

SMT660N-23

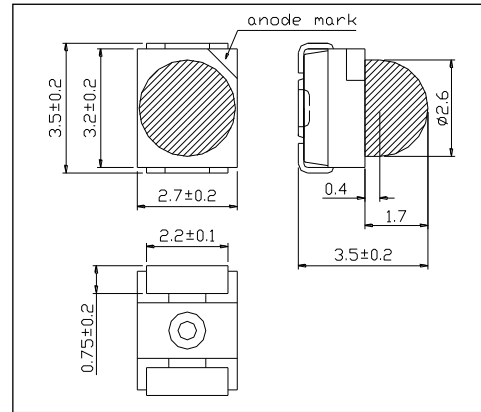
High Performance Red Color TOP LED with Lens

SMT660N-23 consists of an AlGaInP LED mounted on the lead frame as TOP LED package. It is 12mW typical of output power and 1800mcd of Brightness. It emits a spectral band of radiation at 660nm.

<Specifications>

1. Product Name: TOP LED
2. Type Number: SMT660N-23
3. Chip:
 - Chip Material: AlGaInP
 - Dimension: 350um x 350um
 - Peak Wavelength: 660nm
4. Package
 - Lead Frame Die: Silver Plated
 - Package Resin: PPA Resin
 - Lens: Epoxy Resin

Outer Dimension (Unit:mm)



| Absolute Maximum Ratings[Ta=25°C] | | | |
|-----------------------------------|--------|---------------------|------|
| Item | Symbol | Maximum Rated Value | Unit |
| Power Dissipation | PD | 120 | mW |
| Forward Current | IF | 50 | mA |
| Pulse Forward Current* | IFP | 200 | mA |
| Reverse Voltage | VR | 5 | V |
| Thermal Resistance | Rthja | 200 | K/W |
| Junction Temperature | Tj | 100 | °C |
| Operating Temperature | TOPR | -20 ~ +80 | °C |
| Storage Temperature | TSTG | -20 ~ +80 | °C |
| Soldering Temperature** | TSOL | 250 | °C |

* Duty=1% and Pulse Width=10us.

** Soldering condition must be completed within 5 second at 250 °C.

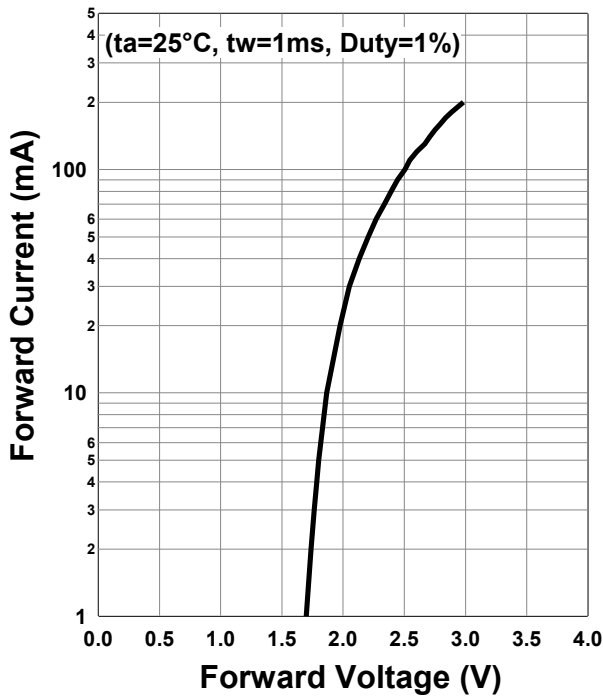
| Electro-Optical Characteristics [Ta=25°C] | | | | | | |
|--|--------|-----------|---------|---------|---------|-------|
| Item | Symbol | Condition | Minimum | Typical | Maximum | Unit |
| Forward Voltage | VF | IF=20mA | | 2.0 | 2.2 | V |
| Radiated Power* | PO | IF=20mA | 9 | 12 | | mW |
| Radiant Intensity** | IE | IF=20mA | | 15 | | mW/sr |
| Brightness | IV | IF=20mA | | 1800 | | mcd |
| Peak wavelength | λP | IF=20mA | 650 | 660 | 670 | nm |
| Half Width | Δλ | IF=20mA | | 16 | | nm |
| Viewing Half Angle | θ1/2 | IF=20mA | | ±19 | | deg |
| Rise Time | tr | IF=20mA | | 60 | | ns |
| Fall Time | tf | IF=20mA | | 50 | | ns |

