Kingbright

Part Number: APTD3216PBC/A   Blue

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- 3.2mmX1.6mm SMT LED, 1.8mm thickness.
- Low power consumption.
- Ideal for backlight and indicator.
- Various colors and lens types available.
- Package: 2000pcs / reel .
- Moisture sensitivity level : level 3.
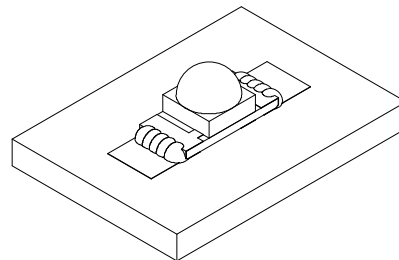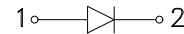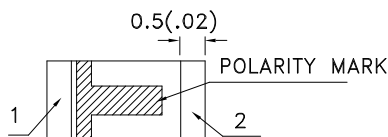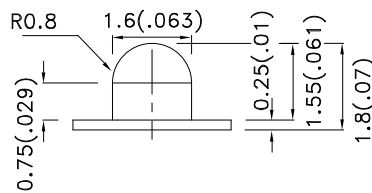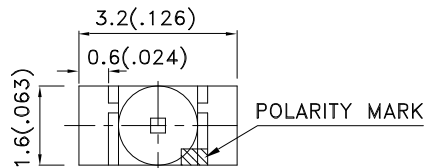- RoHS compliant.

Description

The Blue source color devices are made with InGaN on SiC Light Emitting Diode.

Static electricity and surge damage the LEDS.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.2(0.008") 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.

SPEC NO: DSAE9926	REV NO: V.7	DATE: MAR/25/2009	PAGE: 1 OF 5
APPROVED: WYNEC	CHECKED: Allen Liu	DRAWN: X.J.Guo	ERP: 1203004171

Kingbright

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APTD3216PBC/A	Blue (InGaN)	WATER CLEAR	110	400	50°

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

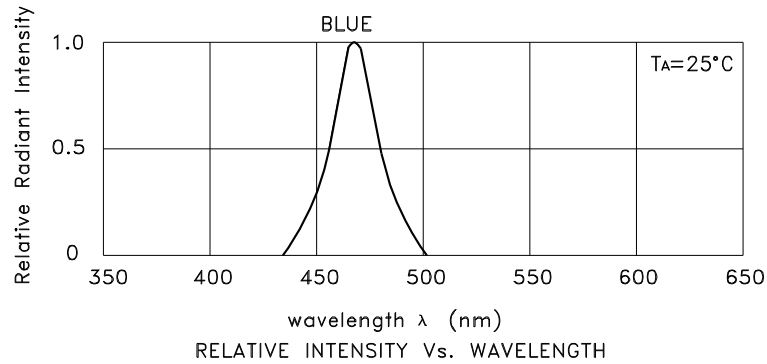| Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue	468		nm	I_F=20mA
λD [1]	Dominant Wavelength	Blue	470		nm	I_F=20mA
$\Delta\lambda$1/2	Spectral Line Half-width	Blue	21		nm	I_F=20mA
C	Capacitance	Blue	100		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Blue	3.2	4	V	I_F=20mA
I_R	Reverse Current	Blue		10	uA	V_R=5V

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

Absolute Maximum Ratings at TA=25°C

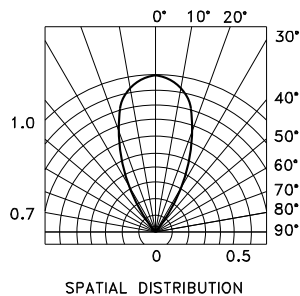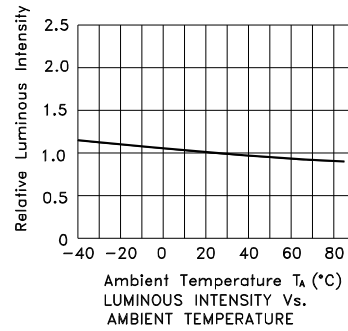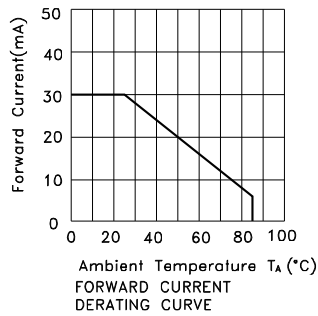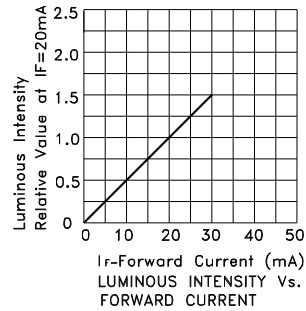| Parameter	Blue	Units
Power dissipation	120	mW
DC Forward Current	30	mA
Peak Forward Current [1]	100	mA
Reverse Voltage	5	V
Operating Temperature	-40°C To +85°C	
Storage Temperature	-40°C To +85°C	

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

Kingbright

BLUE

$T_A=25°C$

Relative Radiant Intensity vs wavelength λ (nm)

RELATIVE INTENSITY Vs. WAVELENGTH

Blue   **APTD3216PBC/A**

Forward Current(mA) vs Forward Voltage(V)

FORWARD CURRENT Vs. FORWARD VOLTAGE

Luminous Intensity Relative Value at IF=20mA vs Ir-Forward Current (mA)

LUMINOUS INTENSITY Vs. FORWARD CURRENT

Forward Current(mA) vs Ambient Temperature T_A (°C)

FORWARD CURRENT DERATING CURVE

Relative Luminous Intensity vs Ambient Temperature T_A (°C)

LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION

Kingbright

APTD3216PBC/A

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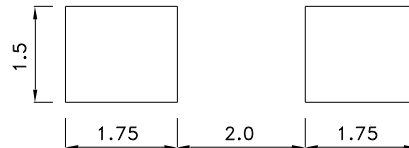Other soldering methods are not recommended as they might cause damage to the product.

