

Part Number: AM23SRD-F Super Bright Red

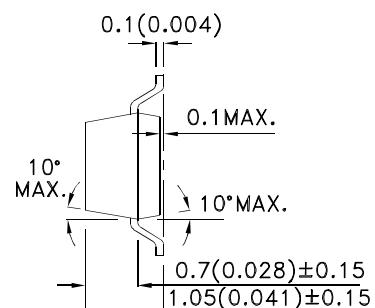
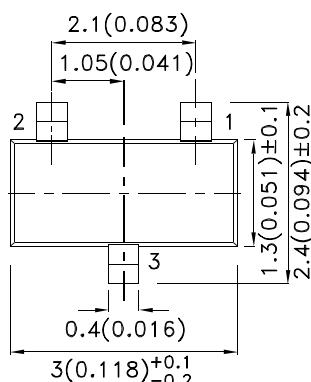
### Features

- SOT-23 package surface mount LED lamp.
- Low power consumption.
- Long life - solid state reliability.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

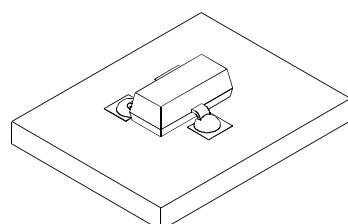
### Description

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

### Package Dimensions



1 CATHODE  
2 N.C.  
3 ANODE



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01")$  unless otherwise noted.
3. Lead spacing is measured where the lead emerge from the package.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
5. The device has a single mounting surface. The device must be mounted according to the specifications.



## Selection Guide

Part No.	Dice	Lens Type	I <sub>v</sub> (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	
AM23SRD-F	Super Bright Red (GaAlAs)	Red Diffused	55	90	140°
			*12	*30	

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%.

\* Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.		Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Red	660	*655		nm	I <sub>f</sub> =20mA
λD [1]	Dominant Wavelength	Super Bright Red	640	*640		nm	I <sub>f</sub> =20mA
Δλ1/2	Spectral Line Half-width	Super Bright Red	20			nm	I <sub>f</sub> =20mA
C	Capacitance	Super Bright Red	45			pF	V <sub>f</sub> =0V;f=1MHz
V <sub>f</sub> [2]	Forward Voltage	Super Bright Red	1.85		2.5	V	I <sub>f</sub> =20mA
I <sub>R</sub>	Reverse Current	Super Bright Red			10	uA	V <sub>R</sub> = 5V

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

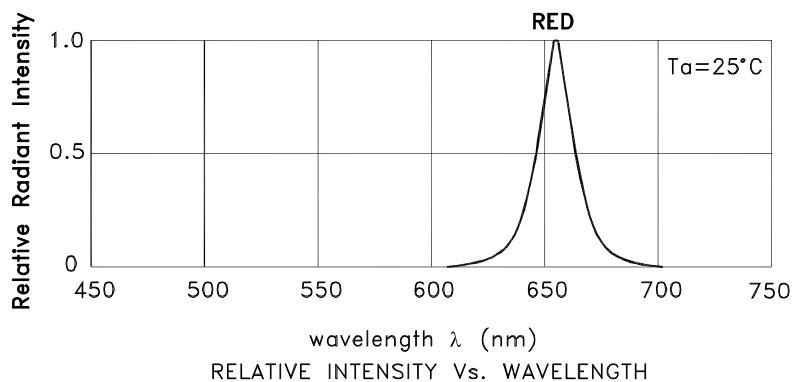
\* Wavelength value is traceable to the CIE127-2007 compliant national standards.

