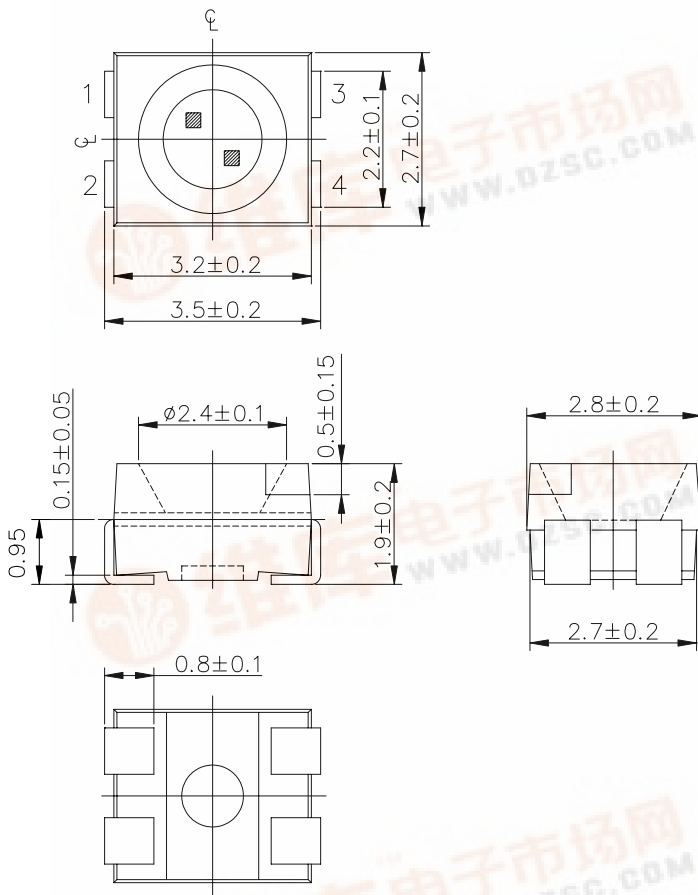


# A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT CHIP LED LAMPS

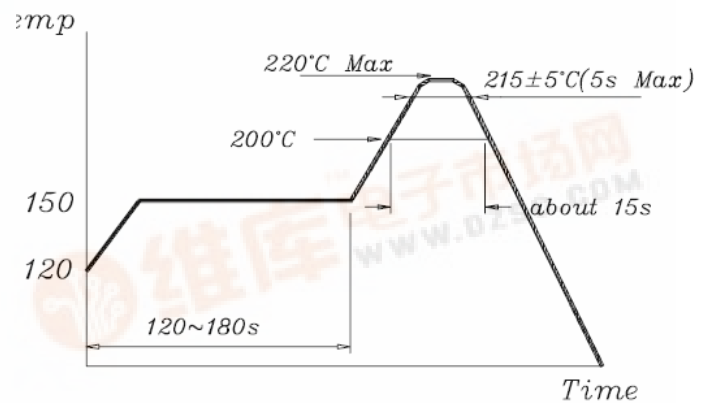
Top View LEDs With Bi-Color

Part Number: 67-22SURSYGC

Package outlines & Re-flow Profile

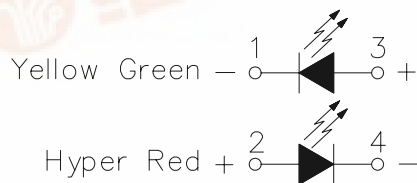


■Reflow Temp/Time



■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 15W, and temperatures should be controllable. Surface temperature of the device should be under  $230^\circ\text{C}$ .



