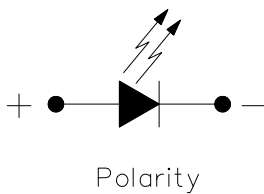
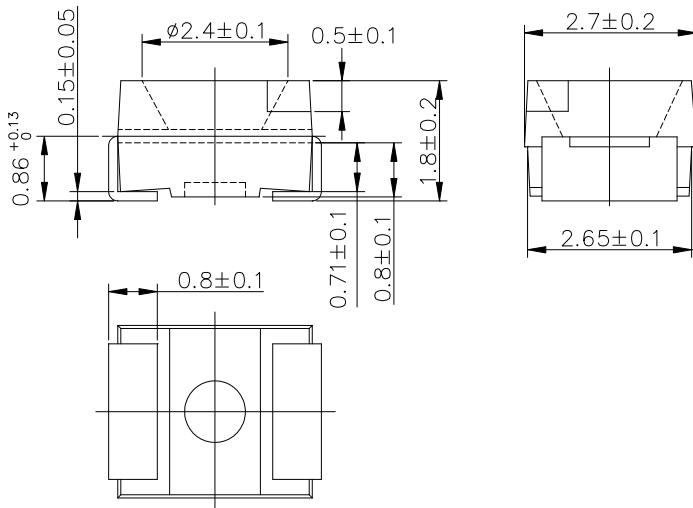
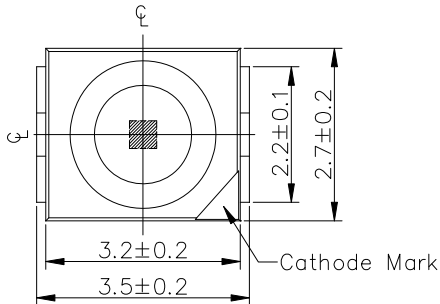


# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT CHIP LED LAMPS

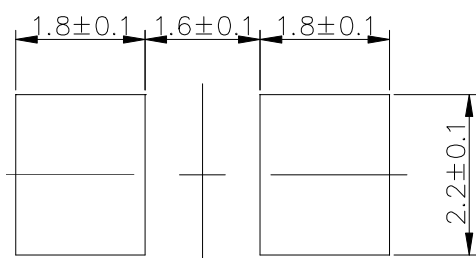
## TOP View LEDs

Part Number: 67-21SUBC

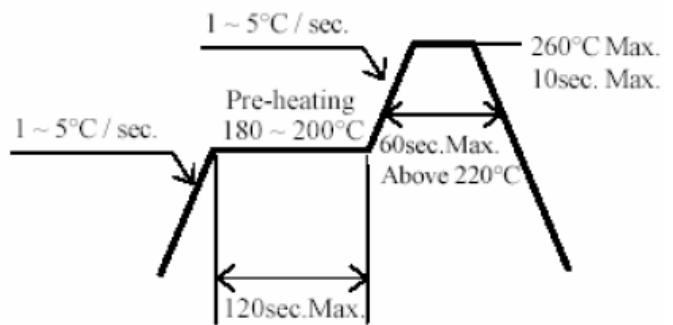
## Package outlines & Re-flow Profile



For Reflow Soldering



### Reflow Temp/Time



### Soldering iron

Basic spec is  $\leq 5\text{sec}$  when  $260^\circ\text{C}$ . If temperature is higher, time should be shorter ( $+10^\circ\text{C} \rightarrow -1\text{sec}$ ). Power dissipation of iron should be smaller than  $15\text{W}$ , and temperatures should be controllable. Surface temperature of the device should be under  $230^\circ\text{C}$ .

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  $\pm 0.1\text{mm}$  ( $0.004\text{inch}$ ) unless otherwise noted.
- Polarity referring onto the cathode mark is reversed on the red.