## Absolute Maximum Ratings at TA=25°C

Parameter	Super Bright Red	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	

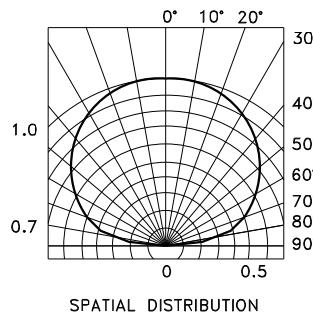
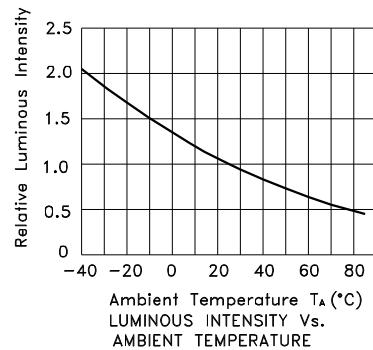
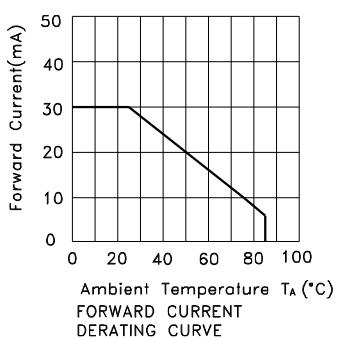
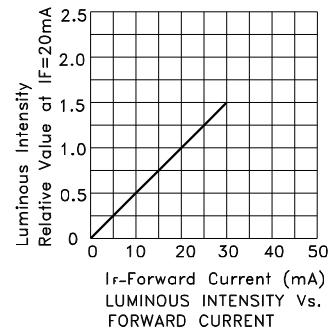
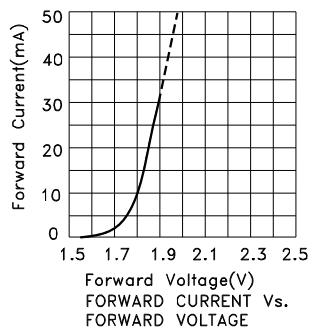
Note:

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



Super Bright Red

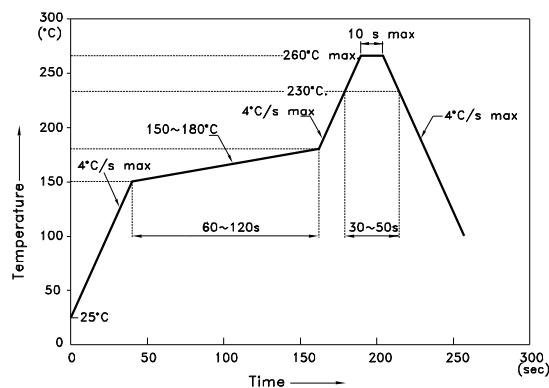
AM23SRD-F



## AM23SRD-F

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.

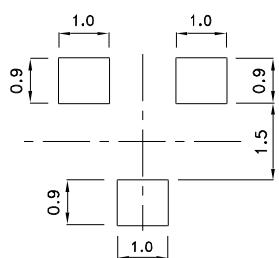
Reflow Soldering Profile For Lead-free SMT Process.



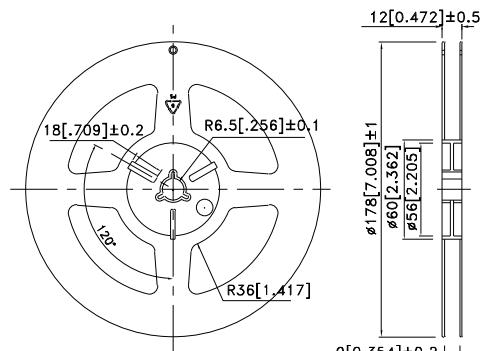
NOTES:

1. We recommend the reflow temperature  $245^{\circ}\text{C} (+/- 5^{\circ}\text{C})$ . The maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .
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.

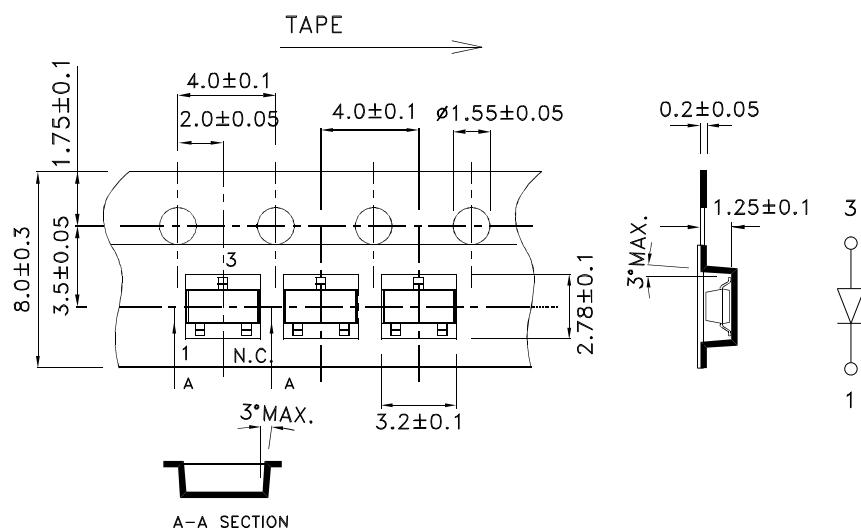
### Recommended Soldering Pattern (Units : mm; Tolerance: $\pm 0.1$ )



