

Technical Data Sheet – Preliminary**Top View LEDs with Lens****67-23B/T2C-PX2Y2/BT****Features**

- Fluorescence type
- High luminous intensity
- High efficiency
- Pb-free
- The product itself will remain within RoHS compliant version.

Descriptions

The white LED which was fabricated using a blue LED and a phosphor, and the phosphor is excited by blue light and emits yellow fluorescence. The mixture of blue light and yellow light results in a white emission.

**Applications**

- OA equipment
- Backlighting of full color LCD
- Automotive equipment
- Replacement of conventional light bulbs and fluorescent lamps

Device Selection Guide

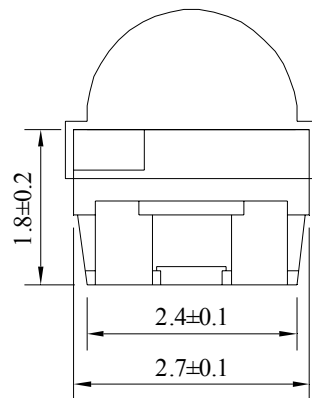
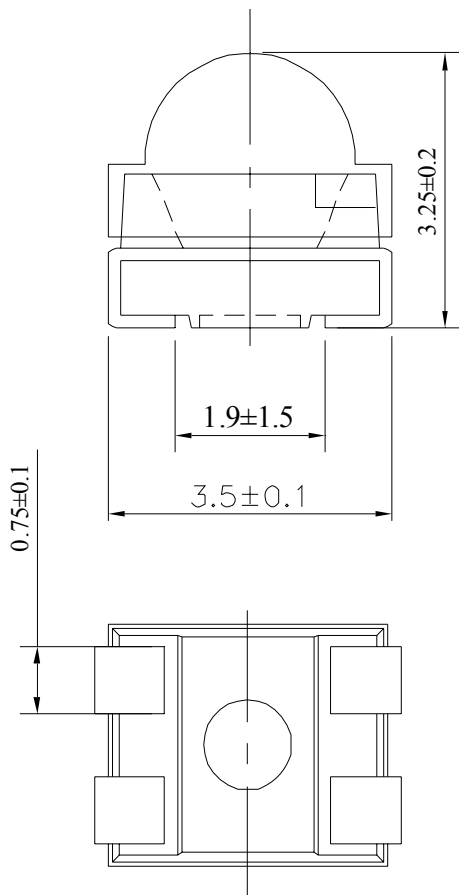
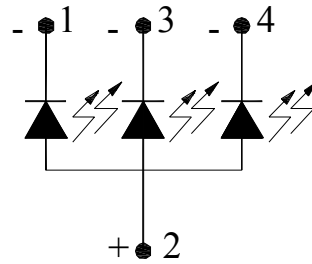
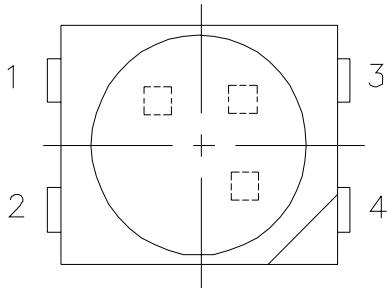
Chip	Emitted Color	Resin Color
Material		
InGaN	White	Water Clear

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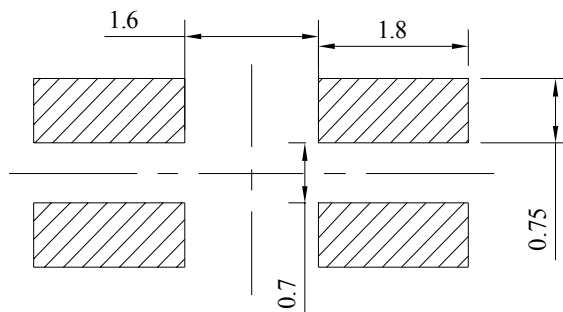
Top View LEDs with Lens

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Package Outline Dimensions



For reflow soldering(propose)



Note: Tolerance of Dimension : ± 0.1 mm. Unit = mm

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67-23B/T2C-PX2Y2/BT**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	30	mA
Peak Forward Current(Duty 1/10 @ 1KHz)	I _{FP}	100	mA
Power Dissipation	P _d	110	mW
Electrostatic Discharge(HBM)	ESD	1000	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40~ +90	°C
Soldering Temperature	Tsol	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Units	Condition
Luminous Intensity ^{*1}	I _V	2250	-----	4500	mcd	I _F =20mA ^{*2}
Viewing Angle	2θ1/2	-----	60	-----	deg	I _F =20mA
Forward Voltage	V _F	-----	3.5	4.0	V	I _F =20mA ^{*2}
Reverse Current	I _R	-----	-----	50	μA	V _R =5V ^{*2}

^{*1} When three LED die are operated simultaneously.

