

**SMD LED LAMP**
**BL-LS3210A0E1**
**Features:**

- 3.2mmx1.0mm SMD, 1.5mm THICKNESS
- Mono-color type
- Compatible with automatic placement equipment
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE: 3KPCS/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	λ <sub>P</sub> (nm)		Typ	Max	Min.	Typ.	
					BL-LS3210A0E1HC	Red	GaP	700	
BL-LS3210A0E1SRC	Super Red	AlGaAs	660	1.85	2.30	5	15		
BL-LS3210A0E1LRC	Super Red	AlGaAs	660	1.85	2.30	10	30		
BL-LS3210A0E1EC	Red	GaAsP	640	2.10	2.70	1	6		
BL-LS3210A0E1YC	Yellow	GaAsP	583	2.15	2.70	1	6		
BL-LS3210A0E1GC	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>SOL</sub>	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)							°C

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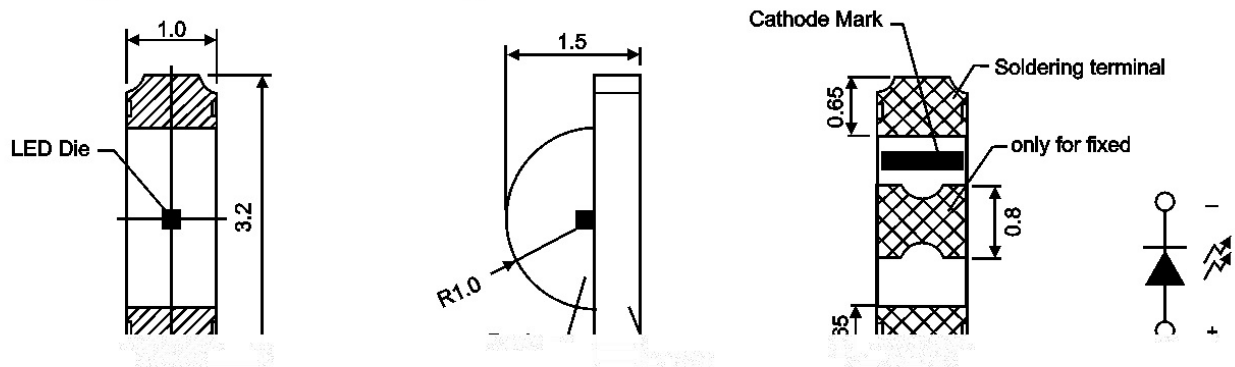
Part Number	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd		Viewing Angle 2θ1/2 (deg)
	Emitted Color	Material	λ <sub>P</sub> (nm)		Typ	Max	Min.	Typ.	
					BL-LS3210A0E1UDR	Ultra Red	AlGaAs	655	
BL-LS3210A0E1UHR	Ultra Red	AlGaAs	645	2.10	2.60	10	60		
BL-LS3210A0E1UEC	Ultra Red	AlGaAs	630	2.10	2.50	20	70		
BL-LS3210A0E1UHD	Ultra Red	AlGaAs	618	2.10	2.60	10	55		
BL-LS3210A0E1UYO	Ultra Amber	AlGaInP	610	2.10	2.60	30	90		
BL-LS3210A0E1UYC	Ultra Yellow	AlGaInP	593	2.10	2.60	15	60		
BL-LS3210A0E1UGC	Ultra Green	AlGaInP	575	2.20	2.70	15	50		
BL-LS3210A0E1PGC	Ultra Pure Green	InGaN	525	3.50	4.20	50	105		
BL-LS3210A0E1BGC	Ultra Bluish Green	InGaN	505	3.50	4.20	50	90		
BL-LS3210A0E1DNB	Blue	InGaN	470	3.50	4.20	10	50		
BL-LS3210A0E1UBC	Ultra Blue	InGaN	470	3.50	4.20	10	40		
BL-LS3210A0E1UWC	Ultra White	InGaN	/	3.50	4.20	40	190		

**■ 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>SOI</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-LS3210A0E1 Series Package Outline Drawing



### Manufacturing Assembly Plan (M/A Plan)



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.

