百流光电
BetLux Electronics

SMD LED LAMP

BL-LS0603LXX

■ Features:

- 1.6mmx0.8mm SMD, 0.6mm THICKNESS
- Mono-color type
- Compatible with automatic placement equipment
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE: 4KPCS/REEL.
- RoHs Compliance





■ Electrical-optical characteristics: (Ta=25℃)

(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	λ_P (nm)		Typ	Max	Min.	Typ.	
BL-LS0603LHC	Red	GaP	700	Water Clear	2.2	2.7	0.2	0.8	130
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	

www.betlux.com

■ Absolute maximum ratings (Ta=25℃)

Parameter	H	SR	LR	UR	E	Y	G	Unit
Forward Current I_F	30	30	30	30	30	30	30	mA
Power Dissipation P_d	65	78	78	78	65	65	65	mW
Reverse Voltage V_R	5	5	5	5	5	5	5	V
Peak Forward Current I_{PF} (Duty 1/10 @1KHZ)	100	100	100	100	100	100	100	mA
Operation Temperature T_{OPR}	-30 to +80							℃
Storage Temperature T_{STG}	-40 to +85							℃
Lead Soldering Temperature T_{SOL}	Max.260±5℃ for 3 sec Max. (1.6mm from the base of the epoxy bulb)							℃

SMD LED LAMP

BL-LS0603LXX

■ Electrical-optical characteristics: (Ta=25℃) (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.	
BL-LS0603LUDR	Ultra Red	AlGaAs	655	Water Clear	2.10	2.50	17	55	130
BL-LS0603LUHR	Ultra Red	AlGaAs	645		2.10	2.60	25	75	
BL-LS0603LUEC	Ultra Orange	AlGaAs	630		2.10	2.50	20	70	
BL-LS0603LUHD	Ultra Orange	AlGaAs	618		2.10	2.60	45	105	
BL-LS0603LUYO	Ultra Amber	AlGaInP	610		2.10	2.60	25	75	
BL-LS0603LUYC	Ultra Yellow	AlGaInP	593		2.10	2.60	20	65	
BL-LS0603LUGC	Ultra Green	AlGaInP	575		2.20	2.70	10	35	
BL-LS0603LPGC	Ultra Pure Green	InGaN	525		3.50	4.20	50	100	
BL-LS0603LBGC	Ultra Bluish Green	InGaN	505		3.50	4.20	50	100	
BL-LS0603LDNB	Blue	InGaN	470		3.50	4.20	10	30	
BL-LS0603LUBC	Ultra Blue	InGaN	470		3.50	4.20	10	25	
BL-LS0603LUWC	Ultra White	InGaN	/		3.50	4.20	40	200	

■ Absolute maximum ratings (Ta=25℃)

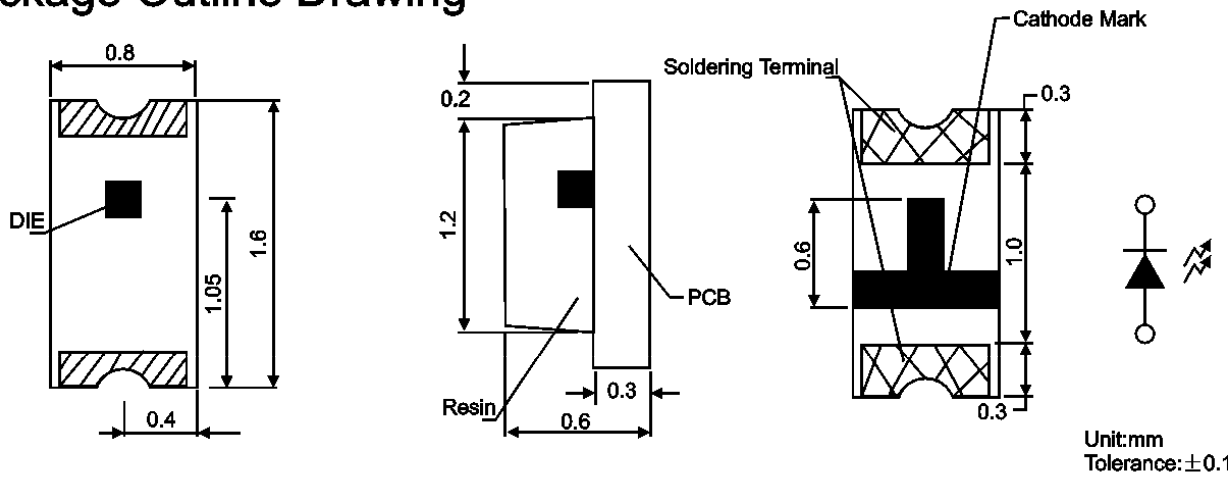
Parameter	UDR	UHR	UE	UHD	UYO	UY	UG	PG	BG	DNB	UB	UW	Unit
Forward Current I_F	30	30	30	30	30	30	30	30	30	30	30	30	mA
Power Dissipation P_d	78	78	78	78	78	78	78	78	78	78	78	78	mW
Reverse Voltage V_R	5	5	5	5	5	5	5	5	5	5	5	5	V
Peak Forward Current I_{PF} (Duty 1/10 @1KHZ)	100	100	100	100	100	100	100	100	100	100	100	100	mA
Operation Temperature T_{OPR}	-30 to +80												℃
Storage Temperature T_{STG}	-40 to +85												℃
Lead Soldering Temperature T_{SOL}	Max.260±5℃ for 3 sec Max. (1.6mm from the base of the epoxy bulb)												℃