^{*2} For each die.

Notes:

- 1.Tolerance of Luminous Intensity : ±11%
- 2.Tolerance of Forward Voltage : ±0.1V



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Bin Range of Luminous Intensity

Bin Code	Min.	Max.	Unit	Condition
X2	2250	2850	mcd	I _F =20mA
Y1	2850	3600		
Y2	3600	4500		

Note: Tolerance of Luminous Intensity : $\pm 11\%$



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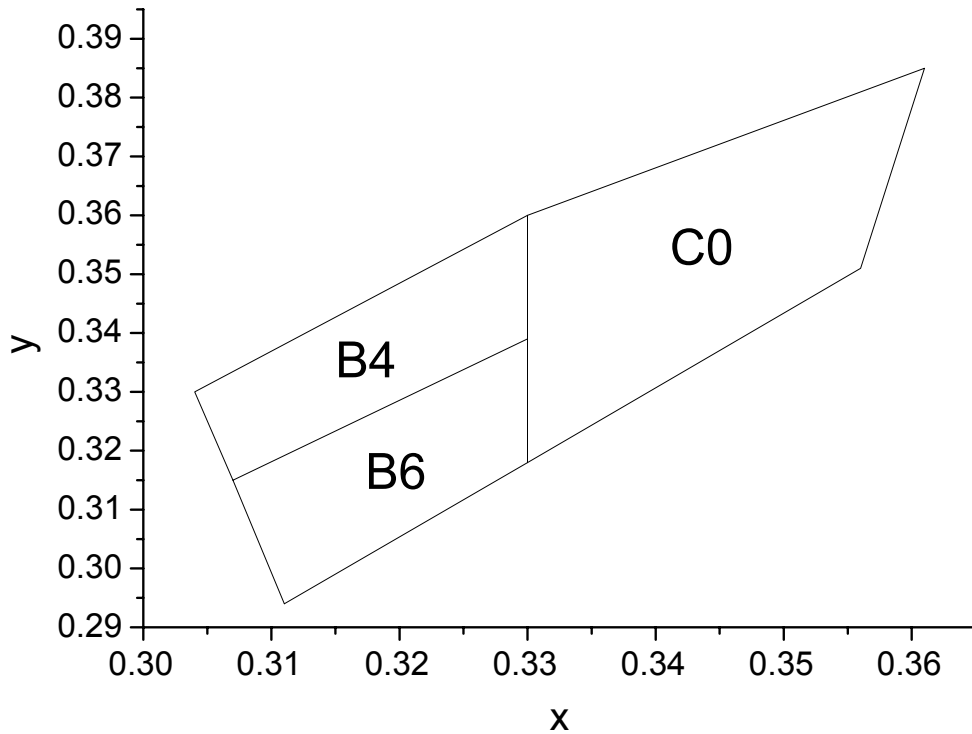
Bin Range of Chromaticity Coordinates

Group	Bin Code	CIE_x	CIE_y	Bin Code	CIE_x	CIE_y	Condition
E	B4	0.307	0.315	B6	0.311	0.294	I _F =20mA
		0.304	0.33		0.307	0.315	
		0.33	0.36		0.330	0.339	
		0.33	0.339		0.330	0.318	
	C0	0.330	0.318	/			
		0.330	0.360				
		0.361	0.385				
		0.356	0.351				

Note:

