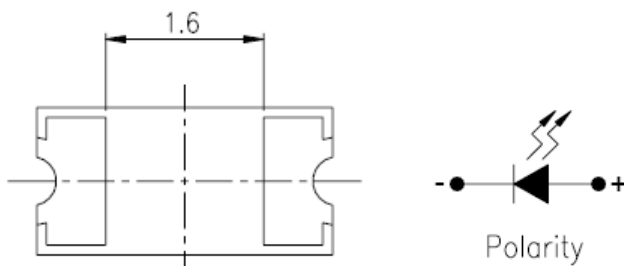
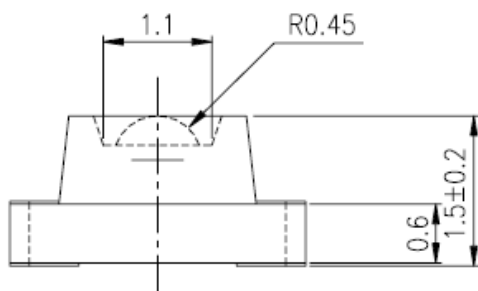
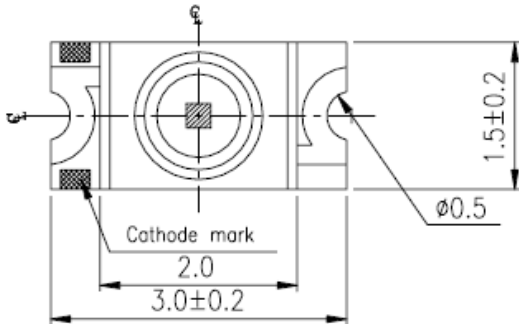


A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT LED LAMPS

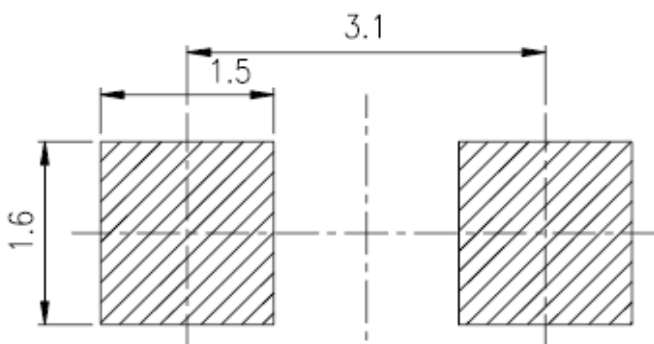
1206 Inner Lens White SMD Chip LED Lamps

Part Number: AL-HW433A

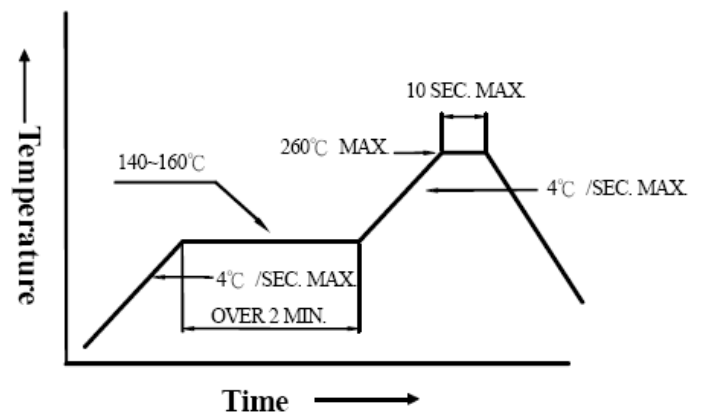
Package outlines & Re-flow Profile



For Reflow Soldering



Reflow Temp/Time



Soldering iron

Basic spec is ≤ 5 sec when 260°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°C .

ITEM	MATERIALS
Resin (mold)	Epoxy
Lens color	Yellow Diffused
Printed circuit board	BT
Dice	InGaN
Emitted color	White

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ± 0.1 mm (0.004inch) unless otherwise noted.
3. Soldering terminal may shift in x, y direction.
4. Polarity referring on to the Cathode mark is reversed on the red.

