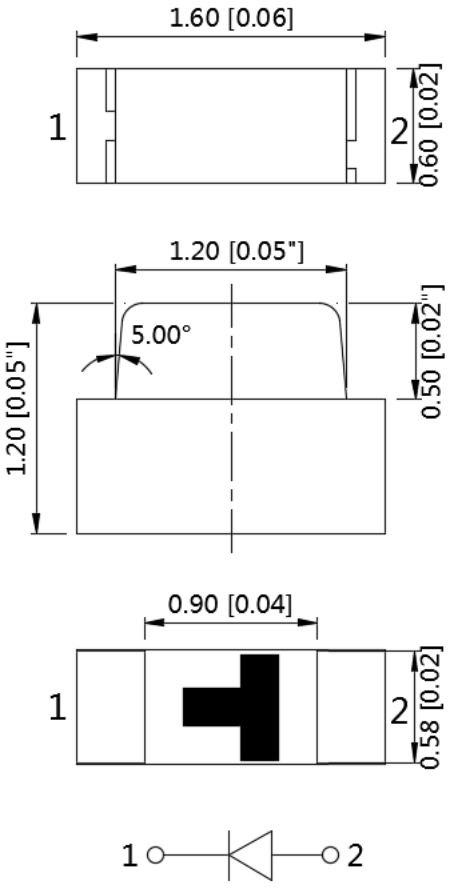
■ Features

- Meet RoHS.
- Mono-color type.
- 0602 Package in 8 mm tape on 7” diameter reels.
- Suitable for all SMT assembly methods.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.

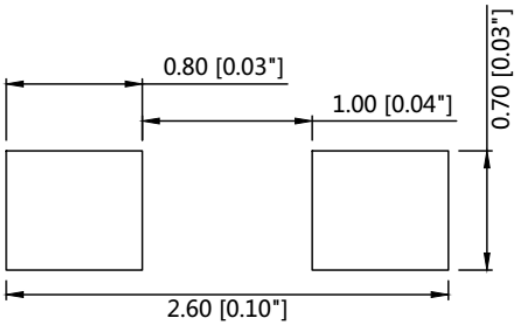
■ Typical Applications

- Automotive: Dashboards, stop lamps, turn signals.
- Backlighting: LCDs, Key pads advertising.
- Status indicators: Consumer & industrial electronics.
- General use.

■ Package Dimensions



Recommend Pad Layout



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.10mm (0.004’) unless otherwise specified.

■ Device Selection Guide

Chip Material	Emitted Color	Lens Color
GaAlAs	Infrared	Water Clear

■ Absolute Maximum Ratings at Ta=25℃:

Parameter	Symbol	Maximum	Unit
Power Dissipation	Pd	108	mW
Peak Forward Current (Duty 1/10 @1KHz)	I_{FP}	200	mA
Forward Current	I_F	60	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	Topr	-40℃ to + 85℃	
Storage Temperature Range	Tstg	-40℃ to + 100℃	
Lead Soldering Temperature [2.0mm from body]	Tsol	Preheating: 140℃~160℃±5℃, within 2 minutes. Operation heating:260℃(Max) within 10 seconds.(Max) Gradual Cooling (Avoid quenching).	

■ Electrical/Optical Characteristics at Ta=25℃:

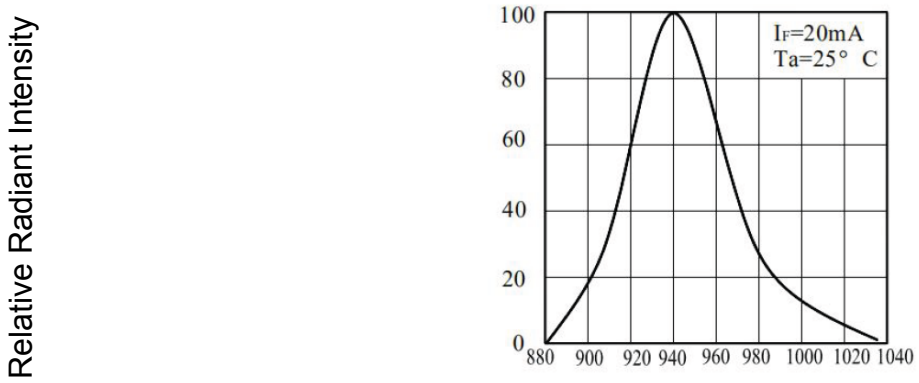
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Radiant Intensity	I_e	I_F=20mA	0.6	1.0	—	mW/sr
Peak Wavelength	λp	IF=20mA	—	940	—	nm
Spectral Line Half-width	△λ	I_F=20mA	—	45	—	nm
Forward Voltage	V_F	I_F=20mA	1.0	—	1.5	V
Viewing Angle	2θ1/2	I_F=20mA	—	120	—	deg
Reverse Current	I_R	V_R=5V	—	—	10	uA

