

## SMD LED LAMP

BL-LS0603LXX

### Features:

- Ø 1.6mmx0.8mm SMD, 0.6mm 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-LS0603LHC	Red	GaP	700	
BL-LS0603LSRC	Super Red	AlGaAs	660	1.85	2.30	2	10		
BL-LS0603LLRC	Super Red	AlGaAs	660	1.85	2.30	8	25		
BL-LS0603LURC	Ultra Red	AlGaAs	660	1.95	2.50	15	40		
BL-LS0603LEC	Orange	GaAsP	640	2.10	2.70	1	5		
BL-LS0603LYC	Yellow	GaAsP	583	2.15	2.70	1	5		
BL-LS0603LGC	Green	GaP	568	2.30	2.70	5	12		

### 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-LS0603LXX
**Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=20mA)**

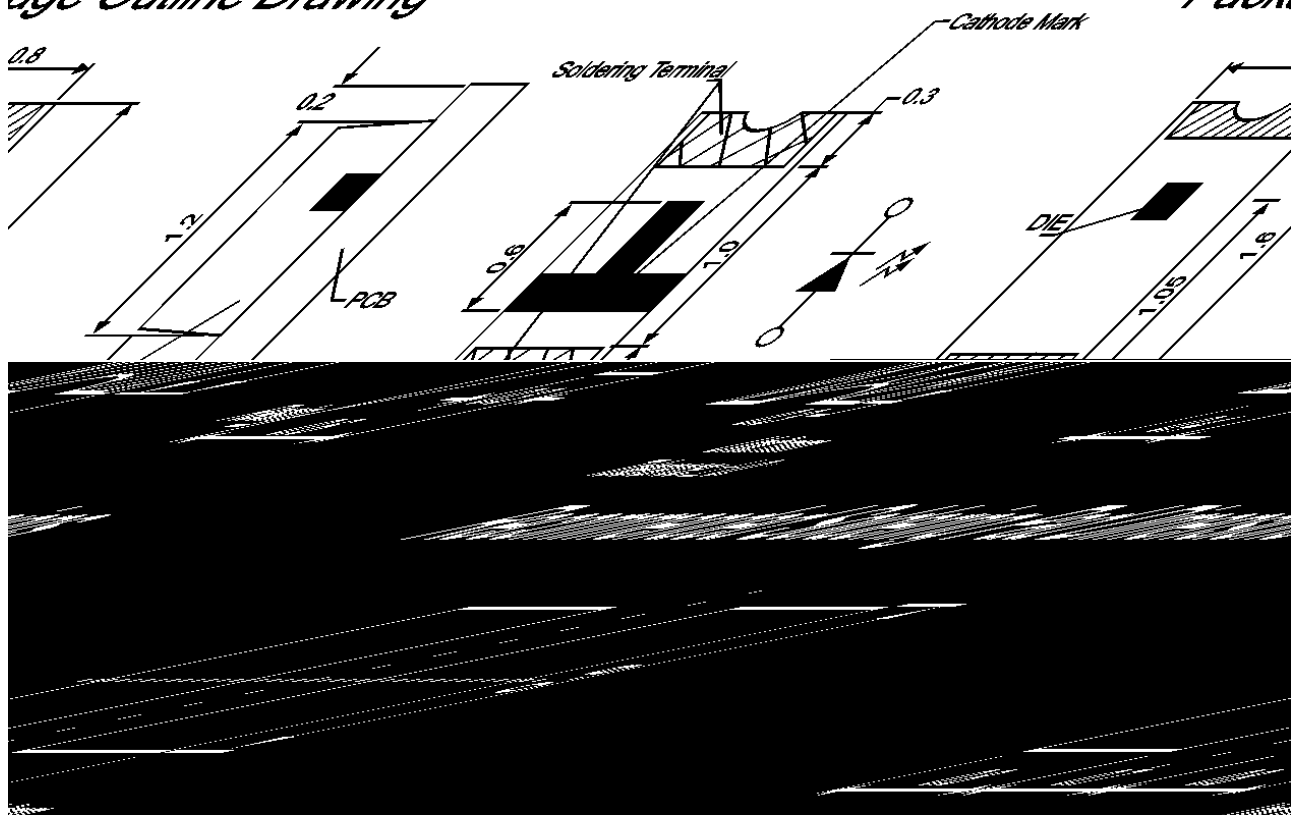
Part Number	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd		Viewing Angle 2θ/2 (deg)
	Emitted Color	Material	λ <sub>P</sub> (nm)		Typ	Max	Min.	Typ.	
					Water Clear				
BL-LS0603LU DR	Ultra Red	AlGaAs	655		2.10	2.50	17	55	130
BL-LS0603LU HR	Ultra Red	AlGaAs	645		2.10	2.60	25	75	
BL-LS0603LU EC	Ultra Orange	AlGaAs	630		2.10	2.50	20	70	
BL-LS0603LU HD	Ultra Orange	AlGaAs	618		2.10	2.60	45	105	
BL-LS0603LU YO	Ultra Amber	AlGaInP	610		2.10	2.60	25	75	
BL-LS0603LU YC	Ultra Yellow	AlGaInP	593		2.10	2.60	20	65	
BL-LS0603LU GC	Ultra Green	AlGaInP	575		2.20	2.70	10	35	
BL-LS0603LP GC	Ultra Pure Green	InGaN	525		3.50	4.20	50	100	
BL-LS0603LB GC	Ultra Bluish Green	InGaN	505		3.50	4.20	50	100	
BL-LS0603LD NB	Blue	InGaN	470		3.50	4.20	10	30	
BL-LS0603LU BC	Ultra Blue	InGaN	470		3.50	4.20	10	25	
BL-LS0603LU WC	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