* Measured by S3584-08

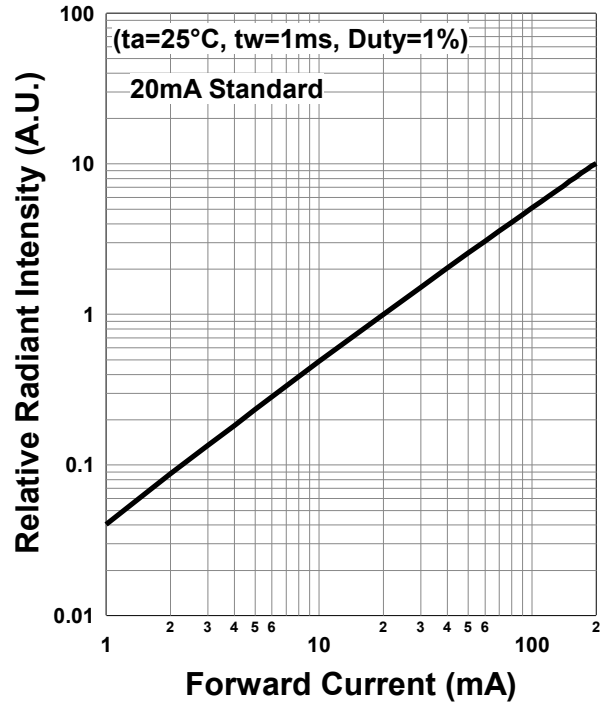
** Measured by Tektronix J-6512



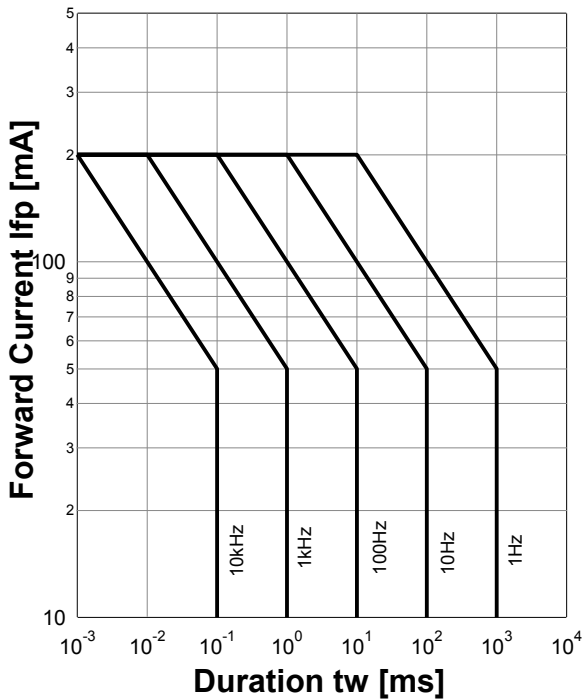
Forward Current - Forward Voltage



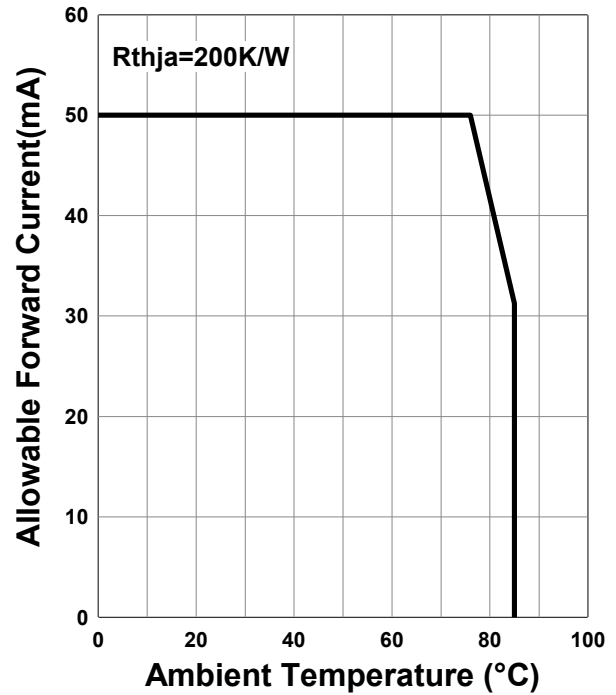
Relative Radiant Intensity - Forward Current