**SURFACE MOUNT CHIP LED LAMPS**

Part Number: 67-21SUBC

**ELECTRO-OPTICAL CHARACTERISTICS****(T<sub>A</sub>=25°C)**

Parameter	Test Condition	Symbol	Value			Unit
			MIN.	TYP.	MAX.	
Forward voltage	I <sub>F</sub> =20mA	V <sub>F</sub>	—	3.2	3.5	V
Luminous intensity	I <sub>F</sub> =20mA	I <sub>v</sub>	—	130	—	mcd
Peak Wavelength	I <sub>F</sub> =20mA	λ <sub>p</sub>	—	472	—	nm
Dominant Wavelength	I <sub>F</sub> =20mA	λ <sub>d</sub>	—	470	—	nm
Spectral Line Half-Width	I <sub>F</sub> =20mA	Δλ	—	35	—	nm
Peak pulsing current (1/10 duty f=1kHz)		I <sub>FP</sub>		100		mA
Power Dissipation		P <sub>D</sub>		110		mW
Reverse current	V <sub>R</sub> =5V	I <sub>R</sub>		50		μA
Electrostatic Discharge		ESD		150		mA

**Absolute maximum ratings****(T<sub>A</sub>=25°C)**

Parameter	Symbol	Value	Unit
Viewing angle at 50% I <sub>v</sub>	2θ <sub>1/2</sub>	120	Deg
Forward current	I <sub>F</sub>	25	mA
Reverse voltage	V <sub>R</sub>	5	V
Operating temperature range	T <sub>op</sub>	-40 ~ +85	°C
Storage temperature range	T <sub>stg</sub>	-40 ~ +100	°C

**A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD.  
**SURFACE MOUNT CHIP LED LAMPS**

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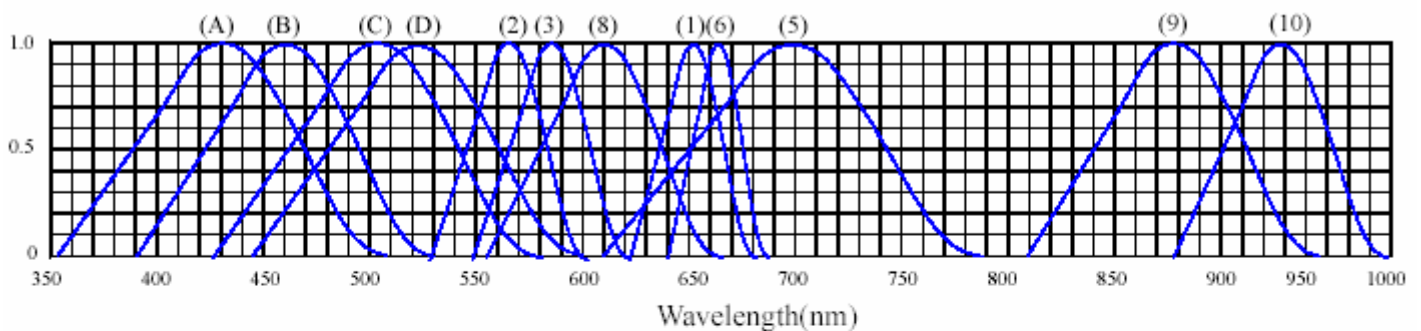
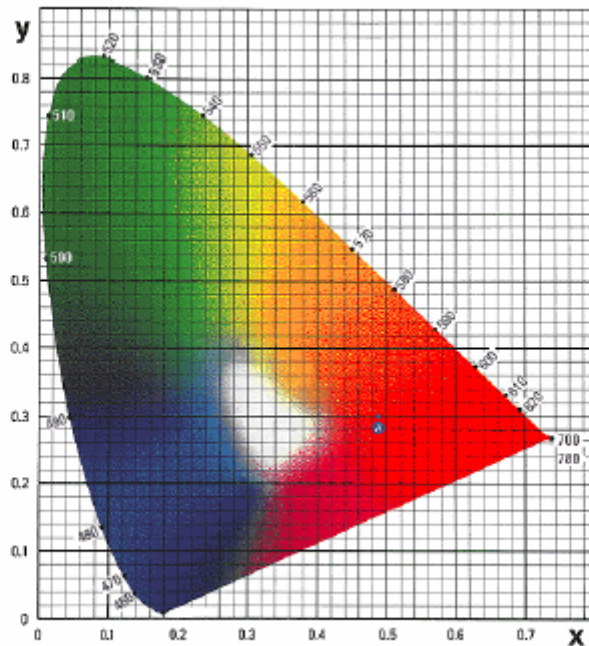
**Test items and results of reliability**