Tolerance of Chromaticity Coordinates: ±0.01

The C.I.E. 1931 Chromaticity Diagram

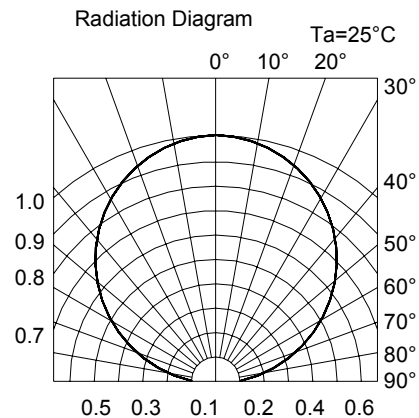
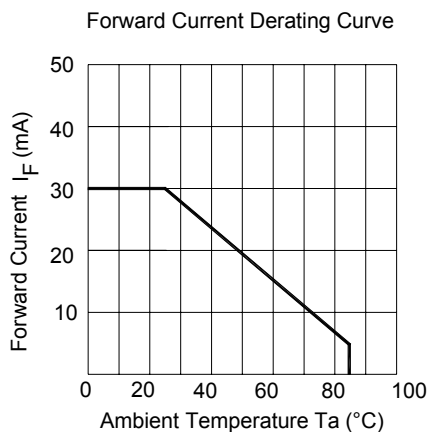
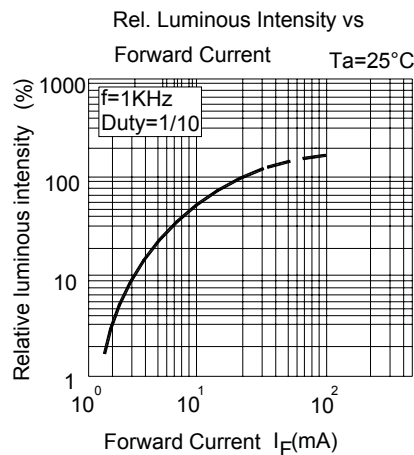
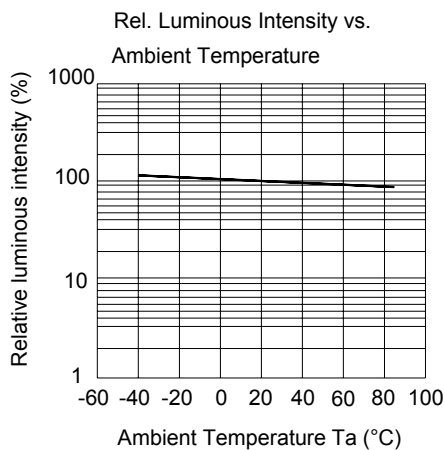
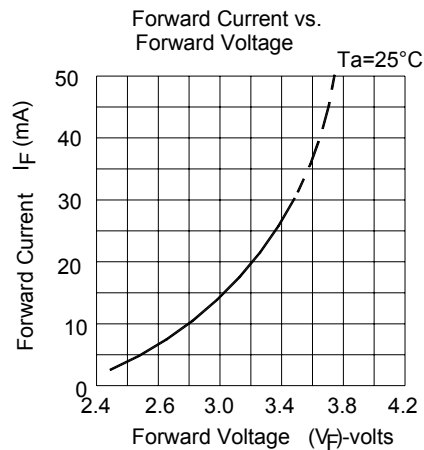
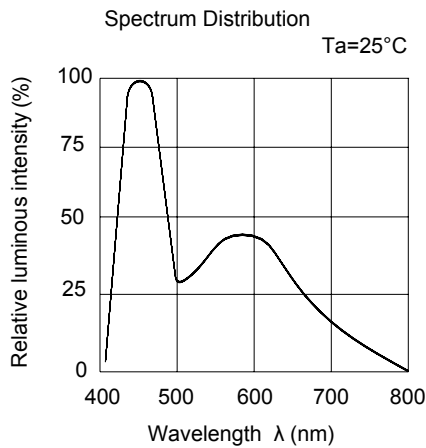


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Typical Electro-Optical Characteristics Curves