www.betlux.com

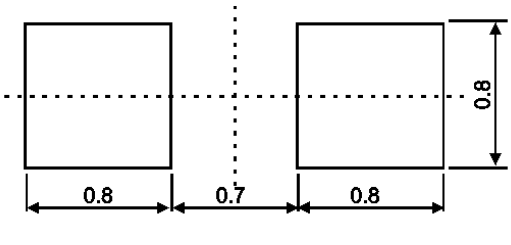
■ **Package configuration & Internal circuit diagram**

BL-LS0603L Series

Package Outline Drawing



Recommended Soldering Pad Dimensions

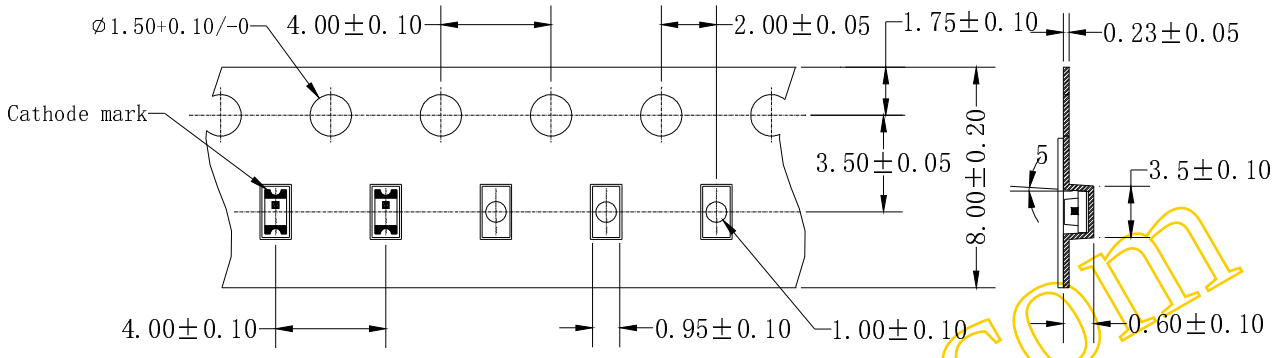


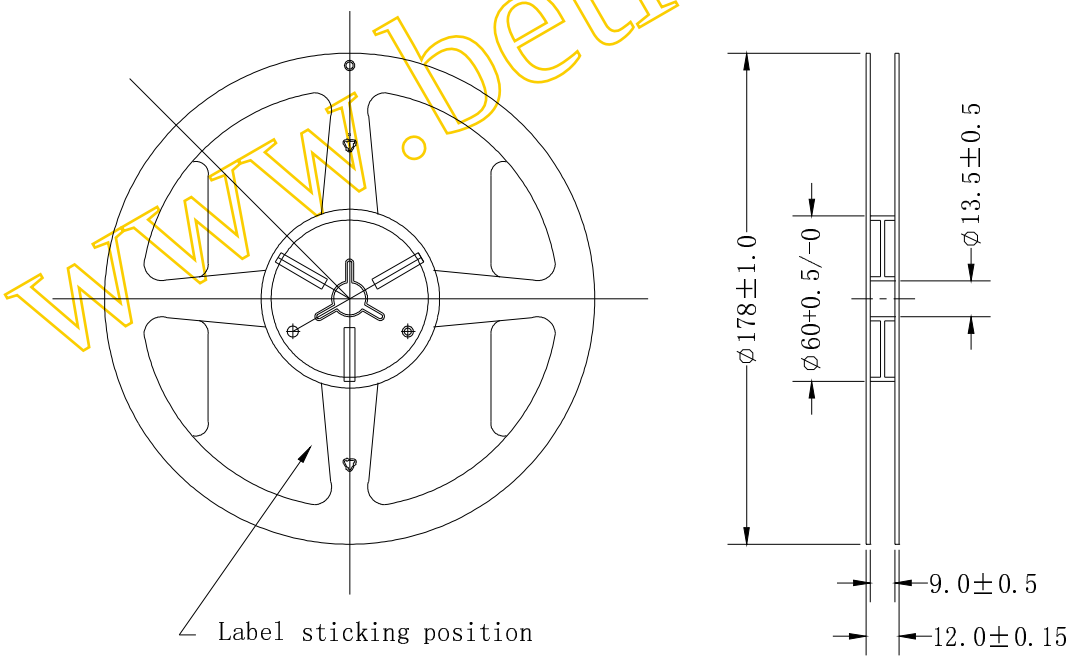
Notes:
1. All dimensions are in millimeters (inches)
2. Tolerance is ±0.25(0.01")unless otherwise noted.
3. Specifications are subject to change without notice.

