

Kingbright

3.2x1.6mm SMD CHIP LED LAMP

PRELIMINARY SPEC

Part Number: APTL3216EC

High Efficiency Red

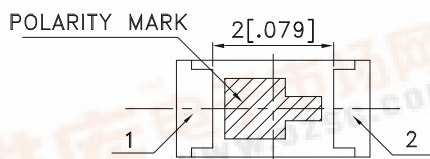
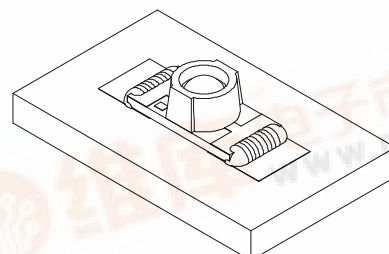
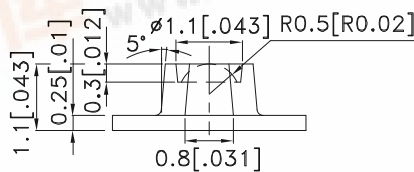
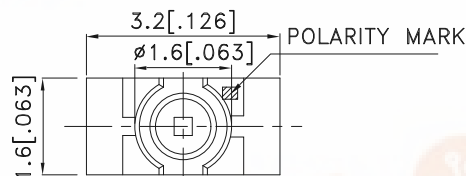
Features

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

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ unless otherwise noted.
3. Specifications are subject to change without notice.
4. 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
APTL3216EC	High Efficiency Red (GaAsP/GaP)	WATER CLEAR	10	25	70°

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:

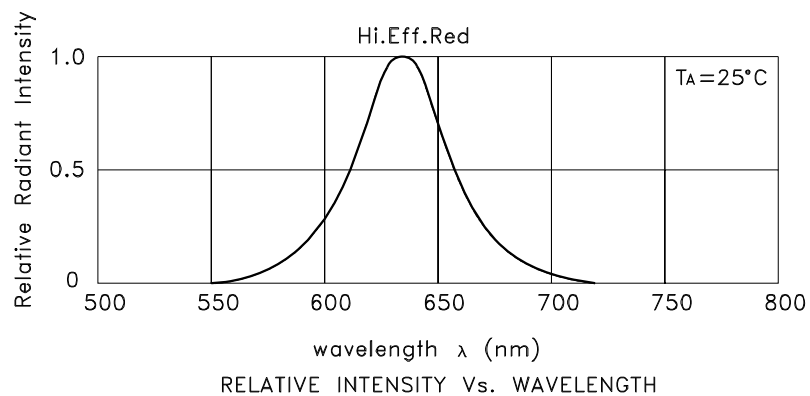
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