For Reflow Soldering

ITEM		MATERIALS	
Resin (mold)		Epoxy	
Lens color		Water Clear	
Printed circuit board		BT	
Material & Emitted color	SUR	AlGaInP	Hyper Red
	SYG	AlGaInP	Super Yellow Green

NOTES:

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



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

Part Number: 67-22SURYGC

**ELECTRO-OPTICAL CHARACTERISTICS**

**(T<sub>A</sub>=25°C)**

Parameter	Emitted Color	Test Condition	Symbol	Value			Unit
				MIN.	TYP.	MAX.	
Forward voltage	SUR	I <sub>F</sub> =20mA	V <sub>F</sub>	-	2.0	2.4	V
	SYG			-	2.0	2.4	
Luminous intensity	SUR	I <sub>F</sub> =20mA	I <sub>v</sub>	24	60	-	mcd
	SYG			16	25	-	
Wavelength	SUR	I <sub>F</sub> =20mA	λ <sub>p</sub>	-	630	-	nm
	SYG			-	575	-	
	SUR	I <sub>F</sub> =20mA	λ <sub>d</sub>	-	625	-	
	SYG			-	575	-	
Spectral Line Half-Width	SUR	I <sub>F</sub> =20mA	Δλ	-	20	-	nm
	SYG			-	20	-	
Peak pulsing current (1/10 duty f=1kHz)	SUR		I <sub>FP</sub>	160			mA
	SYG			160			
Power Dissipation	SUR		P <sub>D</sub>	60			mW
	SYG			60			
Reverse current	SUR	V <sub>R</sub> =5V	I <sub>R</sub>	10			μA
	SYG						
Electrostatic Discharge	SUR		ESD	2000			mA
	SYG						

**Absolute maximum ratings**

**(T<sub>A</sub>=25°C)**

Parameter	Symbol	Value	Unit
Viewing angle at 50% I <sub>v</sub>	2θ 1/2	130	Deg
Forward current	I <sub>F</sub>	20	mA
Reverse voltage	V <sub>R</sub>	5	V
Operating temperature range	Top	-40 ~+85	°C
Storage temperature range	Tstg	-40 ~+90	°C

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

**Part Number: 67-22SURSYGC**

**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

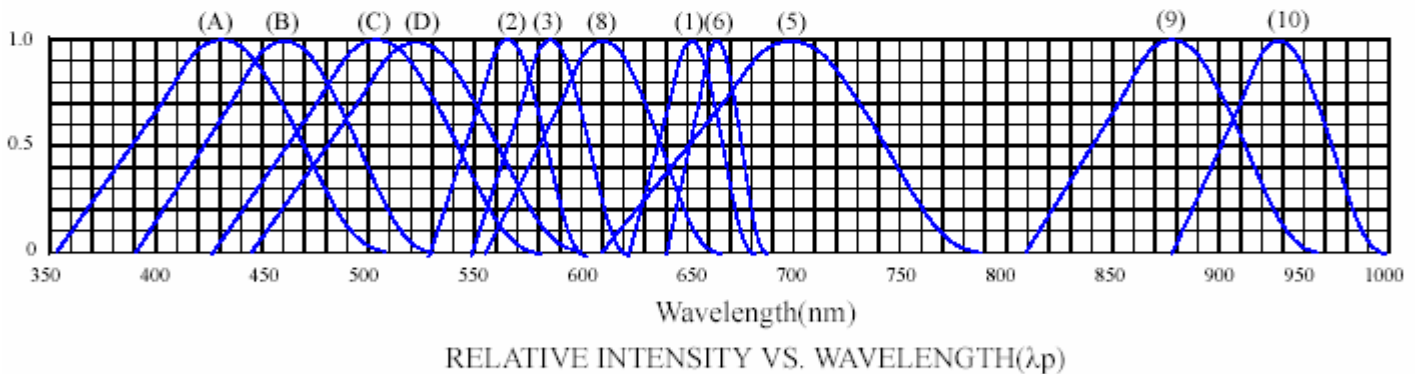
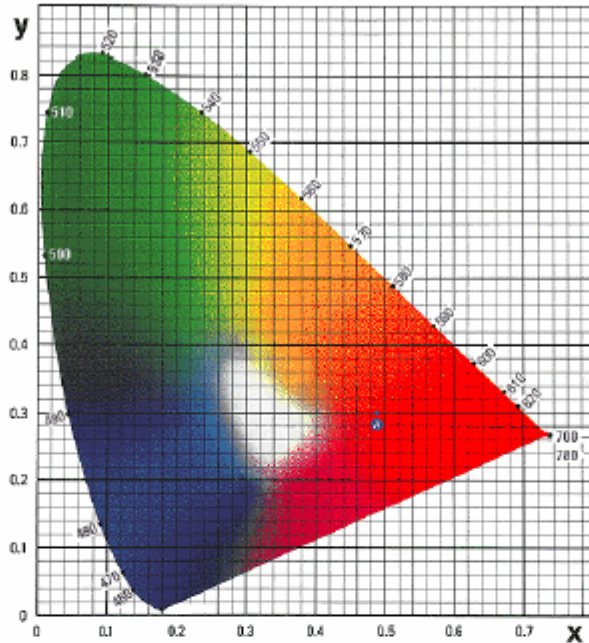
\* Refer to reliability test standard specification for in this line.