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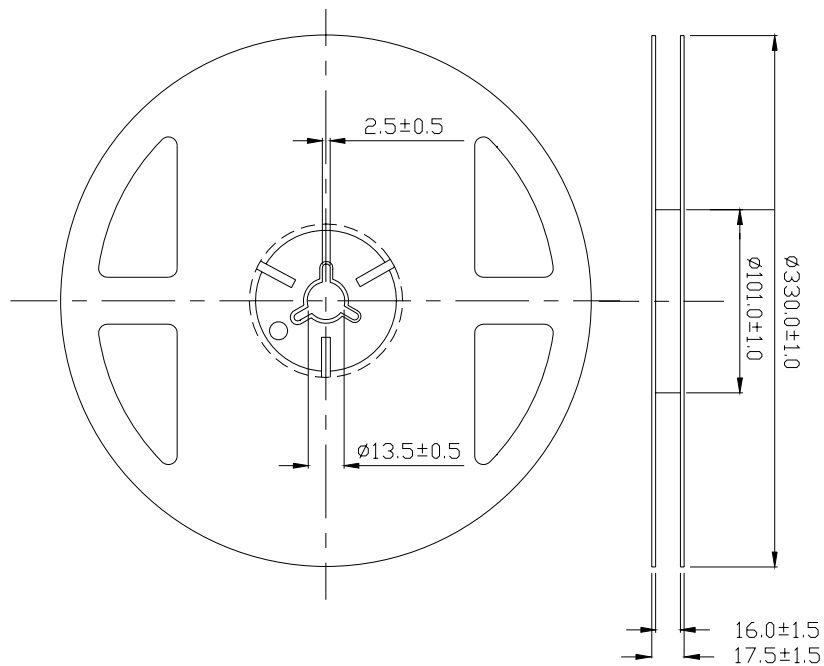
67-23B/T2C-PX2Y2/BT

Label Explanation

- CAT: Luminous Intensity Rank
- HUE: Chromaticity Coordinates Rank
- REF: Forward Voltage Rank

EVERLIGHT	
CPN: XXXXXX	
P/N: XXXXXX	
	RoHS
XXXXXXXXXXXXXXXXXXXX	
QTY: XXXX	
	CAT:
LOT NO: XXXXXXXXXXXX	HUE:
	REF:
MADE IN TAIWAN	

Reel Dimensions



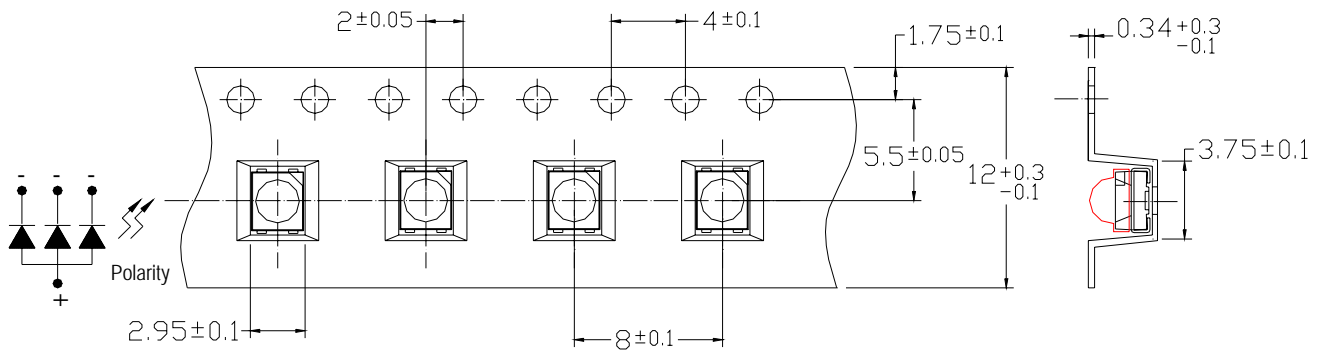
Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$,Unit = mm

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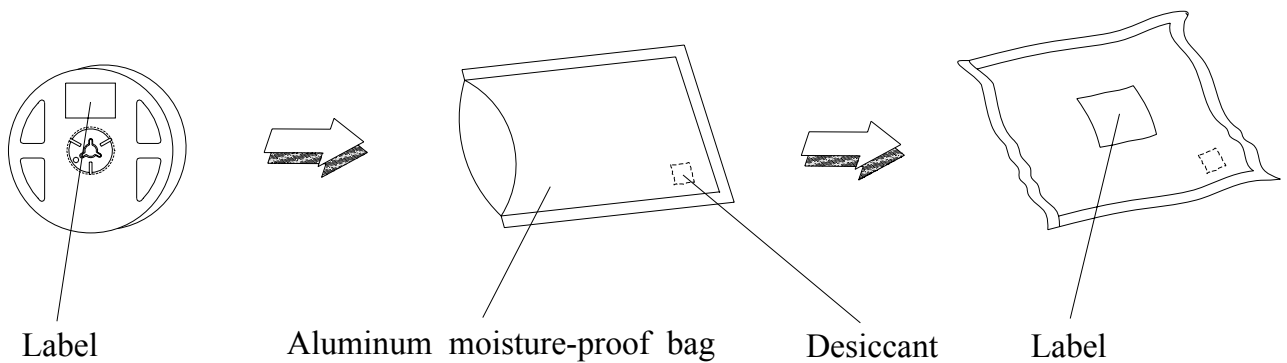
67-23B/T2C-PX2Y2/BT

Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel.



