

**SMD LED LAMP, BI-COLOR**
**BL-LS1311xx-3**
**■ Features:**

- 3.5mmx2.8mm SMD, 1.9mm THICKNESS PLCC4 package
- Mono-color type, Ultra brightness, with 3 chips
- Compatible with automatic placement equipment
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE: 2KPCS/REEL
- RoHs Compliance


**■ Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=20mA)**

Part Number	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd		Viewing Angle 2θ1/2 (deg)
	Emitted Color	Material	λp (nm)		Typ	Max	Min.	Typ.	
					Water Clear				
BL-LS1311UEC-3	Ultra Orange	AlGaAs	630	Water Clear	2.10	2.50	400	800	120
BL-LS1311UYO-3	Ultra Amber	AlGaInP	610		2.10	2.60	300	600	
BL-LS1311UYC-3	Ultra Yellow	AlGaInP	593		2.10	2.60	600	800	
BL-LS1311UGC-3	Ultra Green	AlGaInP	575		2.20	2.70	28	50	
BL-LS1311PGC-3	Ultra Pure Green	InGaN	525		3.50	4.20	700	1000	
BL-LS1311UBC-3	Ultra Blue	InGaN	470		3.50	4.20	400	700	
BL-LS1311UWC-3	Ultra White	InGaN	/		3.50	4.20	1000	1500	

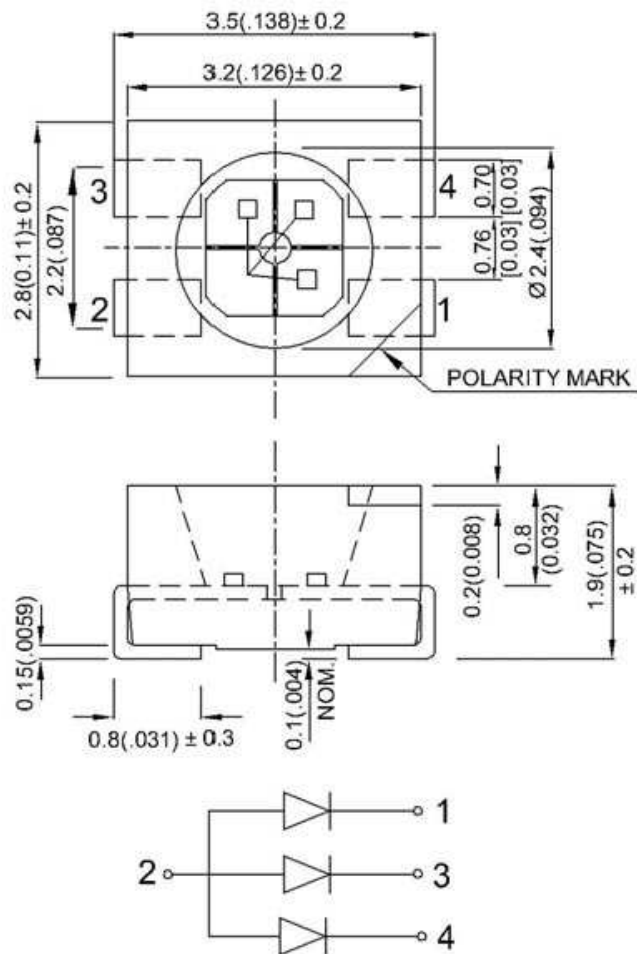
**■ Absolute maximum ratings (Ta=25°C)**

Parameter	UE	UYO	UY	UG	PG	UB	UW	Unit
Forward Current I <sub>F</sub>	30	30	30	30	30	30	30	mA
Power Dissipation P <sub>d</sub>	78	78	78	78	78	78	78	mW
Reverse Voltage V <sub>R</sub>	5	5	5	5	5	5	5	V
Peak Forward Current I <sub>PF</sub> (Duty 1/10 @1KHZ)	100	100	100	100	100	100	100	mA
Operation Temperature T <sub>OPR</sub>	-30 to +80							°C
Storage Temperature T <sub>STG</sub>	-40 to +85							°C
Lead Soldering Temperature T <sub>SOL</sub>	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)							°C

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■ **Package configuration & Internal circuit diagram**



**Notes:**

1. All dimensions are in millimeters (inches)
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Specifications are subject to change without notice.

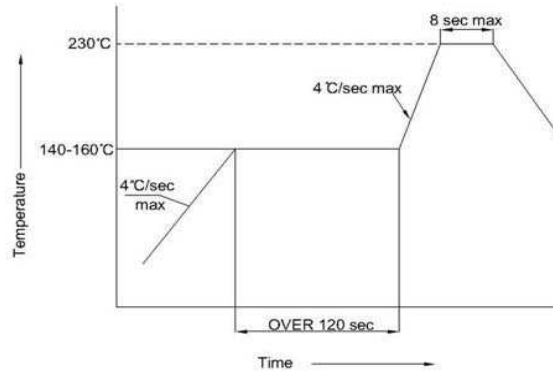
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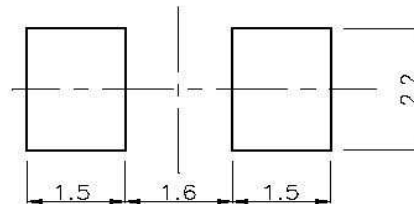
■ **Tape Specifications**

