

Kingbright

SOT-23 SURFACE MOUNT LED LAMP

Part Number: AM23EC-F

High Efficiency Red

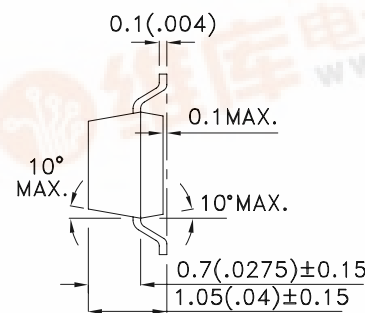
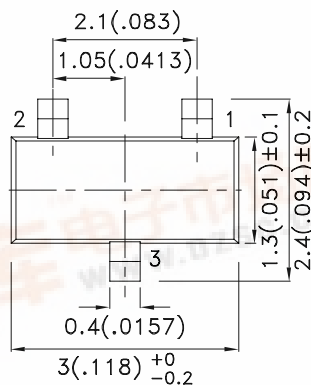
Features

- 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.

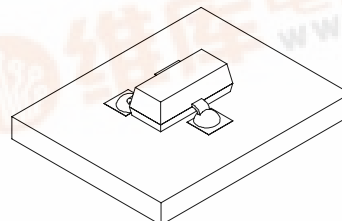
Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

Package Dimensions



- 1 ANODE
- 2 N.C.
- 3 CATHODE



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 (0.01") unless otherwise noted.
3. Lead spacing is measured where the lead emerge from the package.
4. Specifications are subject to change without 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	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
AM23EC-F	High Efficiency Red (GaAsP/GaP)	WATER CLEAR	4	15	140°

Notes:

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

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red	627		nm	IF=20mA
λD [1]	Dominant Wavelength	High Efficiency Red	625		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red	45		nm	IF=20mA
C	Capacitance	High Efficiency Red	15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	High Efficiency Red	2	2.5	V	IF=20mA
IR	Reverse Current	High Efficiency Red		10	uA	VR=5V

Notes:

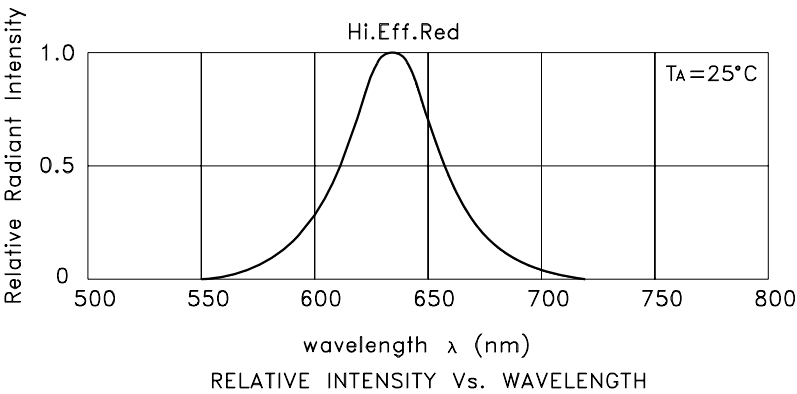
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

Parameter	High Efficiency Red	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	160	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.



High Efficiency Red AM23EC-F

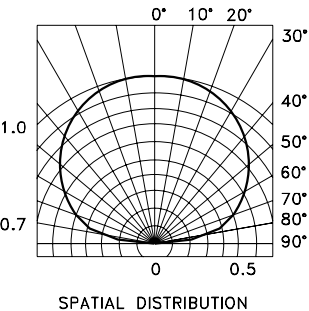
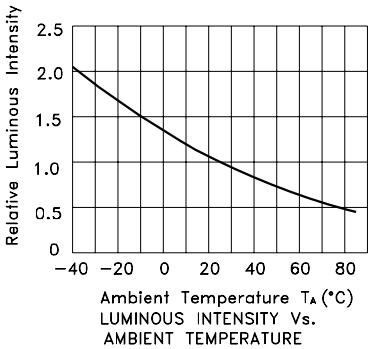
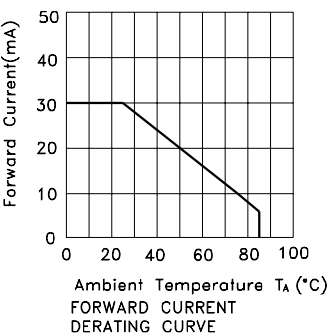
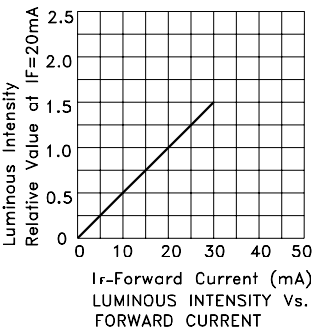
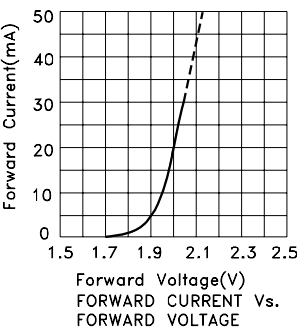