Note: Tolerances Unless Dimension : $\pm 0.1\text{mm}$, Unit = mm

Moisture Resistant Packaging



**Technical Data Sheet – Preliminary****Top View LEDs with Lens****67-23B/T2C-PX2Y2/BT****Reliability Test Items And Conditions**

The reliability of products shall be satisfied with items listed below.

Confidence level : 90%

LTPD : 10%

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp. : 260°C±5°C Min. 5 sec.	6 Min.	22 Pcs.	0/1
2	Temperature Cycle	H : +100°C 15min ∫ 5 min L : -40°C 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	300 Cycles	22 PCS.	0/1
4	High Temperature Storage	Temp. : 100°C	1000 Hrs.	22 PCS.	0/1
5	Low Temperature Storage	Temp. : -40°C	1000 Hrs.	22 PCS.	0/1
6	DC Operating Life	I _F = 20 mA / 25°C	1000 Hrs.	22 PCS.	0/1
7	High Temperature / High Humidity	85°C/85%RH	1000 Hrs.	22 PCS.	0/1

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1. Over-current-proof

Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.

2.3 The LEDs should be used within a year.

2.4 After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.

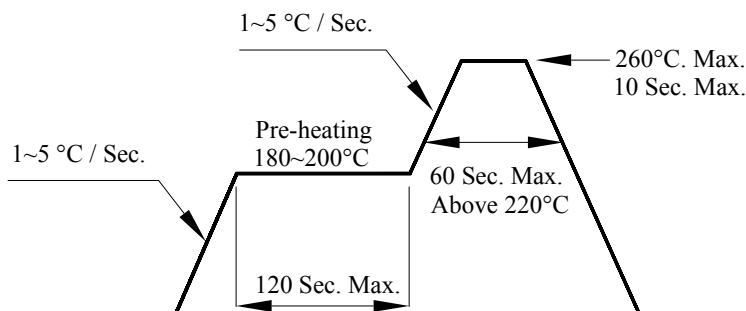
2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

2.6 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment : 60±5°C for 24 hours.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

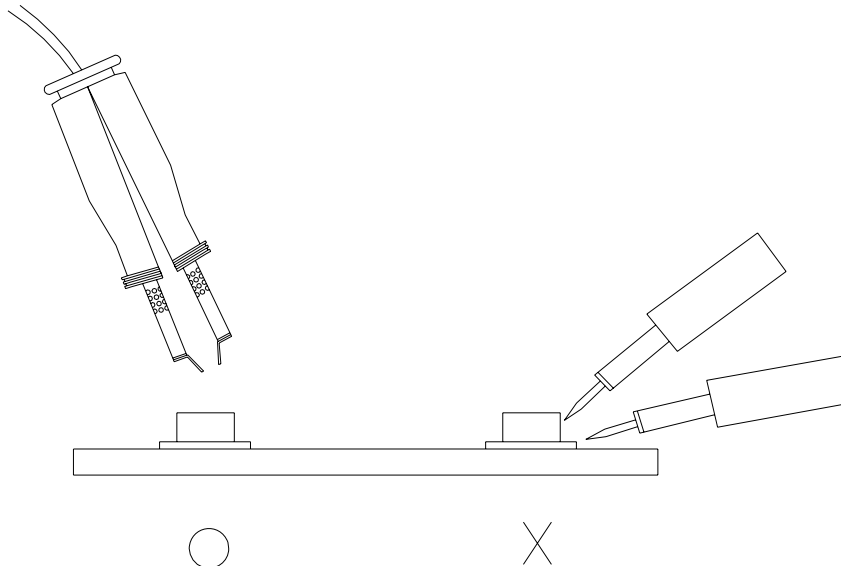
3.4 After soldering, do not warp the circuit board.

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Each terminal is to go to the tip of soldering iron temperature less than 280°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5.Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

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