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

Part Number: AL-HW433A

ELECTRO-OPTICAL CHARACTERISTICS (T_A=25°C)

Parameter	Test Condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
Viewing angle at 50% I _v	I _F =20mA	2 θ 1/2	60			Deg
Forward voltage	I _F =20mA	V _F	--	3.2	4.0	V
Luminous intensity	I _F =20mA	I _v	--	150	--	mcd
Chromaticity Coordinates	I _F =20mA	X	--	0.31	--	--
		Y	--	0.32	--	
Peak pulsing current (1/10 duty f=1kHz)		I _{FP}	100			mA

Absolute maximum ratings (T_A=25°C)

Parameter	Symbol	Value	Unit
Forward current	I _F	30	mA
Reverse voltage	V _R	5	V
Reverse current	I _R	10	μA
Power Dissipation	P _D	65	mW
Electrostatic Discharge	ESD	150	V
Operating temperature range	Top	-30 ~+80	°C
Storage temperature range	Tstg	-40 ~+85	°C

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

Part Number: AL-HW433A

Test items and results of reliability

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp. : 260°C±5°C Min. 5sec.	6 Min.	22 PCS.	0/1
2	Temperature Cycle	H : +100°C 15min ∫ 5 min L : -40°C 15min	300 Cycles	22 PCS.	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec 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. : -40°C	1000 Hrs.	22 PCS.	0/1
6	DC Operating Life	IF = 20 mA	1000 Hrs.	22 PCS.	0/1
7	High Temperature / High Humidity	85°C/ 85%RH	1000 Hrs.	22 PCS.	0/1

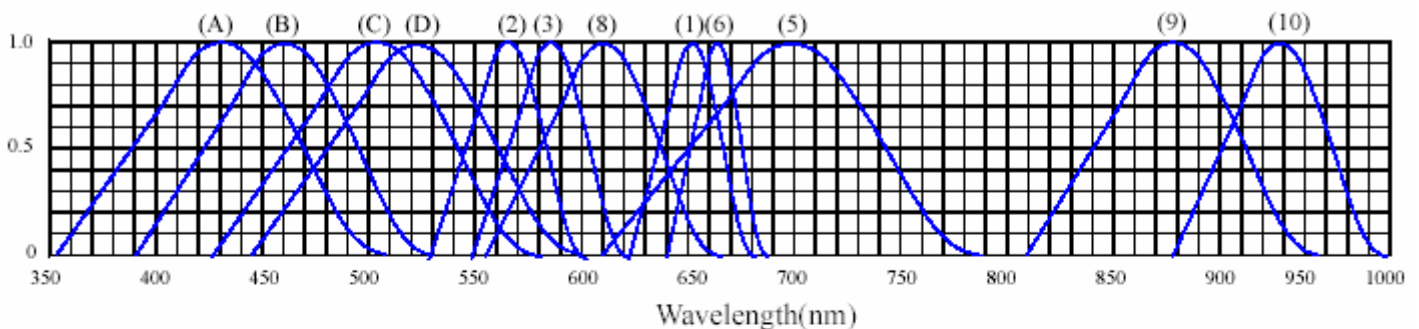
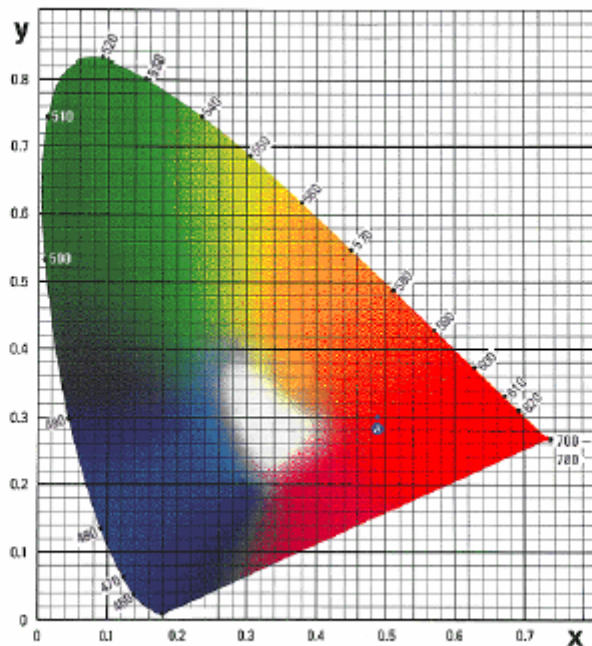
* Refer to reliability test standard specification for in this line.

