| Monitor Current | I_M | 0.15 | | 0.25 | mA |

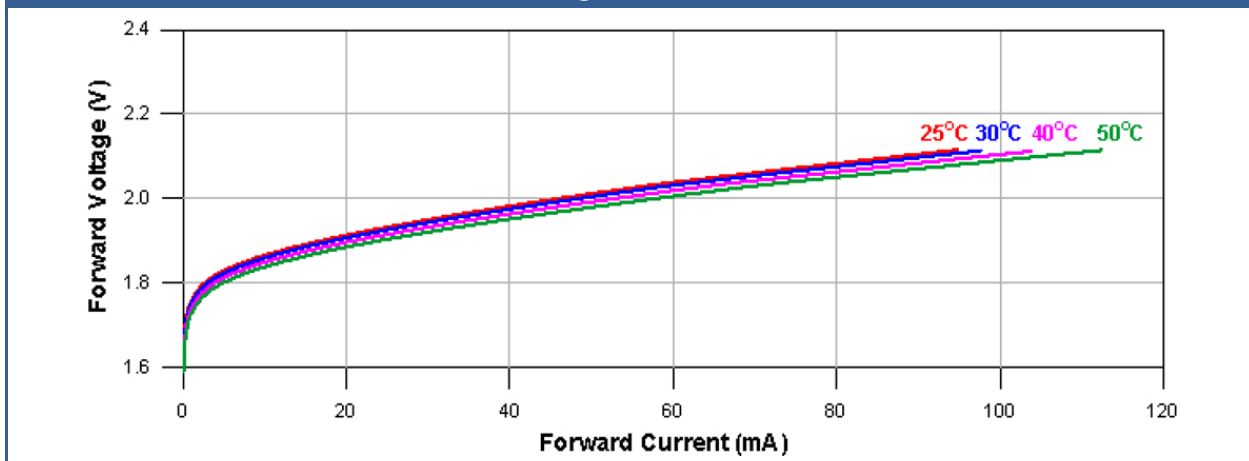


Typical Performance Curves

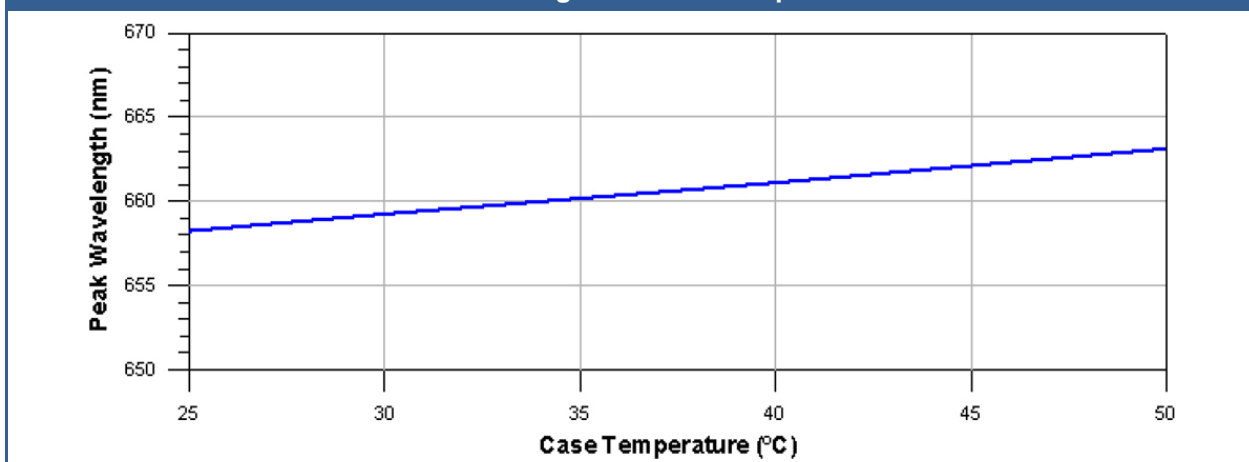