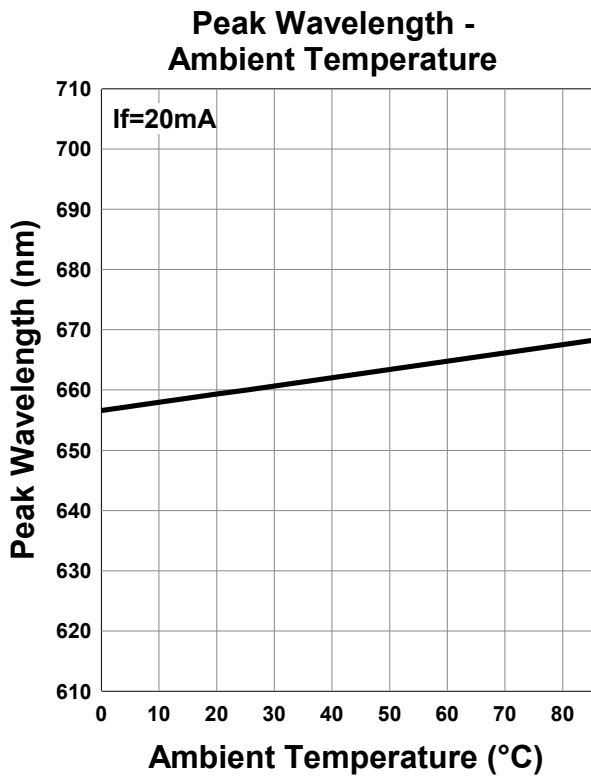
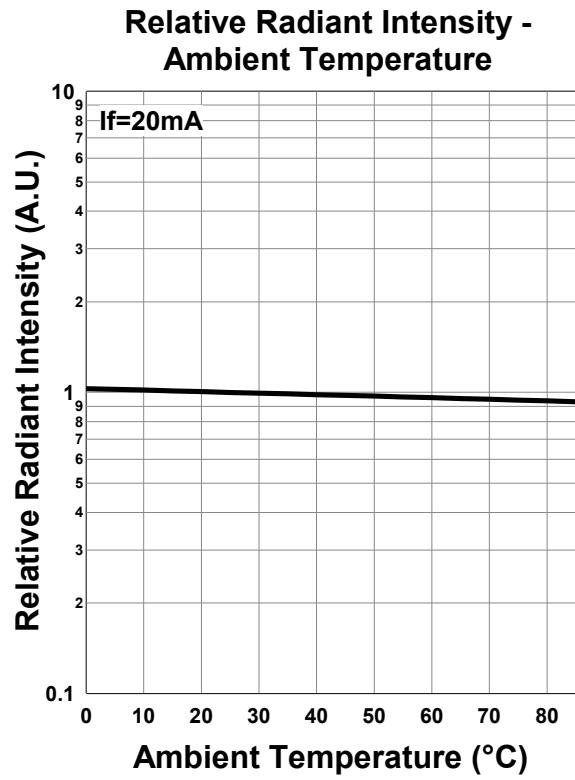
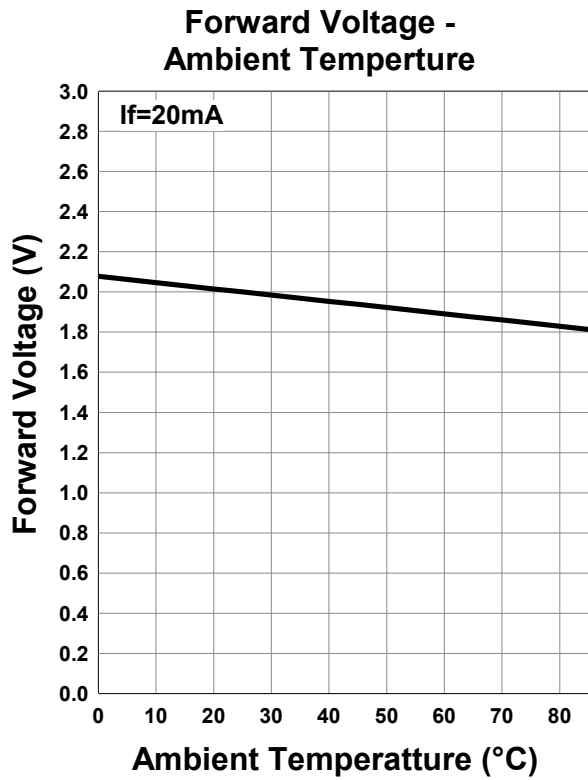