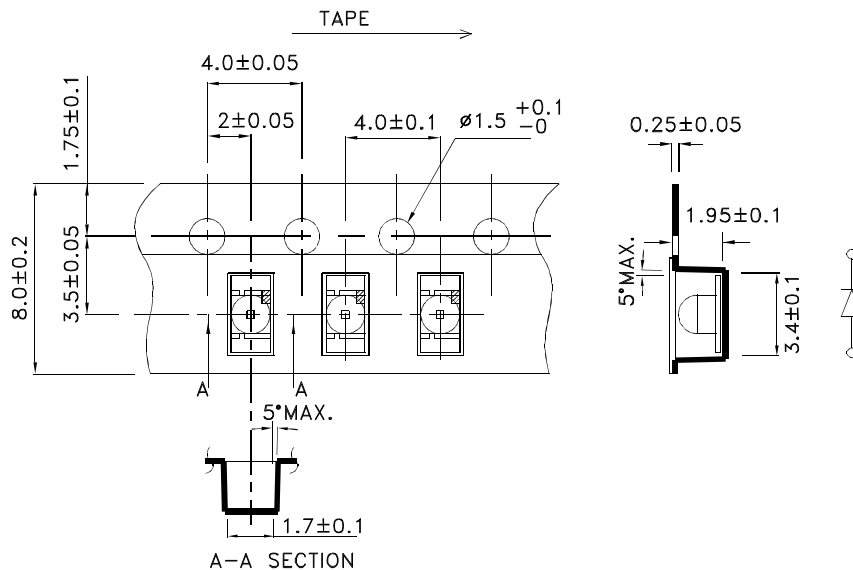Reflow Soldering Profile For Lead-free SMT Process.

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
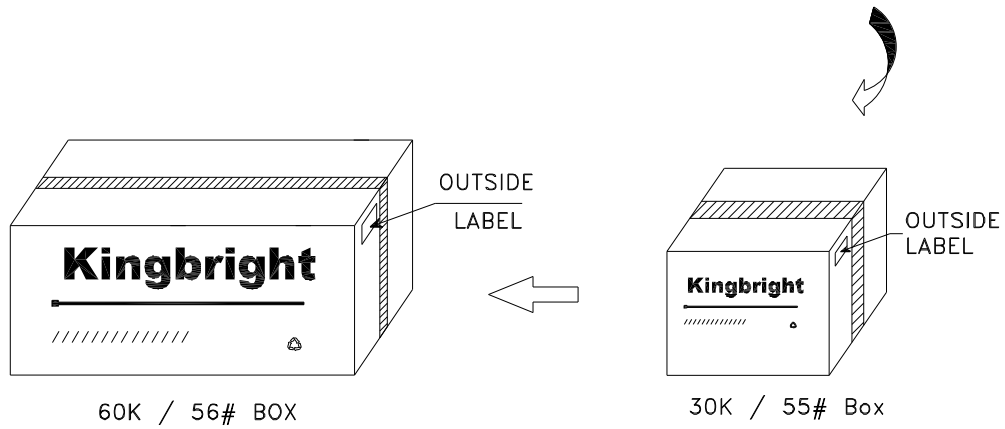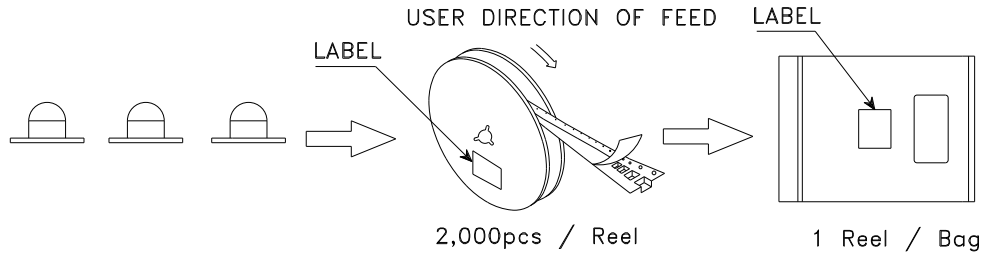**(Units : mm; Tolerance: ± 0.1)**

Tape Dimensions
(Units : mm)

SPEC NO: DSAE9926   REV NO: V.7   DATE: MAR/25/2009   PAGE: 4 OF 5

APPROVED: WYNEC   CHECKED: Allen Liu   DRAWN: X.J.Guo   ERP: 1203004171

Kingbright

PACKING & LABEL SPECIFICATIONS   **APTD3216PBC/A**

USER DIRECTION OF FEED   LABEL

LABEL

2,000pcs / Reel   1 Reel / Bag

OUTSIDE LABEL

Kingbright

//////////////

60K / 56# BOX

OUTSIDE LABEL

Kingbright

30K / 55# Box

Kingbright

P/NO: APTD3216xxx

QTY: 2,000 pcs   Q.C.

Q C
XX XX XXXX
PASSED

S/N: XXXX

CODE: XXX

LOT NO:

xxxxxxxxxxxxxxxxxxxxxx

RoHS Compliant

SPEC NO: DSAE9926	REV NO: V.7	DATE: MAR/25/2009	PAGE: 5 OF 5
APPROVED: WYNEC	CHECKED: Allen Liu	DRAWN: X.J.Guo	ERP: 1203004171