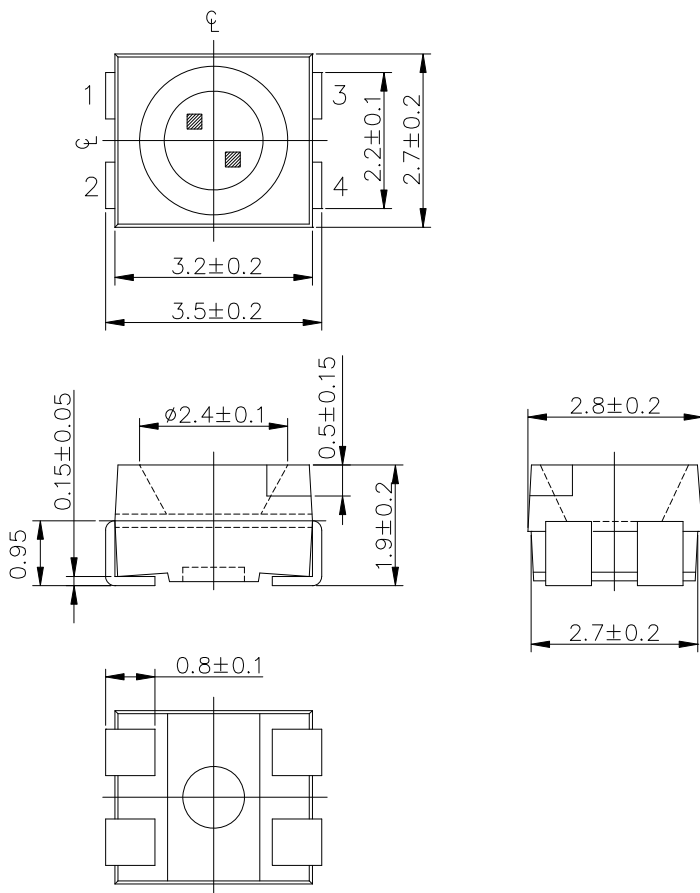


# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT CHIP LED LAMPS

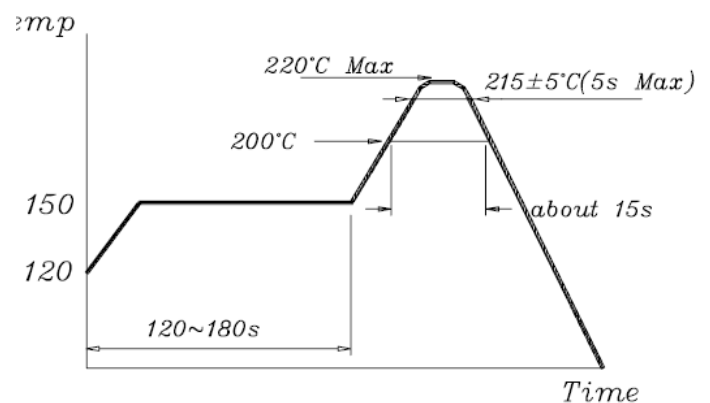
Top View LEDs With Bi-Color

Part Number: 67-22SURSYGC

## Package outlines & Re-flow Profile

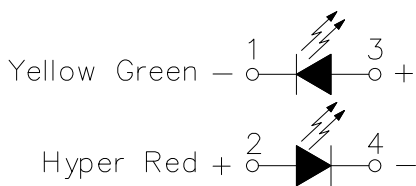


### ■Reflow Temp/Time

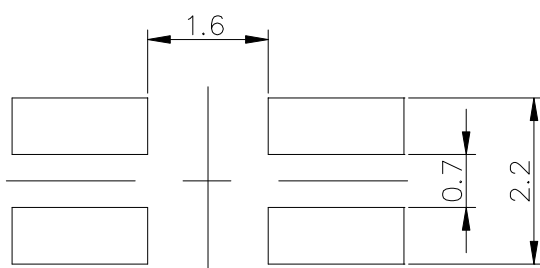


### ■Soldering iron

Basic spec is  $\leq 5$ sec when  $260^{\circ}\text{C}$ . If temperature is higher, time should be shorter ( $+10^{\circ}\text{C} \rightarrow -1$ 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  $\pm 0.1$ 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**