Optical Output Power vs Forward Current

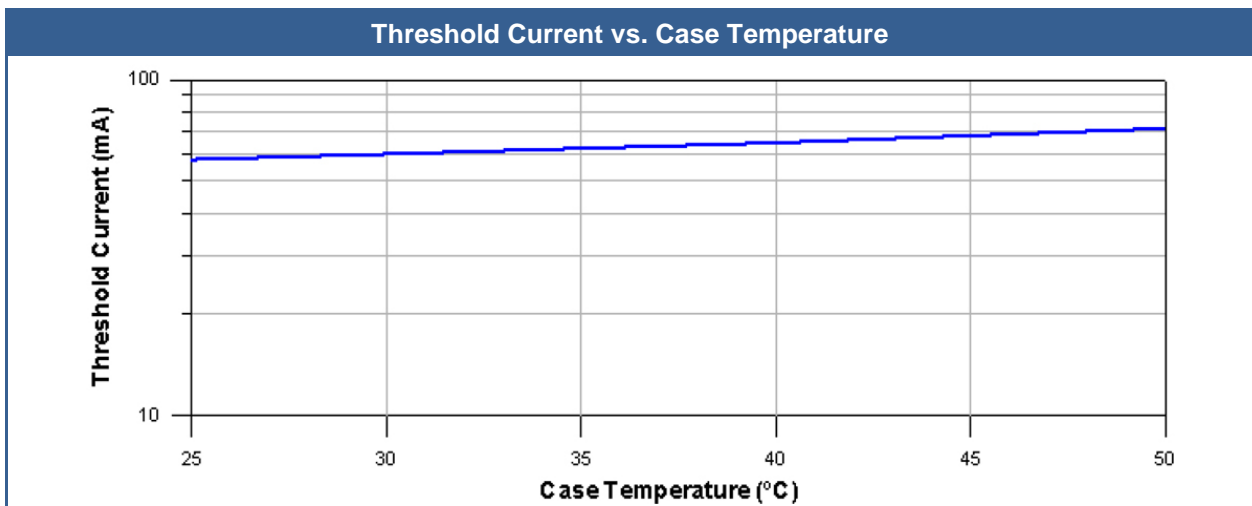
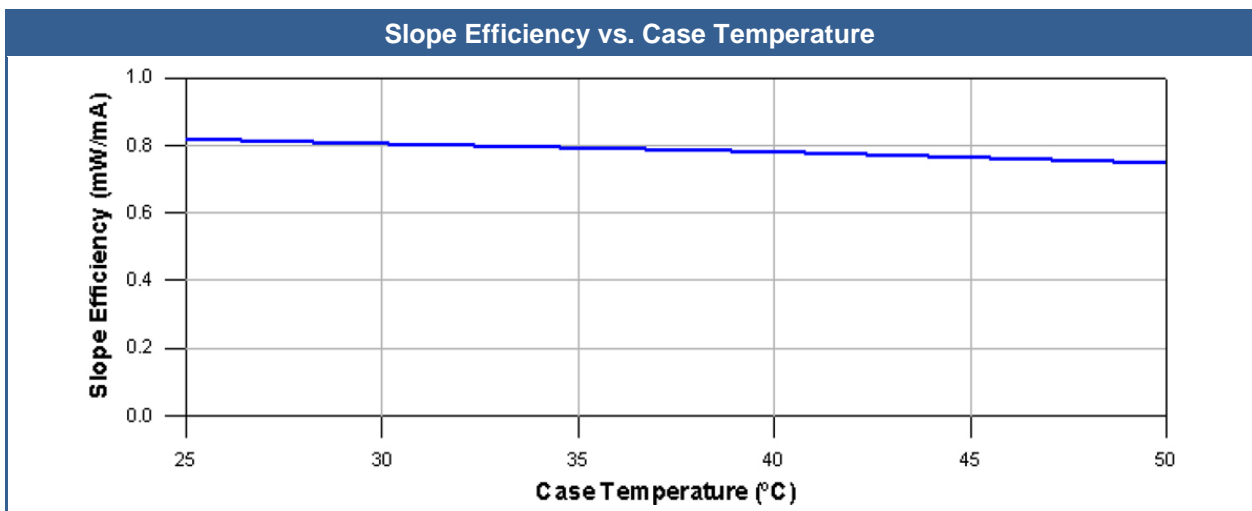
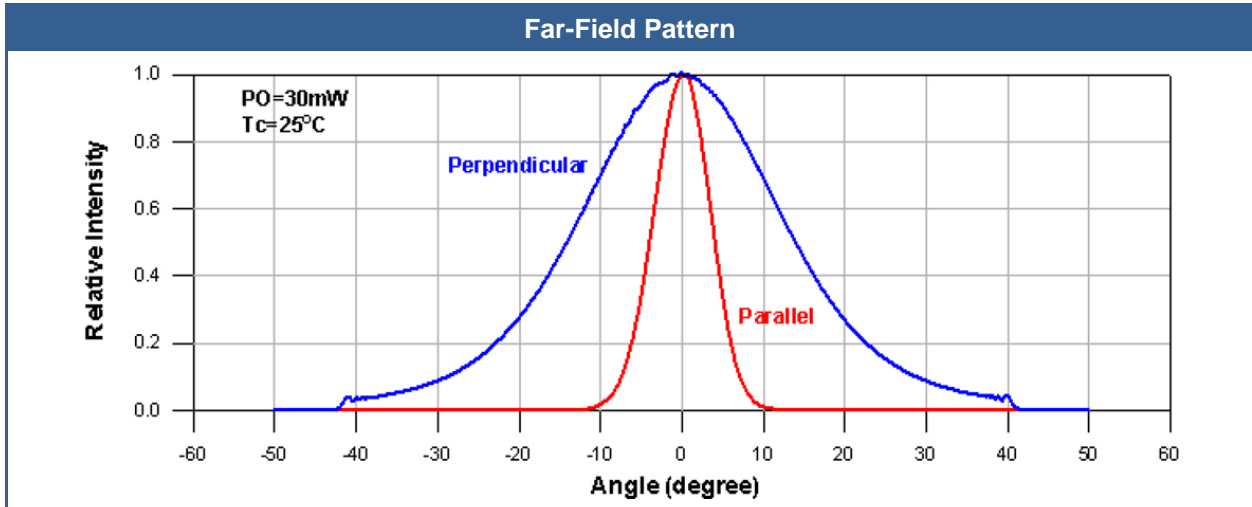