Notes:

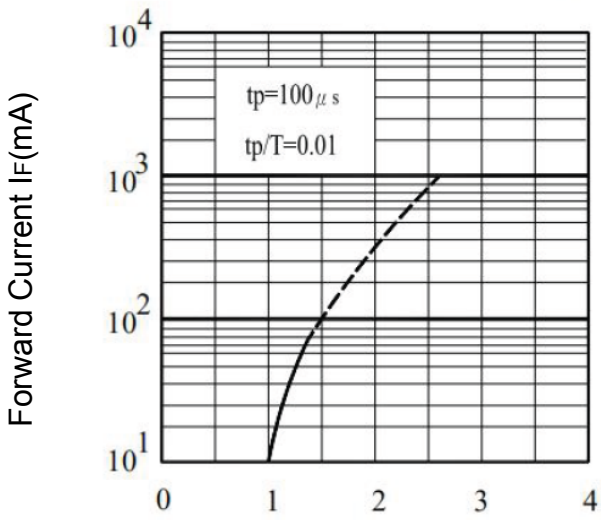
1. Tolerance of Radiant Intensity ±15%
2. Tolerance of Forward Voltage ±0.1V
3. Tolerance of Dominant Wavelength ±1nm

■ Typical Electrical/Optical Characteristic Curves

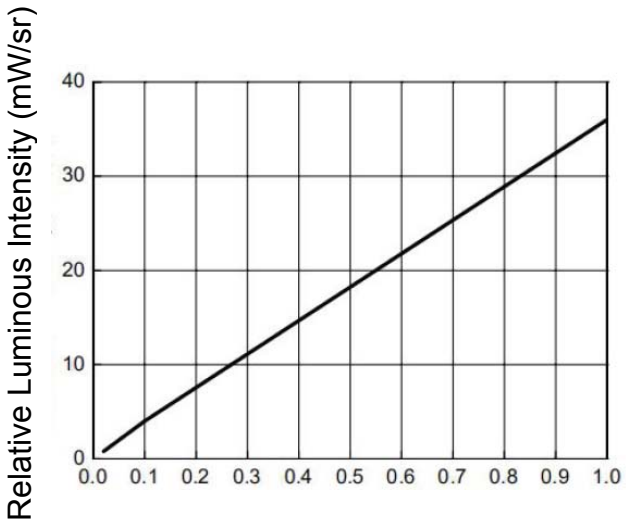
(25℃Ambient Temperature Unless Otherwise Noted)