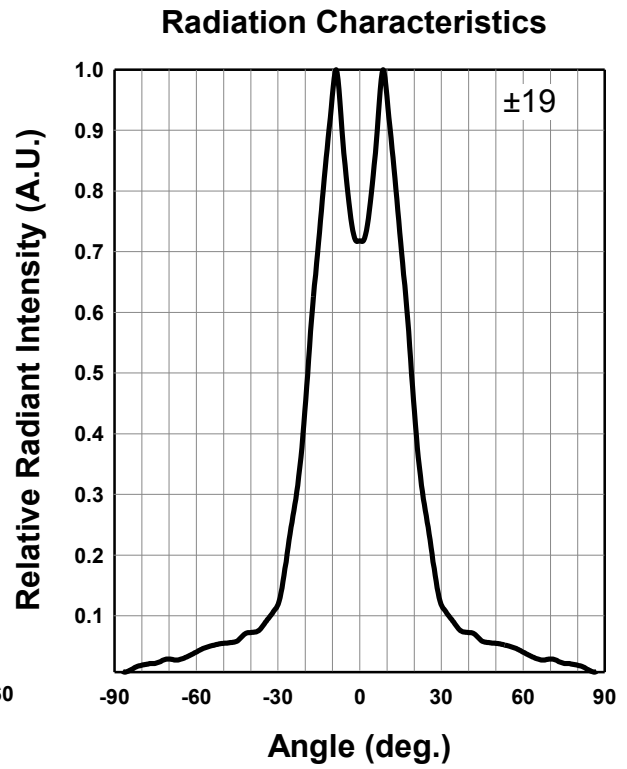
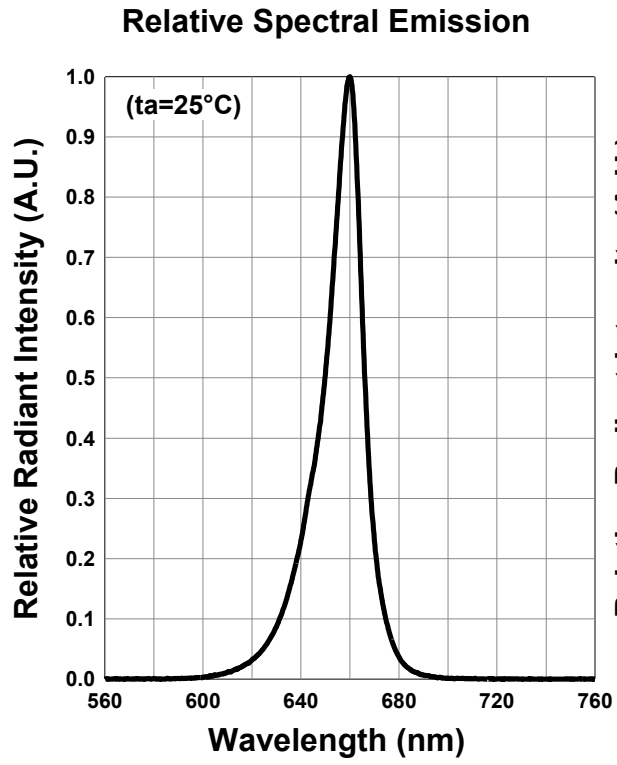
Forward Current - Pulse Duration