( $T_A=25^{\circ}\text{C}$ )

Parameter	Emitted Color	Test Condition	Symbol	Value			Unit
				MIN.	TYP.	MAX.	
Forward voltage	SUR	$I_F=20\text{mA}$	$V_F$	-	2.0	2.4	V
	SYG			-	2.0	2.4	
Luminous intensity	SUR	$I_F=20\text{mA}$	$I_v$	-	60	-	mcd
	SYG			-	25	-	
Wavelength	SUR	$I_F=20\text{mA}$	$\lambda_p$	-	630	-	nm
	SYG			-	575	-	
	SUR	$I_F=20\text{mA}$	$\lambda_d$	-	625	-	
	SYG			-	570	-	
Spectral Line Half-Width	SUR	$I_F=20\text{mA}$	$\Delta\lambda$	-	20	-	nm
	SYG			-	20	-	
Peak pulsing current (1/10 duty f=1kHz)	SUR		$I_{FP}$	160			mA
	SYG			160			
Power Dissipation	SUR		$P_D$	60			mW
	SYG			60			
Reverse current	SUR	$V_R=5\text{V}$	$I_R$	10			$\mu\text{A}$
	SYG						
Electrostatic Discharge	SUR		ESD	2000			mA
	SYG						

**Absolute maximum ratings**

( $T_A=25^{\circ}\text{C}$ )

Parameter	Symbol	Value	Unit
Viewing angle at 50% $I_v$	$2\theta_{1/2}$	120	Deg
Forward current	$I_F$	20	mA
Reverse voltage	$V_R$	5	V
Operating temperature range	Top	-40 ~ +85	$^{\circ}\text{C}$
Storage temperature range	Tstg	-40 ~ +90	$^{\circ}\text{C}$

**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

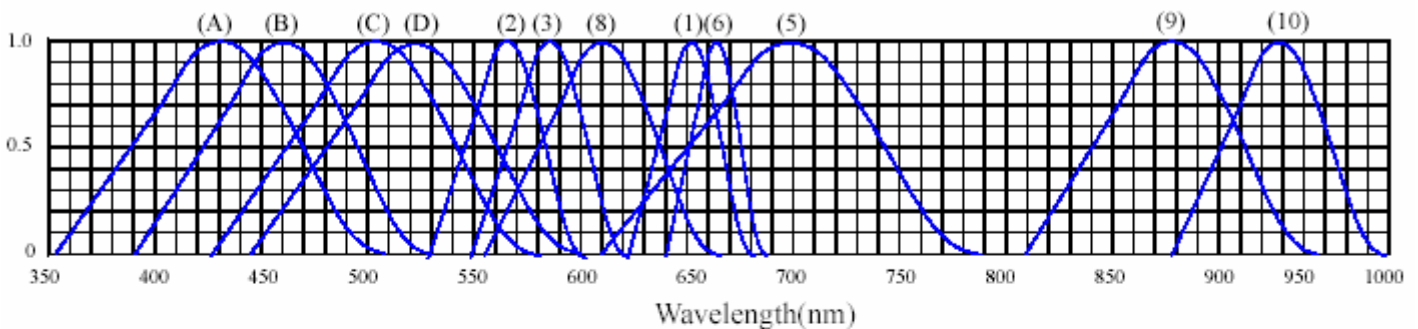
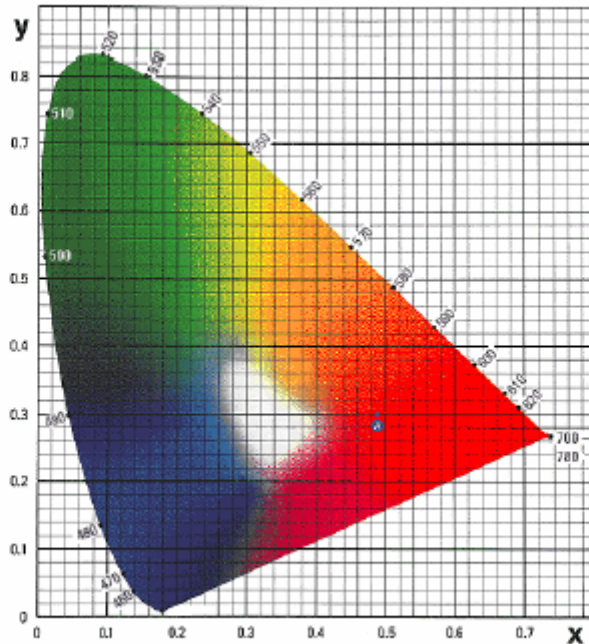
\* Refer to reliability test standard specification for in this line.

