

# SML0603-R3K-TR

## Ultra Red

0603 Profile Surface Mount LEDs

1.6×0.8×0.75mm

120° Viewing Angle

DWG BY:  
OCC / GP  
05-29-14

CHK BY:  
PL  
05-29-14

R&D:  
BJ  
05-29-14

QA:  
RD  
05-29-14

MFG:  
LD  
05-29-14

REVISION LTR: -  
REF ECR#: 051214-RTD02  
05-29-14

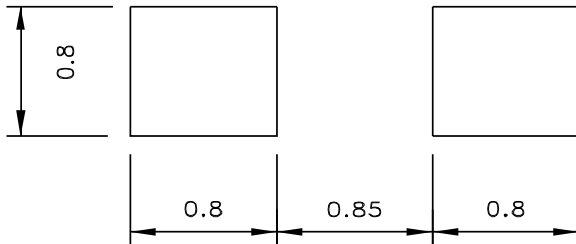
**Features:**

- \* Light Source: AlGaInP
- \* Light Color: Ultra Red
- \* Lens Color: Water Clear
- \* Lens Diffusion: Non-Diffused
- \* Package: 2000pcs / reel
- \* Moisture sensitivity level : 3
- \* This product is RoHS compliant

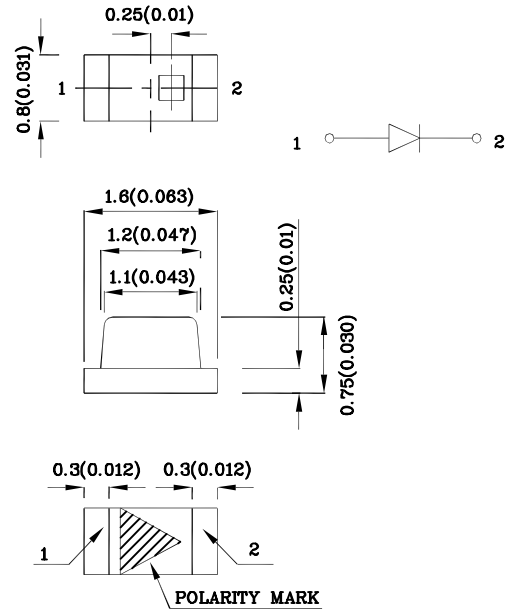
**Notes:**

1. Wavelength: +/-1nm
2. Luminous intensity / luminous flux: +/-15%
3. Forward Voltage: +/-0.1V

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

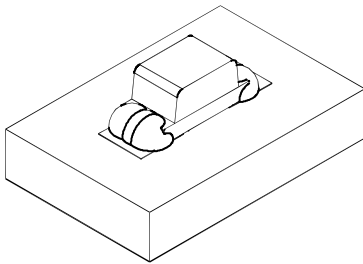


**Package Schematics**



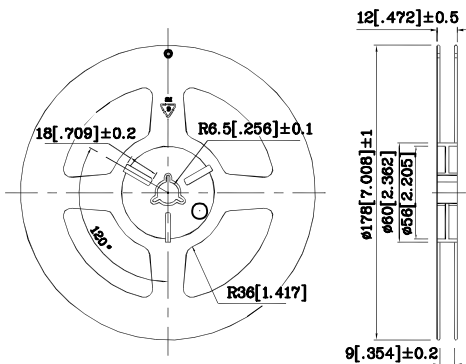
- Notes:
1. All dimensions are in millimeters (inches).
  2. Tolerance is ±0.1(0.004") unless otherwise noted.
  3. Specifications are subject to change without notice.

❖ **The device has a single mounting surface.**  
**The device must be mounted according to the specifications.**

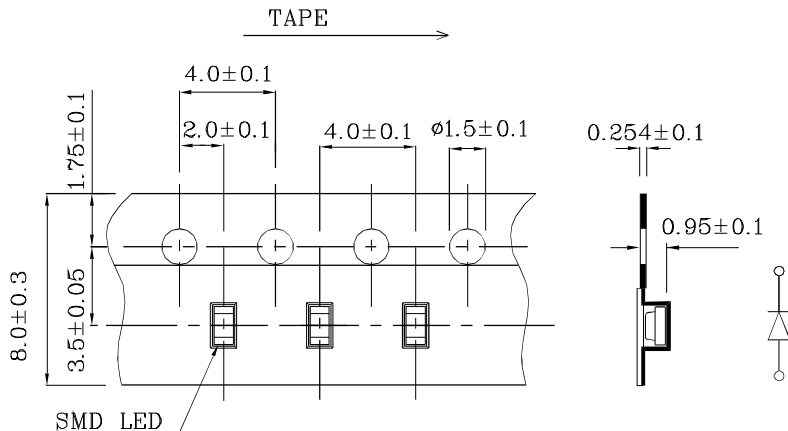


Absolute Maximum Ratings (T <sub>A</sub> =25°C)		(AlGaInP)	Unit
Reverse Voltage	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	i <sub>FS</sub>	185	mA
Power Dissipation	P <sub>D</sub>	75	mW
Operating Temperature	T <sub>A</sub>	-40°C ~ +85°C	°C
Storage Temperature	T <sub>stg</sub>	-40°C ~ +85°C	