**SMT Reflow Soldering Instructions**

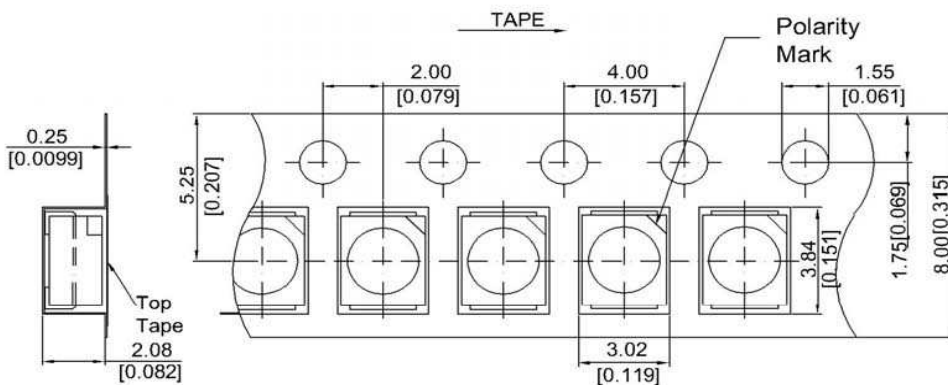
Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and second soldering process:



Recommended Soldering Pattern  
(Units : mm)



Tape Specifications  
(Units : mm)



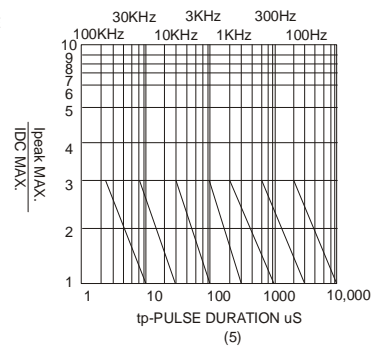
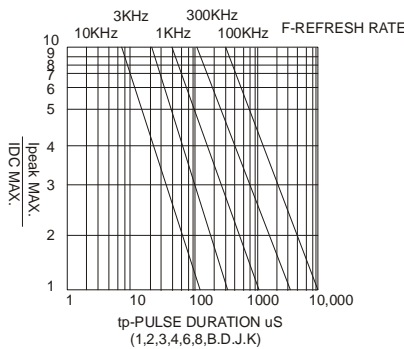
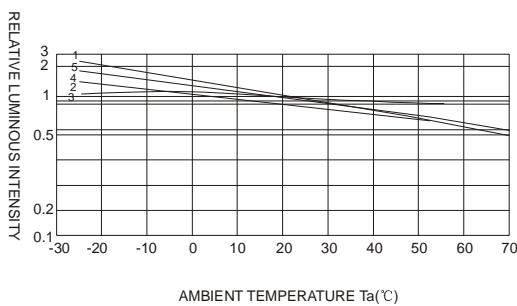
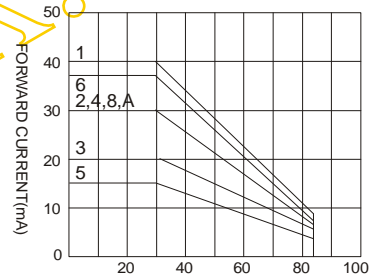
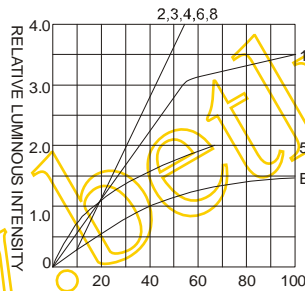
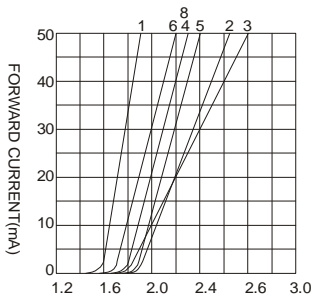
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■ **Typical electrical-optical characteristics curves:**



- |                                           |                                      |
|-------------------------------------------|--------------------------------------|
| (1) - GaAsP/GaAs 655nm/Red                | (9) - GaAlAs 880nm                   |
| (2) - GaP 570nm/Yellow Green              | (10) - GaAs/GaAs & GaAlAs/GaAs 940nm |
| (3) - GaAsP/GaP 585nm/Yellow              | (A) - GaN/SiC 430nm/Blue             |
| (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red | (B) - InGaN/SiC 470nm/Blue           |
| (5) - GaP 700nm/Bright Red                | (C) - InGaN/SiC 505nm/Ultra Green    |
| (6) - GaAlAs/GaAs 660nm/Super Red         | (D) - InGaN/SiC 525nm/Ultra Green    |
| (8) - GaAsP/GaP 610nm/Super Red           |                                      |



NOTE:25°C free air temperature unless otherwise specified