Forward Voltage vs. forward Current



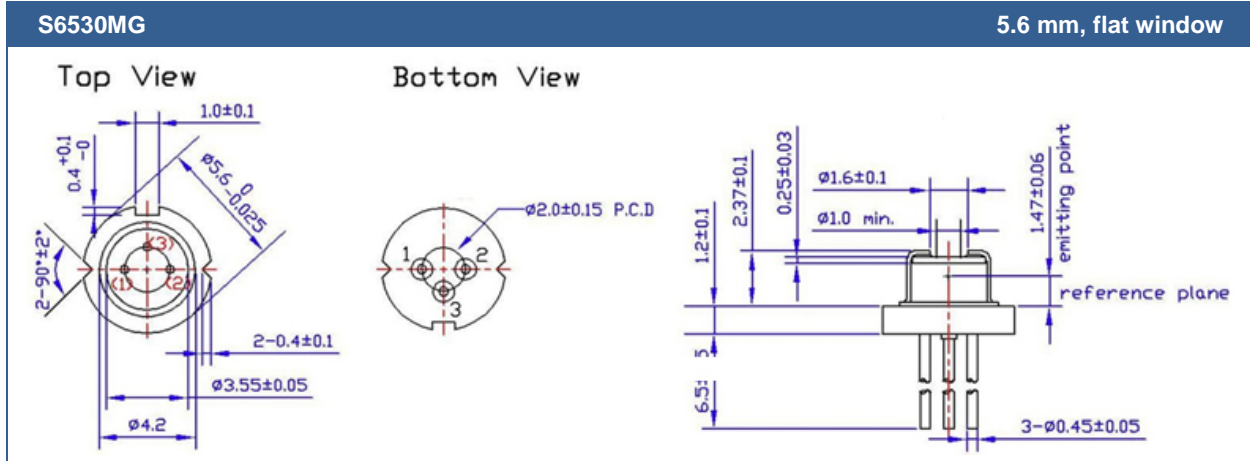
Peak Wavelength vs. Case Temperature





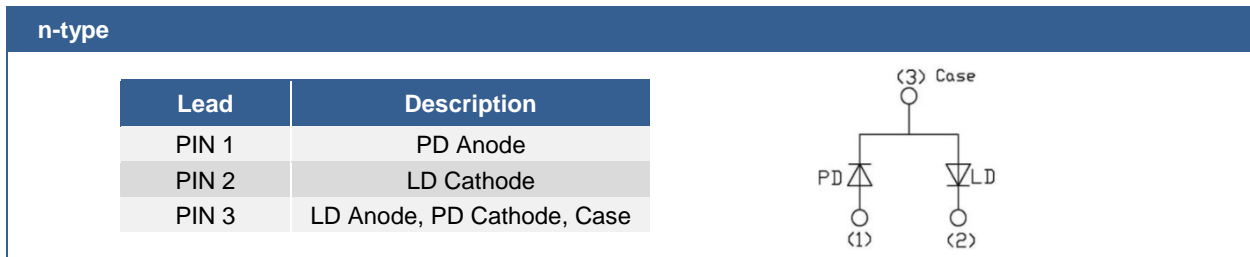


Outline Dimensions



All Dimensions in mm

Electrical Connection





Precautions

ESD Caution:

Always do handle laser diodes with extreme caution to prevent electrostatic discharge, the primary cause of unexpected diode failure. ESD failures can be prevented by always wearing wrist straps, only using a grounding workplace, and following strict anti-static guidelines when handling the laser diode.



Safety Advice:

This laser diode emits highly concentrated infrared light which can be **hazardous to the human eye and skin**. This diode is classified as **CLASS 3 laser product** according to **IEC 60825-1** and **21 CFR Part 1040.10 Safety Standards**.

Operating Considerations:

Operating the laser diode outside of its maximum ratings may cause failure or a safety hazard. The diode may be damaged by excessive drive currents or switching transients. If the diode is operated using a power supply, it is strongly recommended to connect the diode with the output voltage set to zero. The voltage should then be increased slowly and with great caution, while at the same time carefully monitoring the laser diodes output power and drive current. The laser diode will show accelerated degradation with increased temperature, and it is advised to keep the case temperature low therefor, by means of heat sinking the device.