❖ **Reel Dimension**



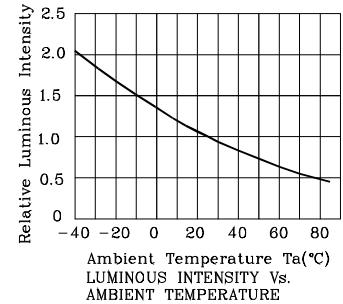
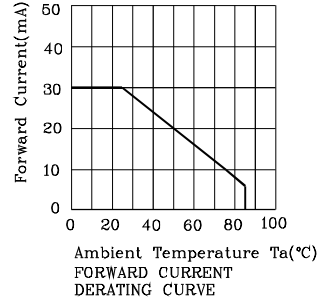
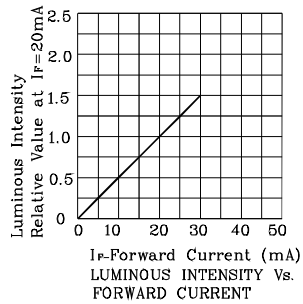
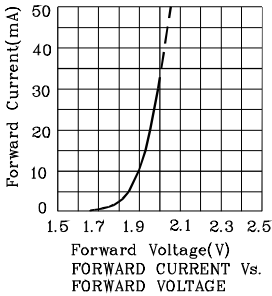
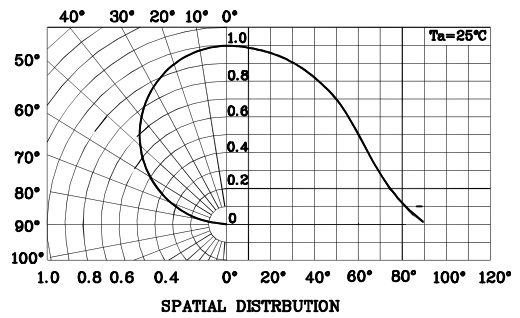
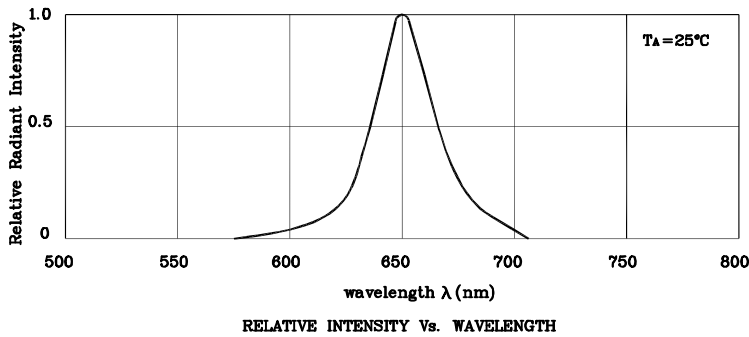
❖ **Tape Specification (Units : mm)**



● **Electrical and optical characteristics(Ta=25°C)**

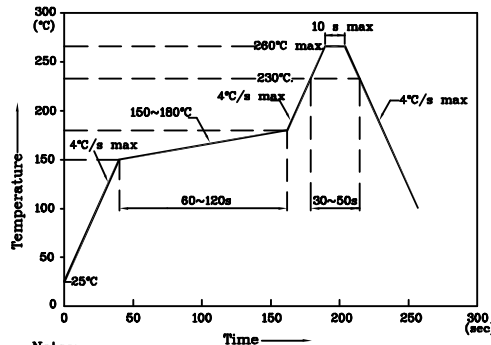
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F=20mA$	-	2.0	2.5	V
Luminous Intensity	$I_v$	$I_F=20mA$	-	100	-	mcd
Reverse Current	$I_R$	$V_R=5V$	-	-	10	$\mu A$
Peak Wave Length	$\lambda_p$	$I_F=20mA$	-	650	-	nm
Dominant Wave Length	$\lambda_d$	$I_F=20mA$	-	630	-	nm
Spectral Line Half-width	$\Delta \lambda$	$I_F=20mA$	-	23	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20mA$	-	120	-	deg

● **Typical electro-optical characteristics curves**



**LED is recommended for reflow soldering and soldering profile is shown below.**

Reflow Soldering Profile for SMD Products (Pb-Free Components)



- Notes:
1. Maximum soldering temperature should not exceed 260°C
  2. Recommended reflow temperature: 145°C-260°C
  3. Do not put stress to the epoxy resin during high temperatures conditions