

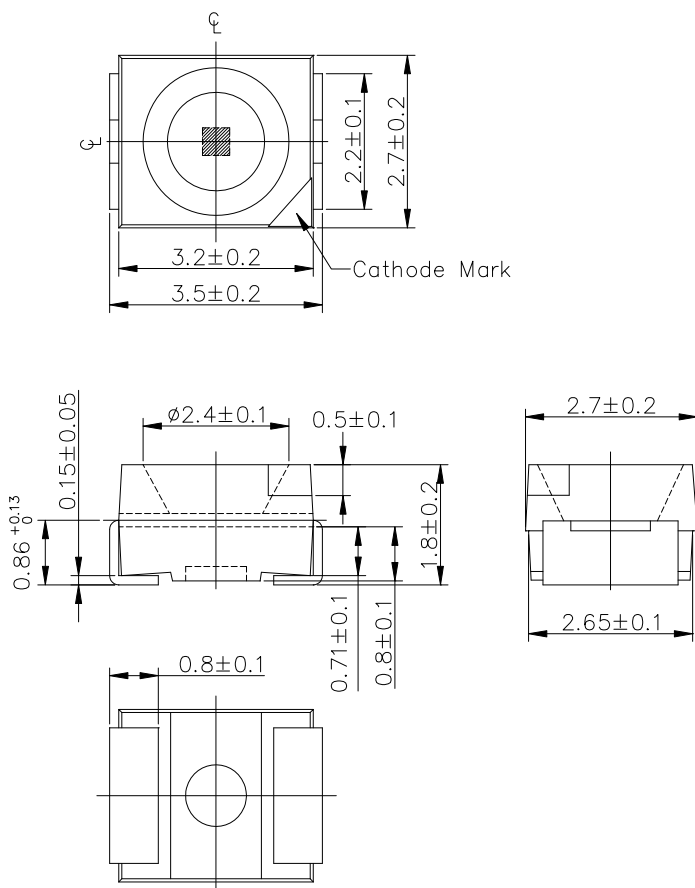
A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD.

SURFACE MOUNT CHIP LED LAMPS

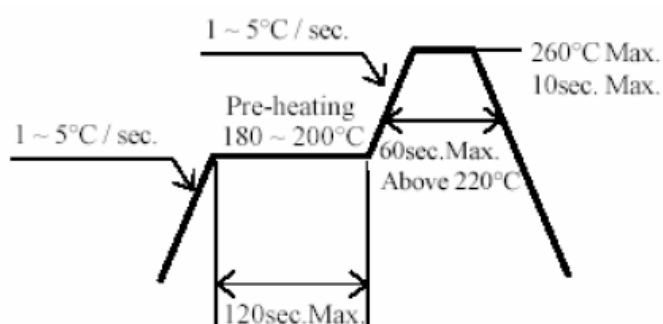
TOP View LEDs

Part Number: 67-21SUBC

Package outlines & Re-flow Profile

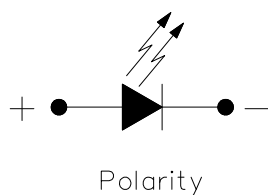


■Reflow Temp/Time

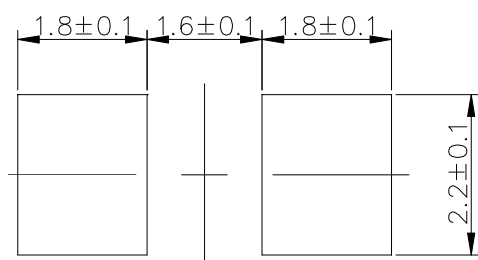


■Soldering iron

Basic spec is ≤ 5sec when 260°C. If temperature is higher, time should be shorter (+10°C → -1sec). Power dissipation of iron should be smaller than 15W, and temperatures should be controllable. Surface temperature of the device should be under 230°C.



For Reflow Soldering



ITEM	MATERIALS
Resin (mold)	Epoxy
Lens color	Water Clear
Printed circuit board	BT
Material	InGaN
Emitted color	Super Blue

NOTES:

- All dimensions are in millimeters (inches).
- Tolerances are ±0.1mm (0.004inch) unless otherwise noted.
- Polarity referring onto the cathode mark is reversed on the red.