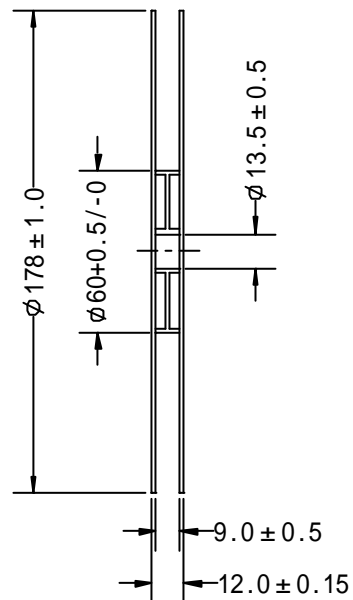
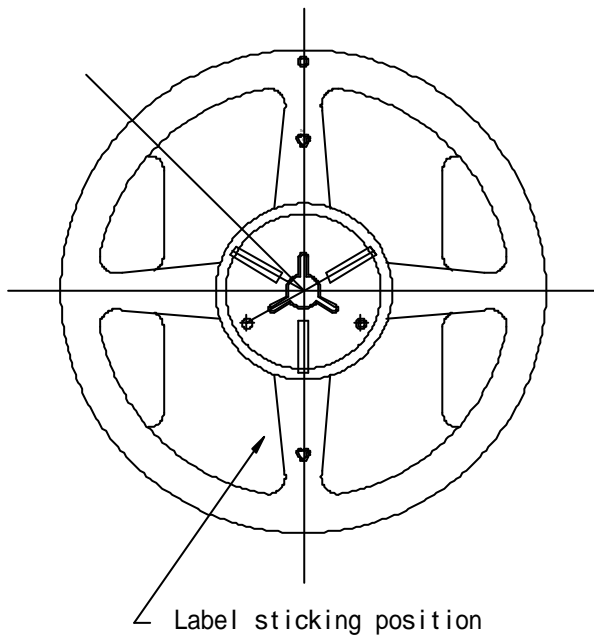
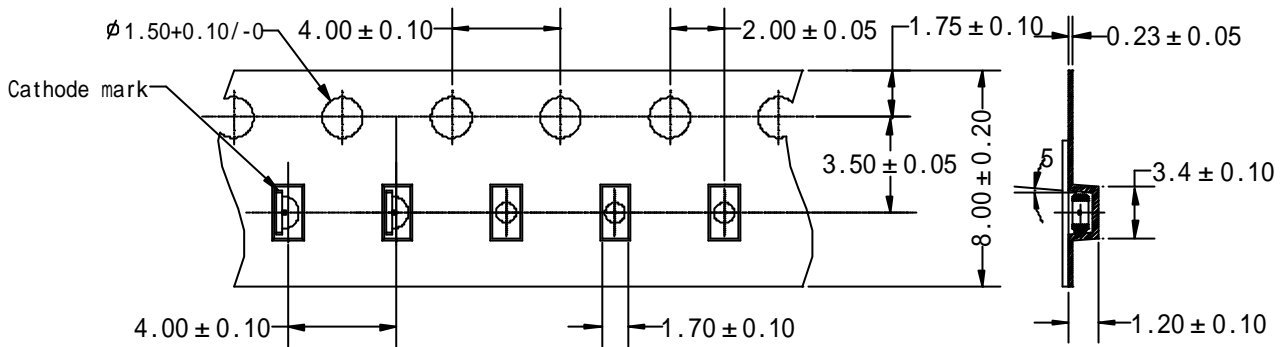
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■ **Tape Specifications**