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

Part Number: AL-HW433A

Typical Optical-Electrical Characteristic Curves

◆ TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES



RELATIVE INTENSITY VS. WAVELENGTH(λ_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 | |

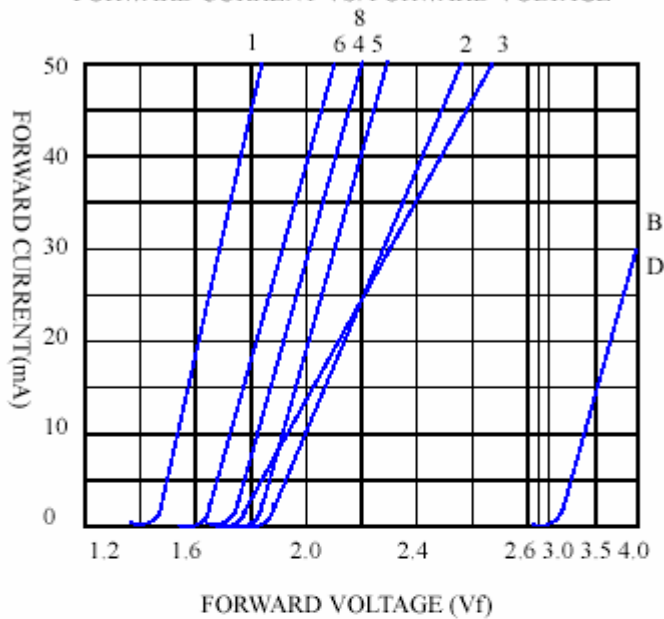
A-BRIGHT A-BRIGHT INDUSTRIAL CO., LTD. SURFACE MOUNT LED LAMPS

Part Number: AL-HW433A

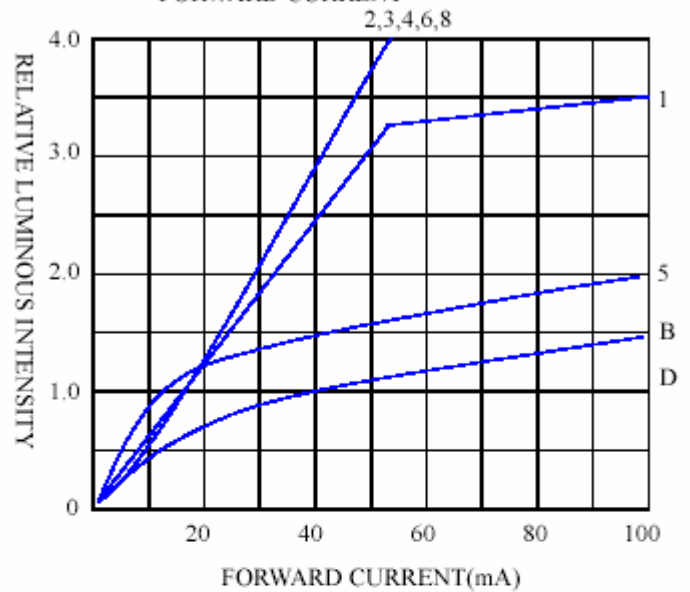
Typical Optical-Electrical Characteristic Curves

◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