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

Part Number: 67-22SURSYGC

## 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

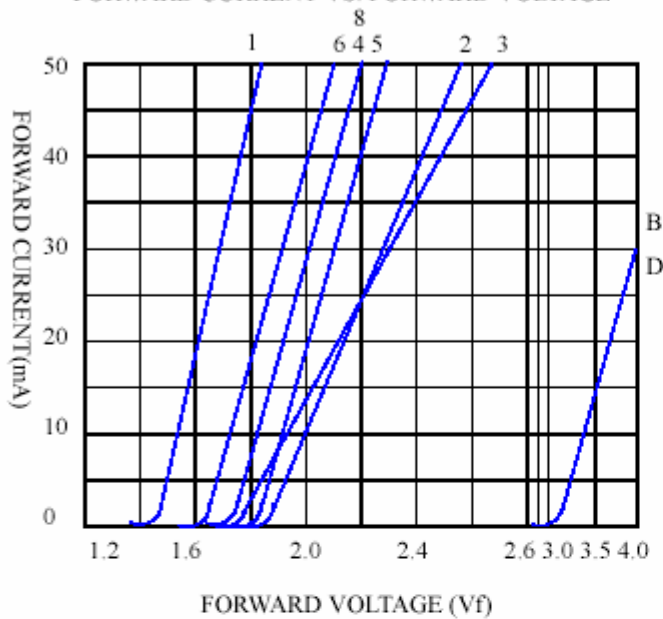
# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT CHIP LED LAMPS

Part Number: 67-22SURSYGC

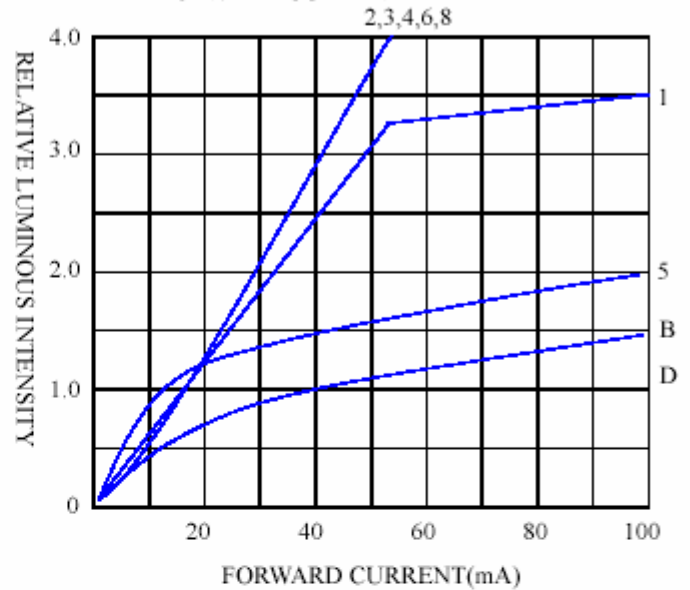
## Typical Electro-Optical Characteristics

### ◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