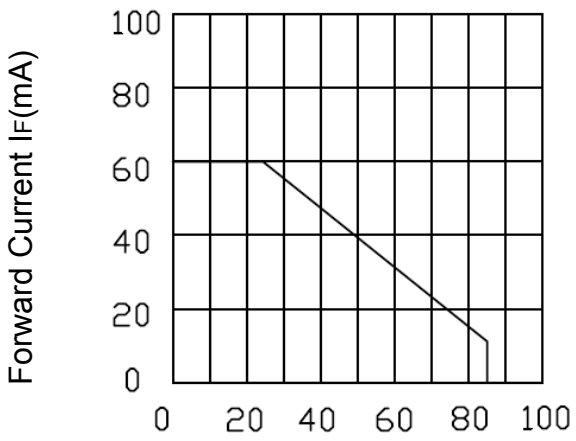
Relative Intensity Vs. Wavelength



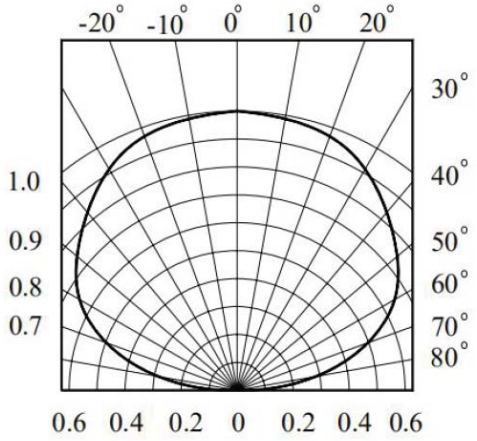
Forward Current vs. Forward Voltage



Relative Luminous Intensity vs. Forward Current



Forward Current Derating Curve

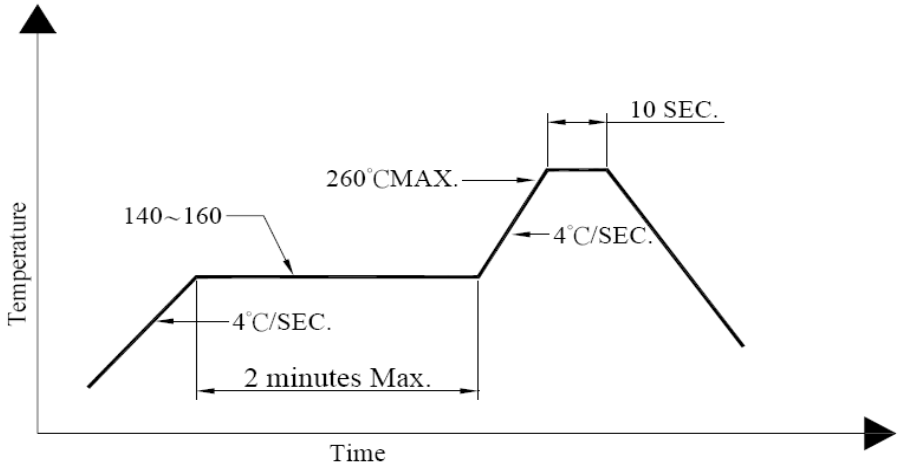


Spatial Distribution

■ Precautions :

1. Storage
   - Recommend storage environment:
     Temperature：5℃～30℃ (41°F～86°F) Relative Humidity：60% RH Max.
   - Product in the original sealed package is recommended to be assembled within 168 hours of opening.
   - If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.
     a. Baking treatment: 60±5℃ for 24 hours.
     b. Fold the opened bag firmly and keep in dry environment.
2. Cleaning
   - Surface condition of this device may change when organic solvents such as trichloroethylene or acetone were applied.
   - Avoid using organic solvent.
   - Recommend ultrasonic method 300W Max.

■ SMT Reflow Soldering Temp/Time:



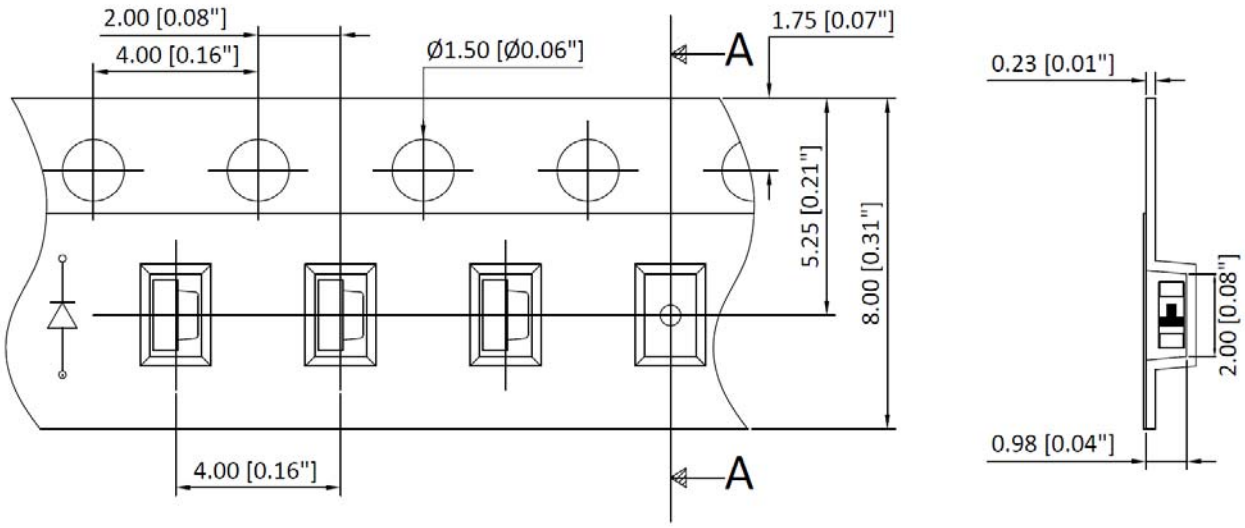
■ Reflow soldering

- Recommend use of upper and lower heater type reflow furnace.
- 260℃ Max for up to 10 seconds, one time only.
- Pre-heat is 150℃ Max for up to 2 minutes Max.
- In case of screen-printing, keep metal mask thickness between 0.2mm and 0.3mm.
- When soldering, do not put stress on the LEDs during heating.

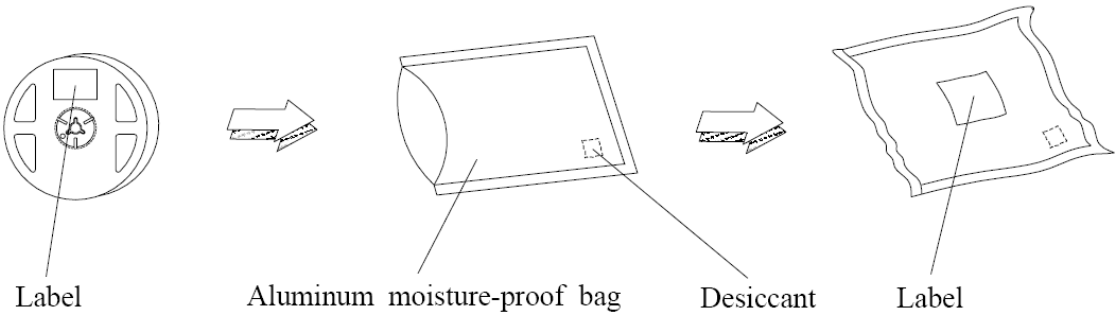
■ Soldering iron

- When hand soldering, keep the temperature of iron below less 300℃ less than 3 seconds.
- The hand solder should be done only one times.

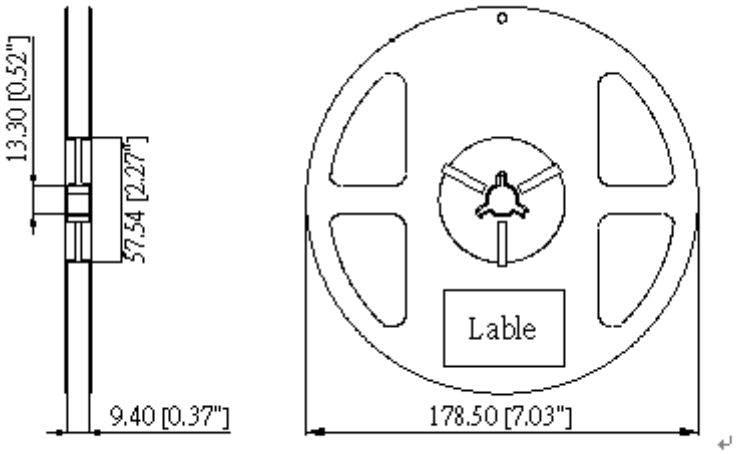
■ Carrier Tape Dimensions: Loaded quantity 4000 PCS per reel.



■ Moisture Resistant Packaging



■ Reel Dimensions



Notes:
1. All dimensions are in mm, tolerance is±2.0mm unless otherwise noted.
2. Specifications are subject to change without notice.