Figure 1 is a line graph showing the temperature profile of the furnace during the heat treatment of the samples. The Y-axis represents Temperature in degrees Celsius (°C), ranging from 0 to 300. The X-axis represents Time in seconds (sec), ranging from 0 to 300. The profile starts at 25°C at 0 seconds. It rises at a rate of 4°C/s to 150°C at 40 seconds. From 150°C, it rises at a rate of 1°C/s to 180°C at 120 seconds. From 180°C, it rises at a rate of 4°C/s to 260°C at 160 seconds. It then holds at 260°C for 10 seconds (up to 170 seconds). Finally, it cools at a rate of 4°C/s to 100°C at 250 seconds. Key points and rates are labeled: 25°C, 4°C/s max, 150~180°C, 1°C/s max, 260°C max, 10 s max, 4°C/s max, and 30~50s.

Technical drawing of a tape reel showing top and side views with dimensions.

Top View Dimensions:

- Overall width: 8.0 ± 0.3
- Distance from top edge to centerline: 3.5 ± 0.05
- Distance from centerline to bottom edge: 1.75 ± 0.1
- Distance between hole centers: 4.0 ± 0.1
- Distance from hole center to edge: 2.0 ± 0.05
- Distance between hole centers (center to center): 4.0 ± 0.1
- Hole diameter: $\phi 1.55 \pm 0.05$
- Distance from hole center to edge (right side): 2.78 ± 0.1
- Distance between hole centers (center to center): 3.40 ± 0.1
- Angle: 3° MAX.
- Label: N.C.
- Label: A

Side View Dimensions:

- Distance from top edge to centerline: 0.2 ± 0.05
- Distance from centerline to bottom edge: 1.25 ± 0.1
- Angle: 3° MAX.

Section A-A:

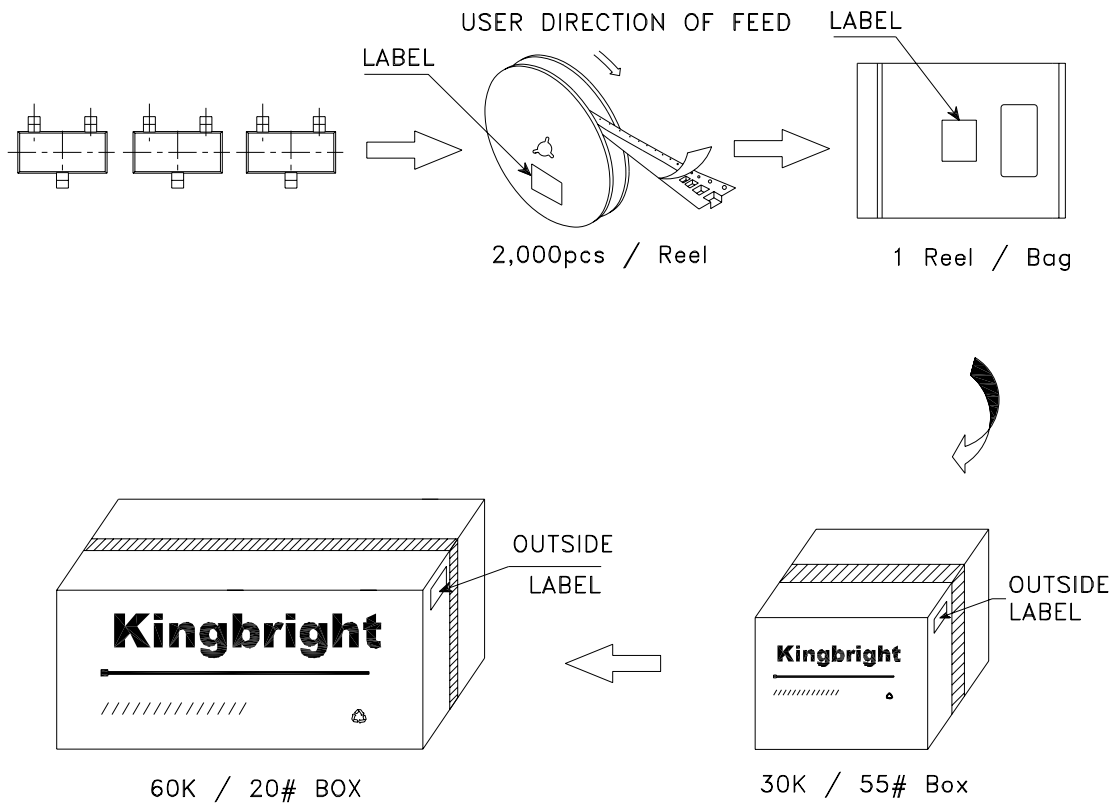
Section A-A shows the profile of the tape reel, indicating the thickness and the angle of the side walls.

TAPE:

TAPE

PACKING & LABEL SPECIFICATIONS

AM23EC-F



Kingbright	
P/NO: AM23xxx	
QTY: 2,000 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	