

## SMD LED LAMP

BL-LS0603XX

### Features:

- Ø 1.6mmx0.8mm SMD, 0.8mm THICKNESS
- Ø Mono-color type
- Ø Compatible with automatic placement equipment
- Ø WIDE VIEWING ANGLE.
- Ø IDEAL FOR BACKLIGHT AND INDICATOR.
- Ø PACKAGE: 4KPCS/REEL
- Ø 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 2θ/2 (deg)
	Emitted Color	Material	λp f (nm)		Typ	Max	Min.	Typ.	
					BL-LS0603HC	Red	GaP	700	
BL-LS0603SRC	Super Red	AlGaAs	660	1.85	2.30	5	13		
BL-LS0603LRC	Super Red	AlGaAs	660	1.85	2.30	10	28		
BL-LS0603URC	Ultra Red	AlGaAs	660	1.95	2.50	20	45		
BL-LS0603EC	Orange	GaAsP	640	2.10	2.70	1	6		
BL-LS0603YC	Yellow	GaAsP	583	2.15	2.70	1	6		
BL-LS0603GC	Green	GaP	568	2.30	2.70	6	15		

### Absolute maximum ratings (Ta=25°C)

Parameter	H	SR	LR	UR	E	Y	G	Unit
Forward Current I <sub>F</sub>	30	30	30	30	30	30	30	mA
Power Dissipation P <sub>d</sub>	65	78	78	78	65	65	65	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>SOI</sub>	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)							°C

**SMD LED LAMP**
**BL-LS0603XX**
**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 2θ/2 (deg)
	Emitted Color	Material	λ <sub>P</sub> (nm)		Typ	Max	Min.	Typ.	
					BL-LS0603UDR	Ultra Red	AlGaAs	655	
BL-LS0603UHR	Ultra Red	AlGaAs	645	2.10	2.60	30	80		
BL-LS0603UEC	Ultra Orange	AlGaAs	630	2.10	2.50	30	80		
BL-LS0603UHD	Ultra Orange	AlGaAs	618	2.10	2.60	50	110		
BL-LS0603UYO	Ultra Amber	AlGaInP	610	2.10	2.60	30	80		
BL-LS0603UYC	Ultra Yellow	AlGaInP	593	2.10	2.60	25	70		
BL-LS0603UGC	Ultra Green	AlGaInP	575	2.20	2.70	10	40		
BL-LS0603PGC	Ultra Pure Green	InGaN	525	3.50	4.20	50	100		
BL-LS0603BGC	Ultra Bluish Green	InGaN	505	3.50	4.20	50	110		
BL-LS0603DNB	Blue	InGaN	470	3.50	4.20	10	33		
BL-LS0603UBC	Ultra Blue	InGaN	470	3.50	4.20	10	30		
BL-LS0603UWC	Ultra White	InGaN	/	3.50	4.20	40	200		

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

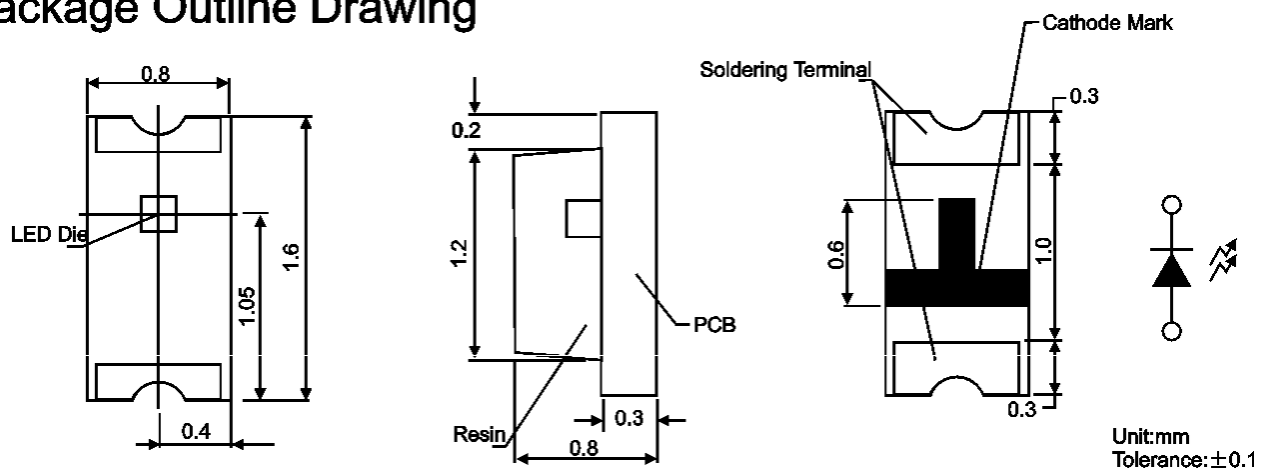
Parameter	UDR	UHR	UE	UHD	UYO	UY	UG	PG	BG	DNB	UB	UW	Unit
Forward Current I <sub>F</sub>	30	30	30	30	30	30	30	30	30	30	30	30	mA
Power Dissipation P <sub>d</sub>	78	78	78	78	78	78	78	78	78	78	78	78	mW
Reverse Voltage V <sub>R</sub>	5	5	5	5	5	5	5	5	5	5	5	5	V
Peak Forward Current I <sub>PF</sub> (Duty 1/10 @1KHZ)	100	100	100	100	100	100	100	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