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Reflow	TEMP : 240±5°C Min. 5sec.	6 MIN.	22 PCS	0/1
2	Temperature Cycle	H : +100°C 15min ∫ 5min L : -40°C 15min	300 CYCLES	22 PCS	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10set L : -10°C 5min	300 CYCLES	22 PCS	0/1
4	High Temperature Storage	TEMP : 100°C	1000 HRS	22 PCS	0/1
5	Low Temperature Storage	TEMP : -55°C	1000 HRS	22 PCS	0/1
6	DC Operating Life	I <sub>F</sub> =20mA	1000 HRS	22 PCS	0/1
7	High Temperature / High Humidity	85°C / 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**RELATIVE INTENSITY VS. WAVELENGTH( $\lambda_p$ )

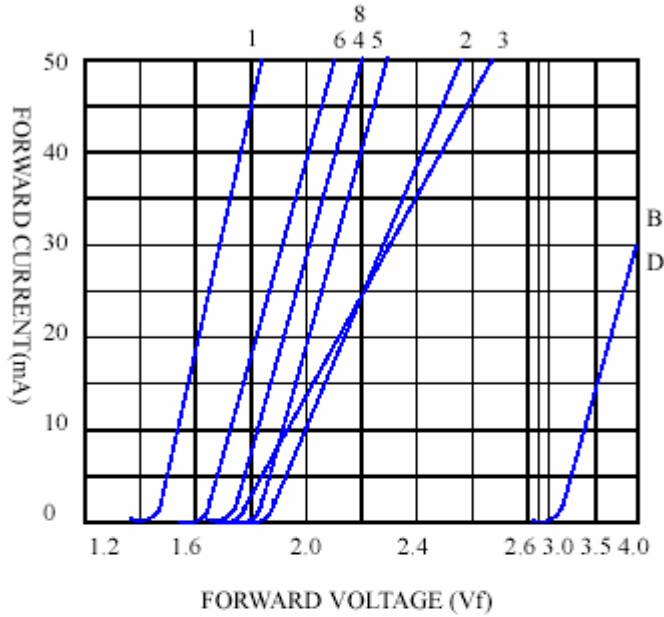
- |                                         |                                  |
|-----------------------------------------|----------------------------------|
| (1) GaAsP/GaAs 655nm/Red                | (9)- GaAlAs 880nm                |
| (2) GaP 568nm/ Yellow Green             | (10)-GaAs/GaAs&GaAlAs/GaAs 940nm |
| (3) GaAsP/GaP 585nm/Yellow              | (A)- GaN 430nm/Blue              |
| (4) GaAsP/GaP 635nm/Orange & Hi-Eff Red | (B)- InGaN 470nm/Blue            |
| (5) GaP 700nm/Bright Red                | (C)- InGaN 502nm/Ultra Green     |
| (6) GaAlAs/GaAs 660nm/Super Red         | (D)- InGaN 523nm/Ultra Green     |
| (8) GaAsP/GaP 610nm/Super Red           |                                  |

**SURFACE MOUNT CHIP LED LAMPS**

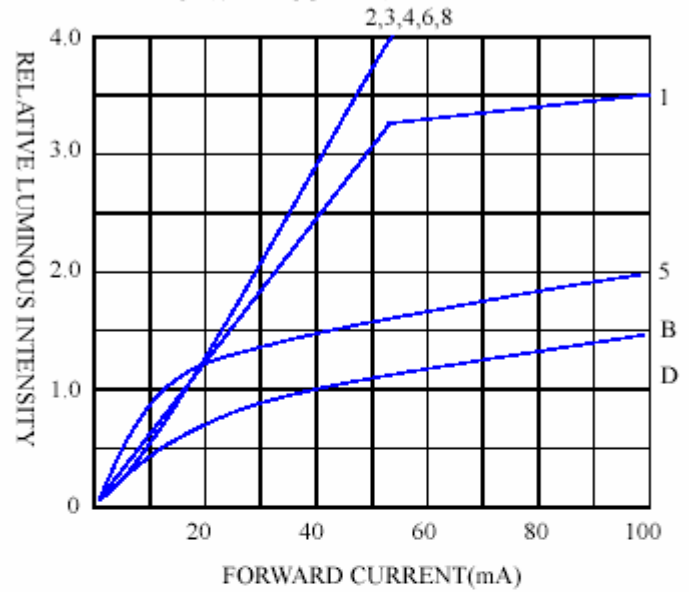
Part Number: 67-21SUBC

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

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