### Reel Dimension



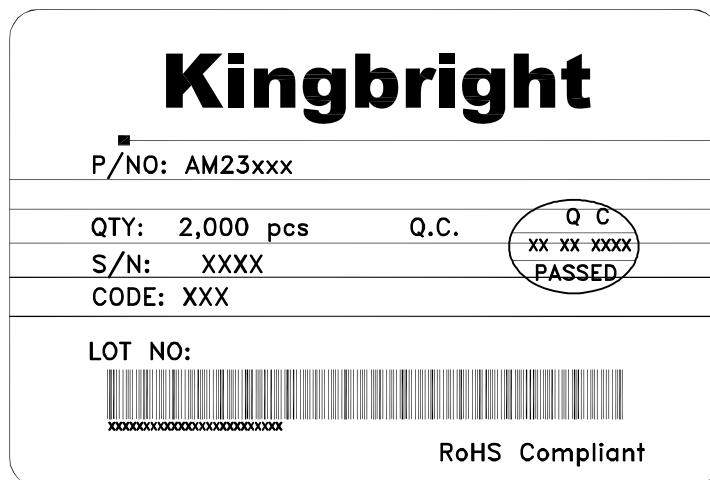
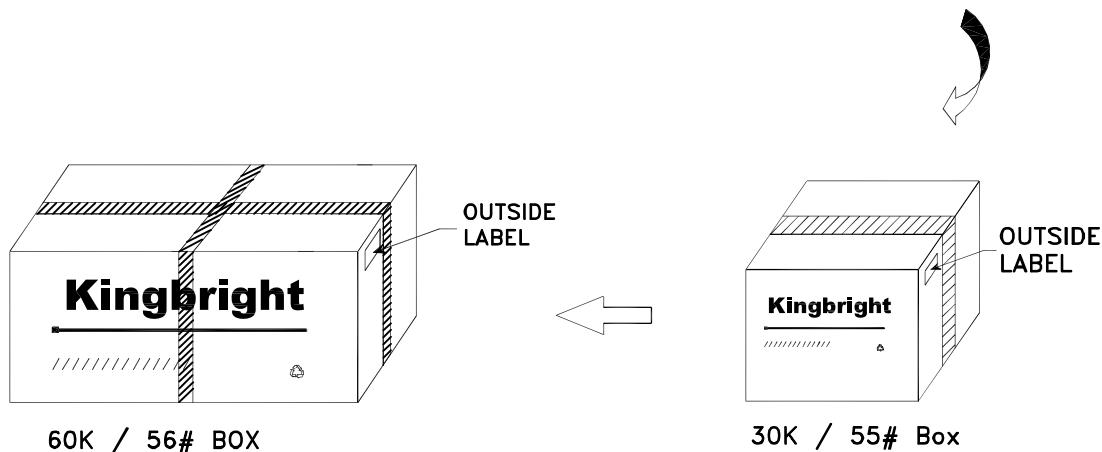
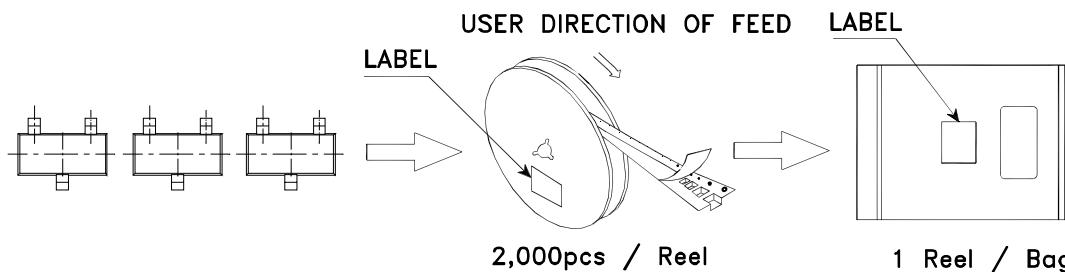
### Tape Dimensions (Units : mm)



# Kingbright

## PACKING & LABEL SPECIFICATIONS

AM23SRD-F



All design applications should refer to Kingbright application notes available at  
<http://www.KingbrightUSA.com/ApplicationNotes>

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