Allowable Forward Current - Ambient Temperature



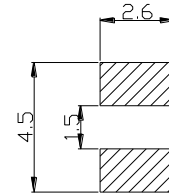
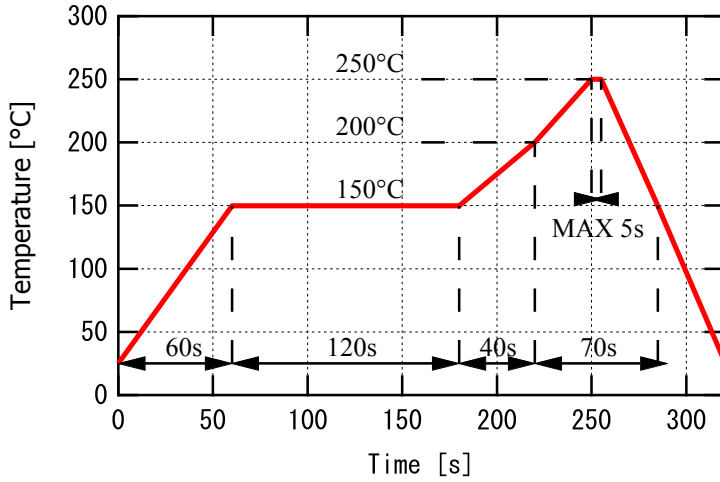




◆ SMD Application

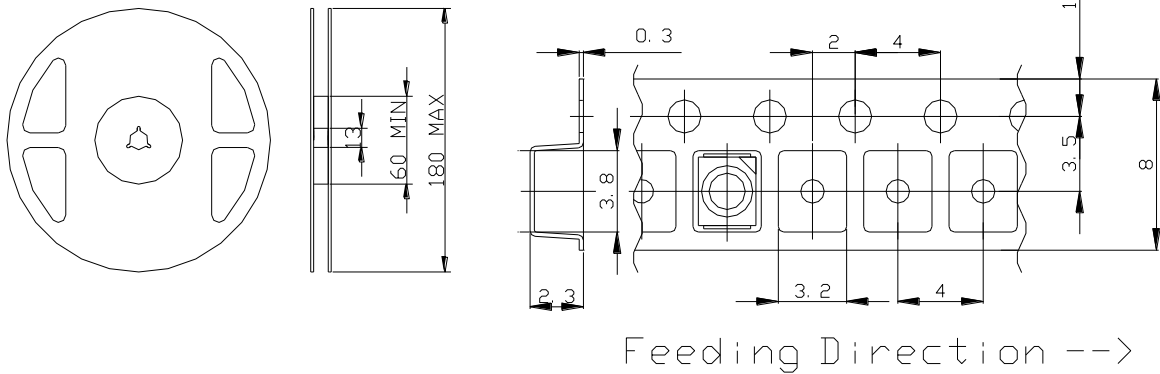
◆ Recommended Lnd Layout (Unit : mm)

IR-Reflow Soldering Profile for lead free soldering



◆ SMD Packing

Tape and Reel Dimensions (Unit: mm)



◆ Wrapping

Moisture barrier bag aluminum laminated film with a desiccant to keep out the moisture absorption during the transportation and storage.

Disclaimer

Product specifications and data shown in this product catalog are subject to change without notice for the purposes of improving product performance, reliability, design, or otherwise.

Product data and parameters in this catalog are typical values based on reasonably up-to-date measurements. Product data and parameters may vary by user application and over time.

Products shown in this catalog are intended to be used for general electronic equipment. Products are not guaranteed for applications where product malfunction or failure may cause personal injury or death, including but not limited to life-supporting / saving devices, medical devices, safety devices, airplanes, aerospace equipment, automobiles, traffic control systems, and nuclear reactor control systems.

2013.08