Package configuration & Internal circuit diagram

*BL-LS0603L Series*  
*Package Outline Drawing*



Notes:

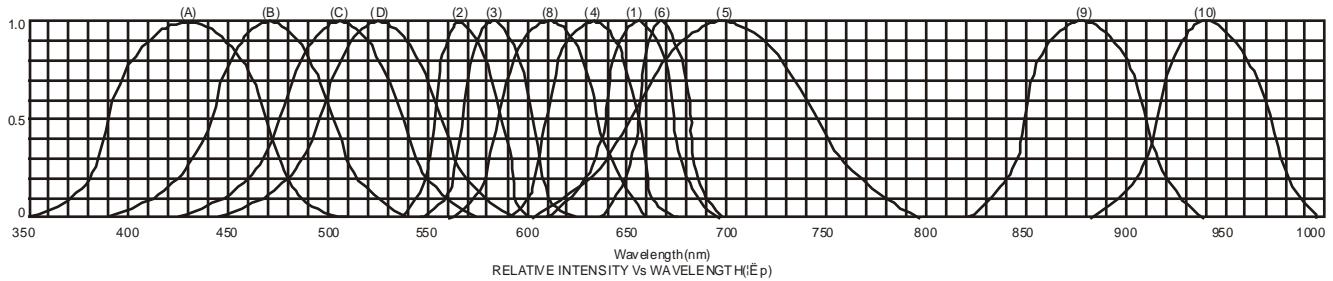
1. All dimensions are in millimeters (inches)
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Specifications are subject to change without notice.



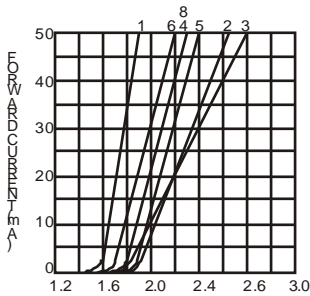
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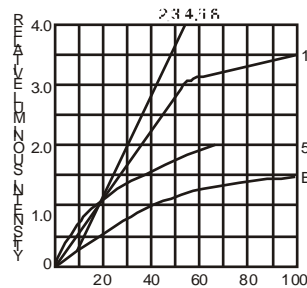
## Typical electrical-optical characteristics curves:



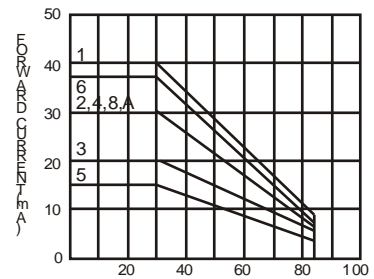
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



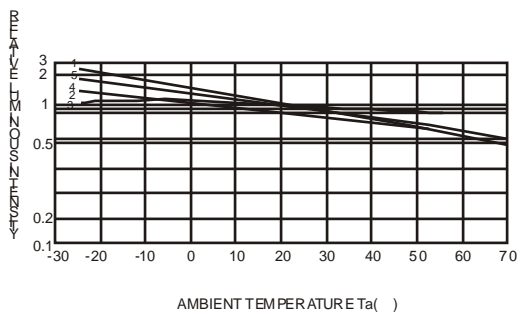
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



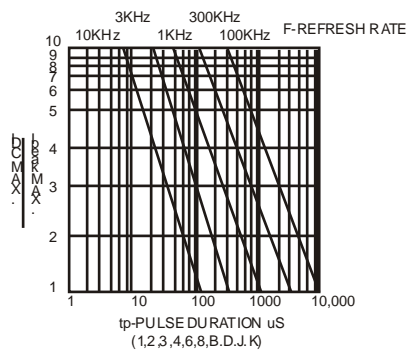
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



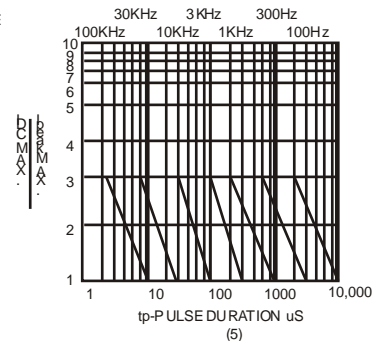
AMBIENT TEMPERATURE Ta ( °C )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



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**

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**Packing and weighting**