■ Tape Specifications

Unit: mm

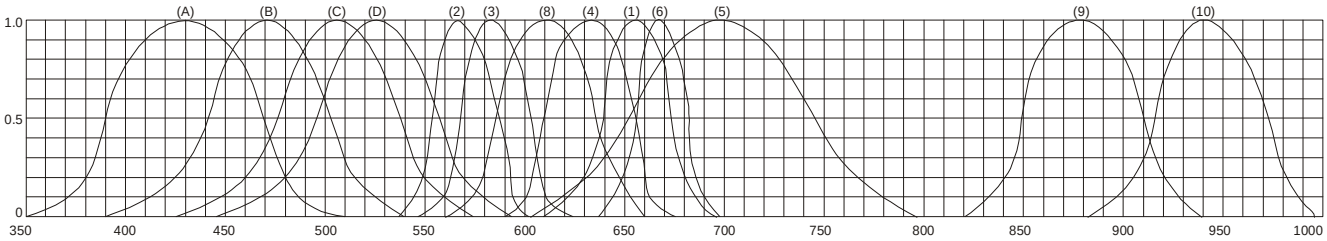
Tolerance: ±0.1





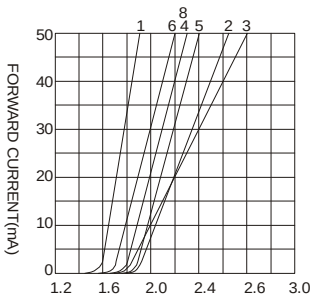
www.betlux.com

■ Typical electrical-optical characteristics curves:

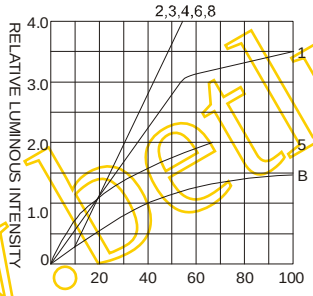


RELATIVE INTENSITY Vs WAVELENGTH(λ p)

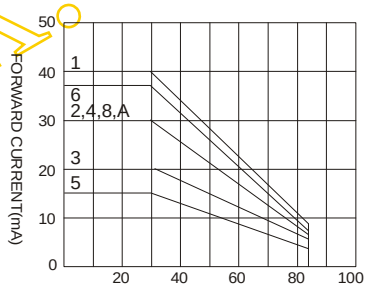
(1) - GaAsP/GaAs 655nm/Red
(2) - GaP 570nm/Yellow Green
(3) - GaAsP/GaP 585nm/Yellow
(4) - GaAsp/GaP 635nm/Orange & Hi-Eff Red
(5) - GaP 700nm/Bright Red
(6) - GaAlAs/GaAs 660nm/Super Red
(8) - GaAsP/GaP 610nm/Super Red
(9) - GaAlAs 880nm
(10) - GaAs/GaAs & GaAlAs/GaAs 940nm
(A) - GaN/SiC 430nm/Blue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



FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE

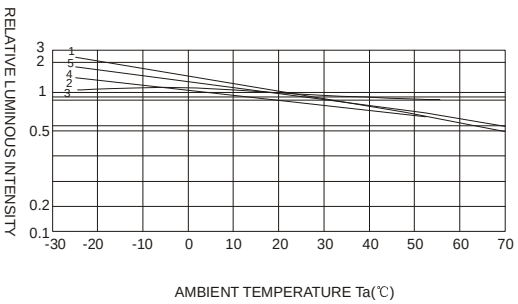


FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT

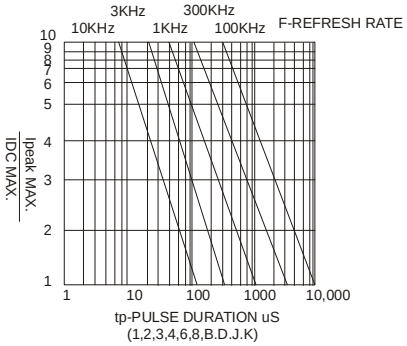


AMBIENT TEMPERATURE Ta(℃)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE

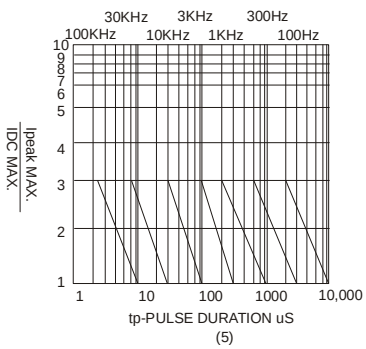
www.betlux.com



AMBIENT TEMPERATURE Ta(℃)



tp-PULSE DURATION uS
(1,2,3,4,6,8,B.D.J.K)



tp-PULSE DURATION uS
(5)

NOTE:25℃ free air temperature unless otherwise specified