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ELECTRO-OPTICAL CHARACTERISTICS**(T_A=25°C)**

Parameter	Test Condition	Symbol	Value			Unit
			MIN.	TYP.	MAX.	
Forward voltage	I _F =20mA	V _F	—	3.2	3.5	V
Luminous intensity	I _F =20mA	I _V	—	130	—	mcd
Peak Wavelength	I _F =20mA	λ _p	—	472	—	nm
Dominant Wavelength	I _F =20mA	λ _d	—	470	—	nm
Spectral Line Half-Width	I _F =20mA	△λ	—	35	—	nm
Peak pulsing current (1/10 duty f=1kHz)		I _{FP}	100			mA
Power Dissipation		P _D	110			mW
Reverse current	V _R =5V	I _R	50			μA
Electrostatic Discharge		ESD	150			mA

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

Parameter	Symbol	Value	Unit
Viewing angle at 50% I _V	2θ1/2	120	Deg
Forward current	I _F	25	mA
Reverse voltage	V _R	5	V
Operating temperature range	Top	-40 ~+85	°C
Storage temperature range	Tstg	-40 ~+100	°C

SURFACE MOUNT CHIP LED LAMPS

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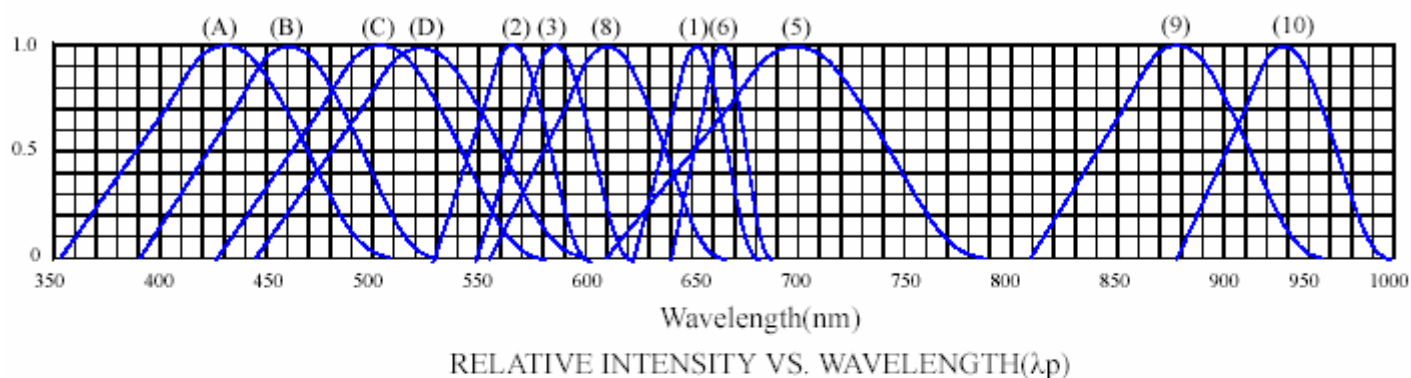
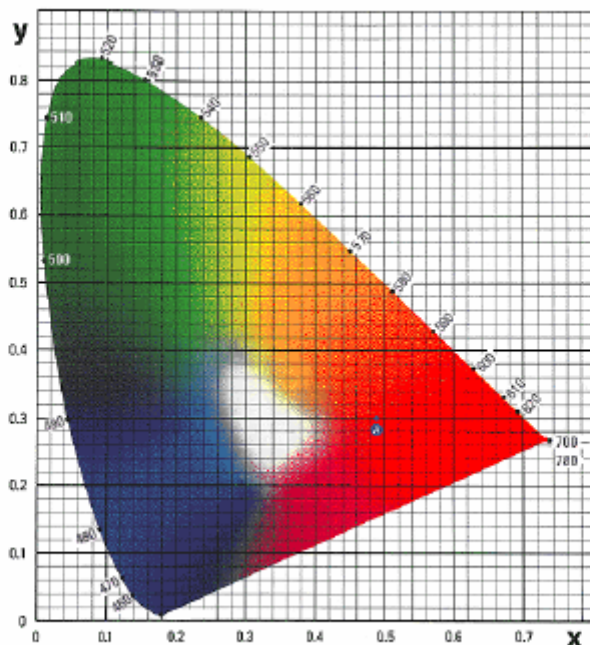
Test items and results of reliability

