

SML10R3KH-TR

Ultra Red

Surface Mount LED

3.2 × 1.6 × 1.1 mm Chip LED

120° viewing angle

DWG BY:
KB / GP
08-08-12

CHK BY:
PL
08-09-12

REVISION LTR: -
ECR#080612-SY01
08-08-12

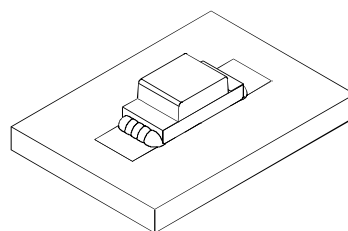
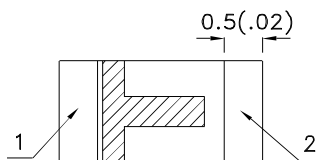
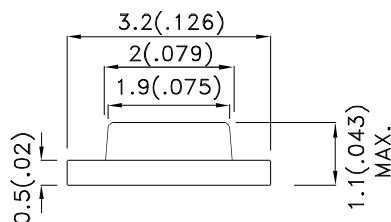
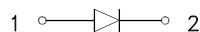
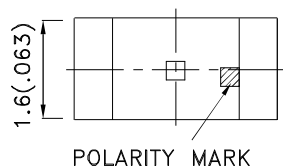
Features

- 3.2mmx1.6mm SMT LED, 1.1mm thickness.
- Low power consumption.
- Wide viewing angle.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

The Ultra Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2(0.0079")$ unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
		Min.	Typ.	2θ1/2
Ultra Red (GaAlAs)	WATER CLEAR	-	30	120°

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	typ.	max.	Units	Test Condition
λpeak	Peak Wavelength	655		nm	IF=20mA
λD [1]	Dominant Wavelength	640		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	22		nm	IF=20mA
C	Capacitance	45		pF	IF=0V;f=1MHz
VF [2]	Forward Voltage	1.85	2.5	V	IF=20mA
IR	Reverse Current		10	uA	VR=5V
x	Chromaticity Coordinates	0.72			IF=20mA
y		0.28			

Notes:

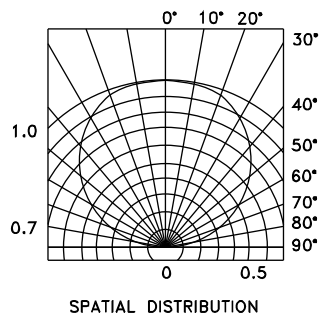
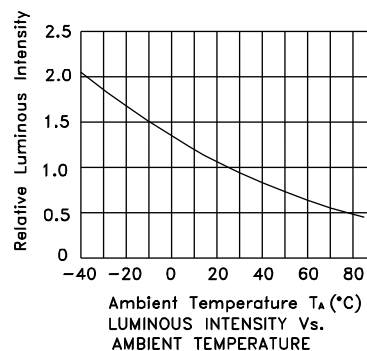
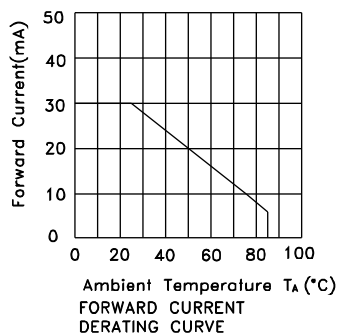
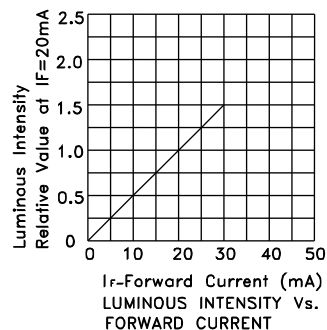
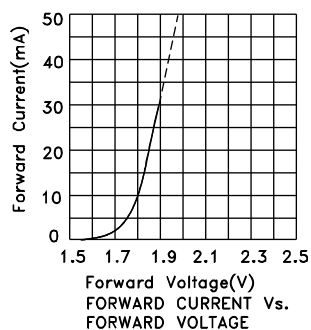
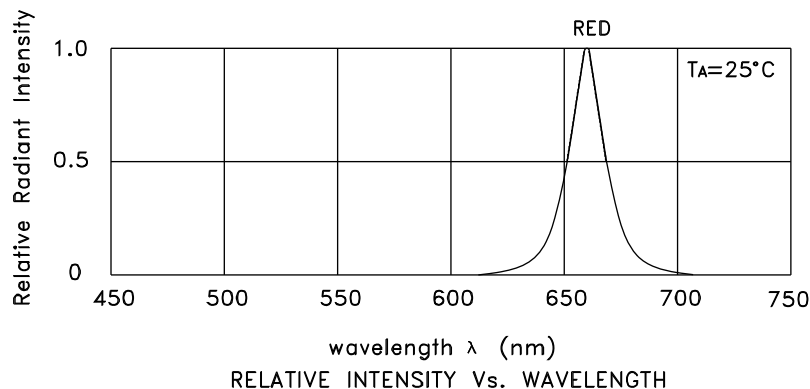
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

Parameter	Rating	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	155	mA
Reverse Voltage	5	V
Operating Temperature	-40 °C To +85 °C	
Storage Temperature	-40 °C To +85 °C	

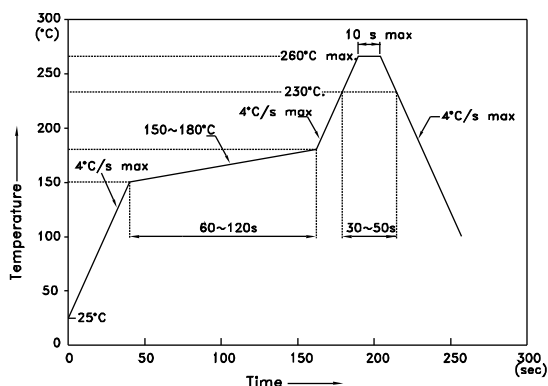
Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.



Reflow soldering is recommended and the soldering profile is shown below.
 Other soldering methods are not recommended as they might cause damage to the product.

Reflow Soldering Profile For Lead-free SMT Process.



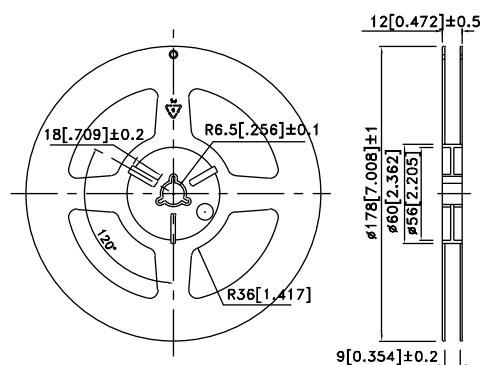
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern
 (Units : mm; Tolerance: ± 0.1)



Reel Dimension



Tape Dimensions
 (Units : mm)