Unit : mm

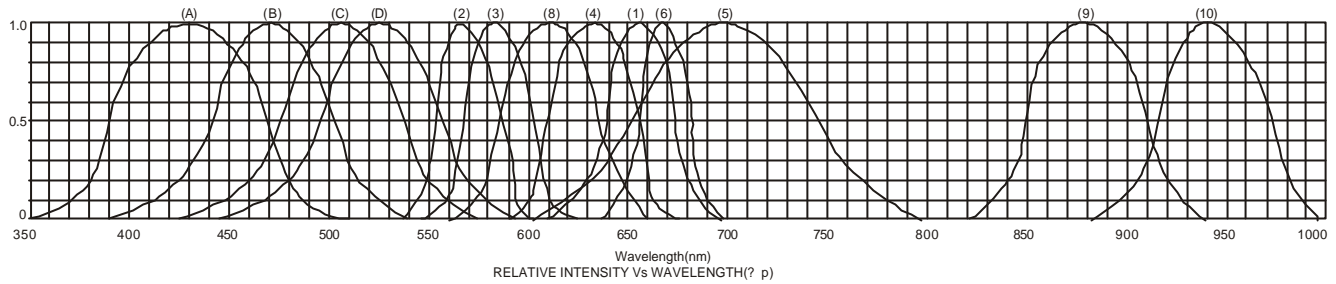
Tolerance :  $\pm 0.1$



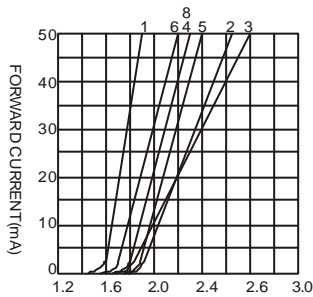
# SMD LED LAMP

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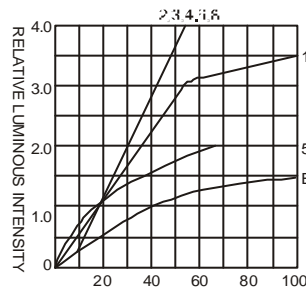
## Typical electrical-optical characteristics curves:



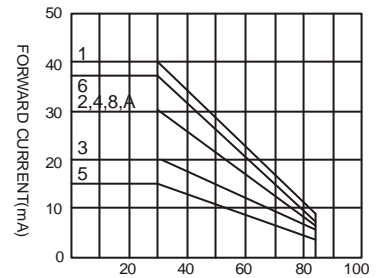
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



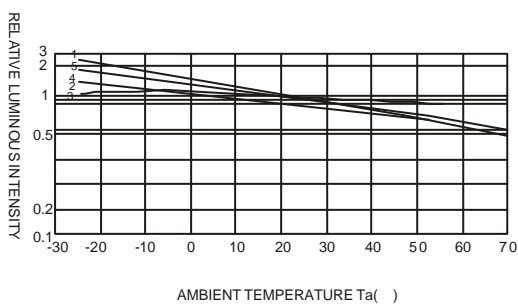
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



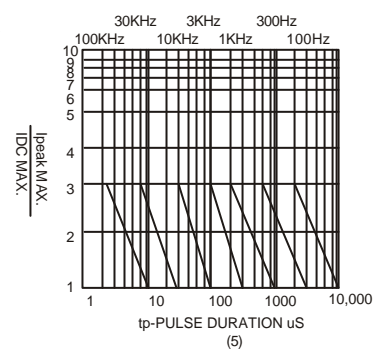
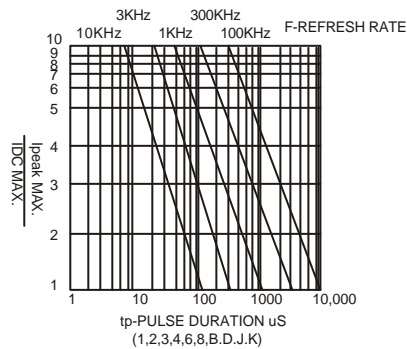
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



AMBIENT TEMPERATURE Ta ( )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta ( )



NOTE:25 free air temperature unless otherwise specified

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■ **Packing and weighting**