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Reflow	TEMP : 240±5℃ Min. 5sec.	6 MIN.	22 PCS	0/1
2	Temperature Cycle	H : +100℃ 15min └ 5min L : -40℃ 15min	300 CYCLES	22 PCS	0/1
3	Thermal Shock	H : +100℃ 5min └ 10set L : -10℃ 5min	300 CYCLES	22 PCS	0/1
4	High Temperature Storage	TEMP : 100℃	1000 HRS	22 PCS	0/1
5	Low Temperature Storage	TEMP : -55℃	1000 HRS	22 PCS	0/1
6	DC Operating Life	I _F =20mA	1000 HRS	22 PCS	0/1
7	High Temperature / High Humidity	85℃ / 85%RH	1000 HRS	22 PCS	0/1

* Refer to reliability test standard specification for in this line.

SURFACE MOUNT CHIP LED LAMPS

Part Number: 67-21SUBC

Typical Electro-Optical Characteristics◆ **TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES**

- (1) GaAsP/GaAs 655nm/Red
- (2) GaP 568nm/ 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

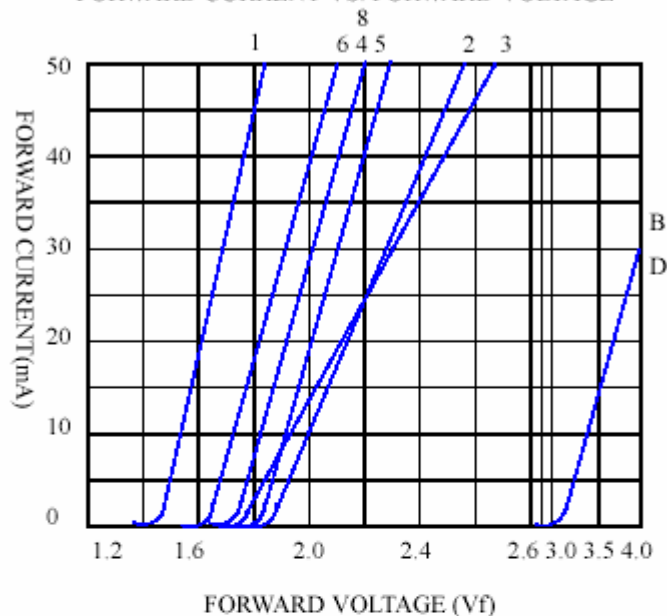
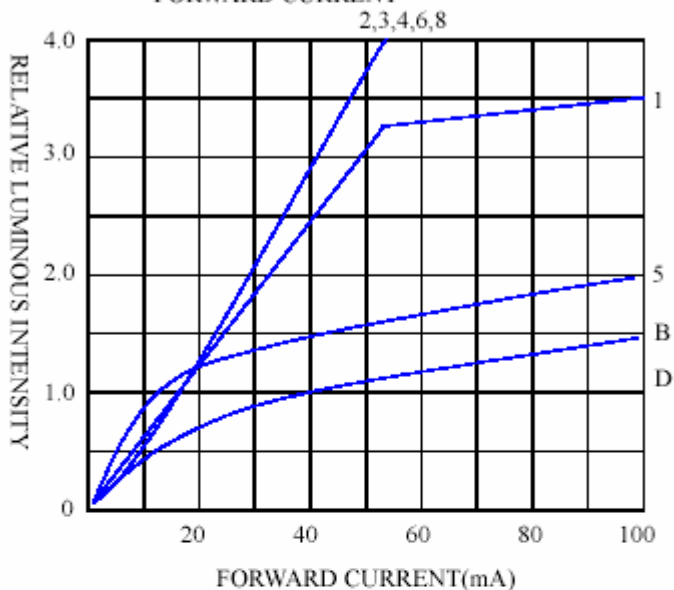
- (9)- GaAlAs 880nm
- (10)-GaAs/GaAs&GaAlAs/GaAs 940nm
- (A)- GaN 430nm/Blue
- (B)- InGaN 470nm/Blue
- (C)- InGaN 502nm/Ultra Green
- (D)- InGaN 523nm/Ultra Green

SURFACE MOUNT CHIP LED LAMPS

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Typical Electro-Optical Characteristics◆ **CHARACTERISTICS DIAGRAMS**

FORWARD CURRENT VS. FORWARD VOLTAGE

RELATIVE LUMINOUS INTENSITY VS.
FORWARD CURRENTFORWARD CURRENT VS. AMBIENT
TEMPERATURE