# **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



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           |                                  |

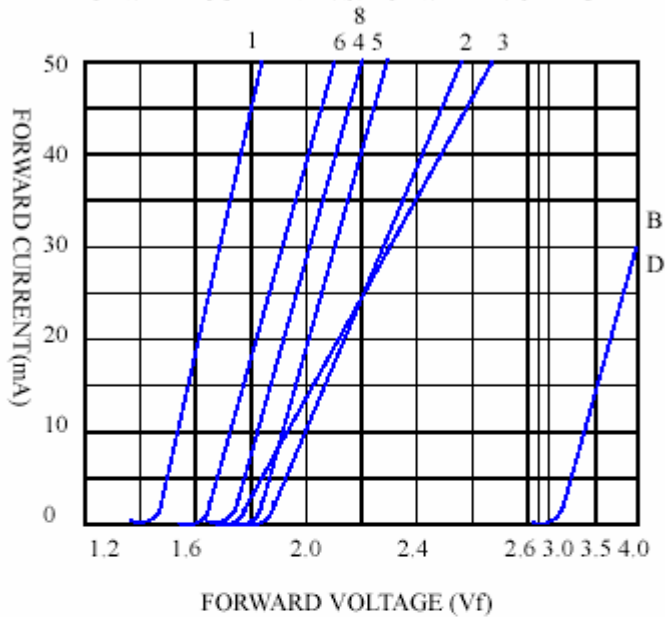
# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT CHIP LED LAMPS

Part Number: 67-22SURSYGC

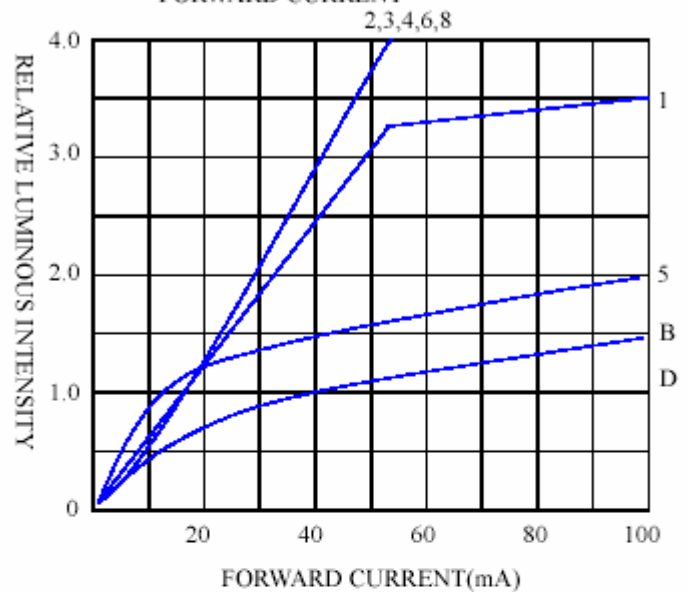
## Typical Electro-Optical Characteristics

### ◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