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

APTL3216EC

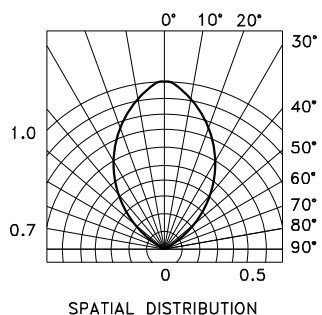
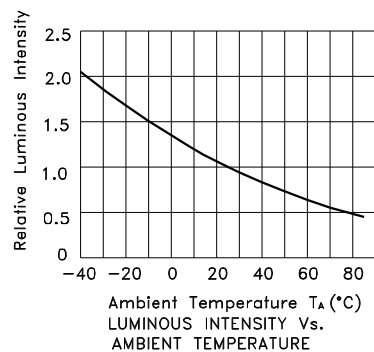
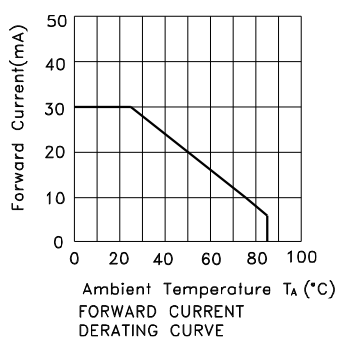
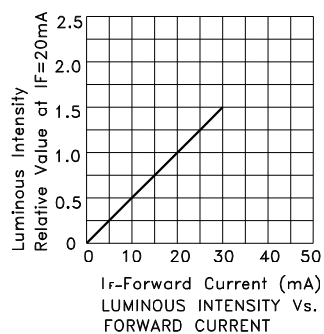
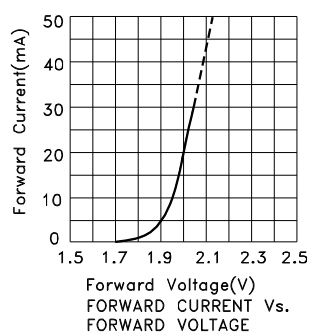
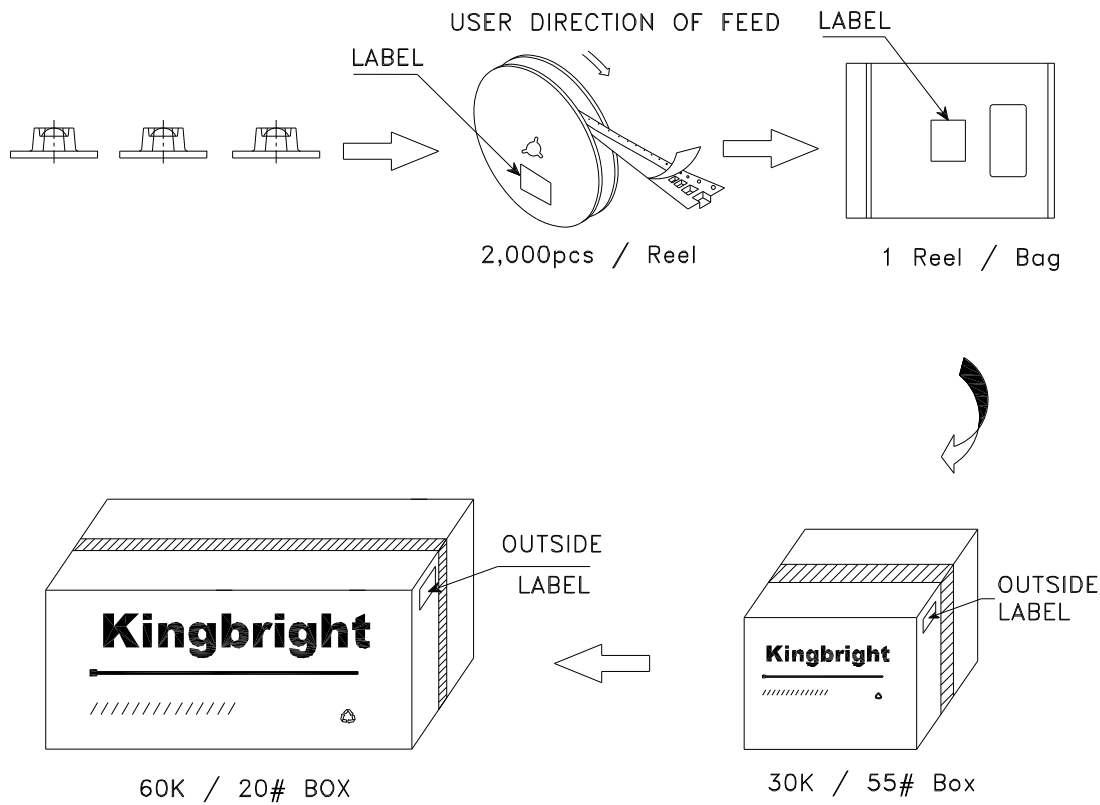


Figure 1 is a line graph showing the temperature profile of the sample during the experiment. The Y-axis represents Temperature in degrees Celsius (°C), ranging from 0 to 300. The X-axis represents Time in seconds (sec), ranging from 0 to 300. The profile starts at 25°C at 0 seconds. It rises at a rate of 4°C/s to 150°C at 40 seconds. Then, it rises at a rate of 1°C/s to 180°C at 120 seconds. After this, 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 time intervals are marked: 60~120s for the 1°C/s ramp and 30~50s for the 4°C/s ramp.

Technical drawing of a tape reel. The main view shows a reel with four reels of tape. Dimensions include: overall width 8.0 ± 0.2 , overall height 1.75 ± 0.1 , distance between reel centers 4.0 ± 0.1 , distance from center to reel 2.0 ± 0.05 , distance from center to reel 4.0 ± 0.1 , reel diameter $\phi 1.5^{+0.1}_{-0}$, distance from center to reel 1.85 ± 0.1 , and distance from center to reel 3.56 ± 0.1 . A cross-section A-A is shown below the main view, indicating a 5°MAX. angle. A side view shows the reel profile with dimensions: overall width 0.22 ± 0.05 , distance from center to reel 1.04 ± 0.1 , and a 5°MAX. angle. A top view shows the reel profile with a 5°MAX. angle.

PACKING & LABEL SPECIFICATIONS

APTL3216EC



Kingbright	
P/NO: APTL3216xxx	
QTY: 2,000 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	