**SMD LED LAMP**

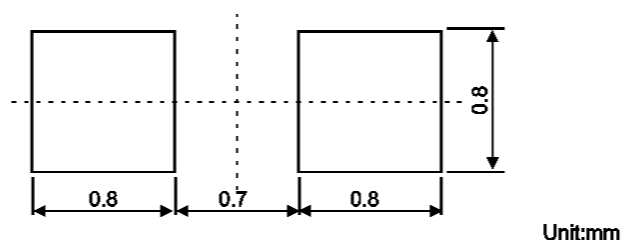
BL-LS0603XX

**Package configuration & Internal circuit diagram**

**BL-LS0603 Series  
Package Outline Drawing**



**Recommended Soldering Pad Dimensions**



**Notes:**

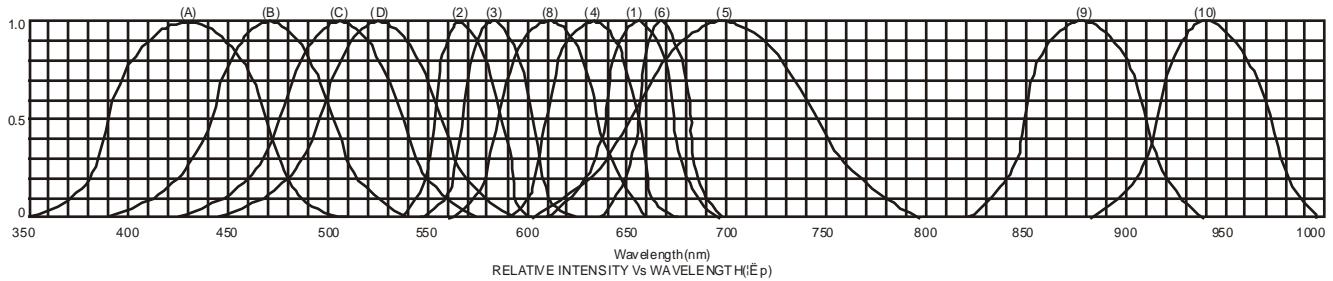
1. All dimensions are in millimeters (inches)
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Specifications are subject to change without notice.



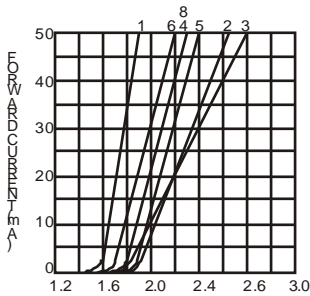
# SMD LED LAMP

**BL-LS0603XX**

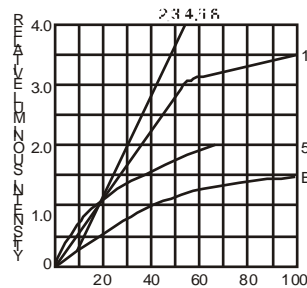
## Typical electrical-optical characteristics curves:



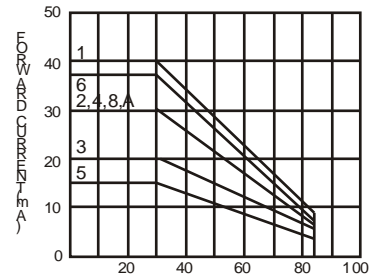
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



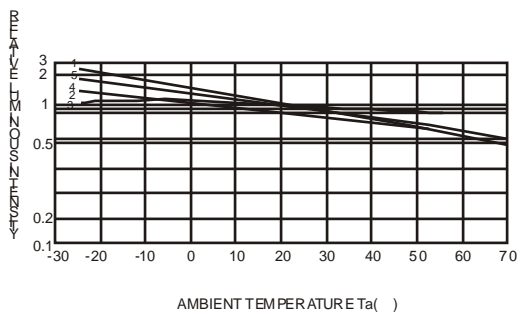
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



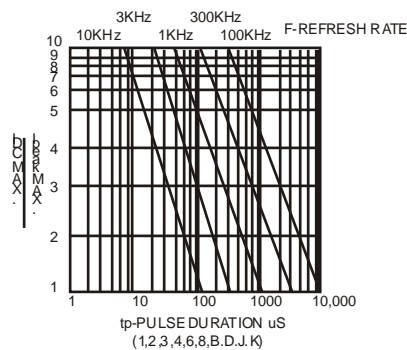
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



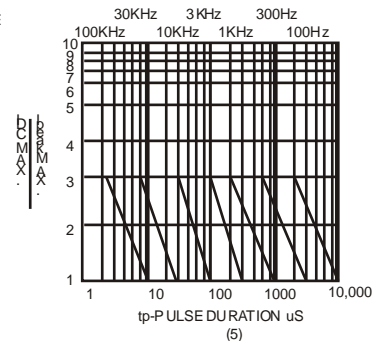
AMBIENT TEMPERATURE Ta ( °C )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta ( °C )



tp-PULSE DURATION  $\mu$ s  
(1,2,3,4,6,8,B,D,J,K)



tp-PULSE DURATION  $\mu$ s  
(5)

NOTE:25 free air temperature unless otherwise specified

**SMD LED LAMP**

**BL-LS0603XX**

**Packing and weighting**

