

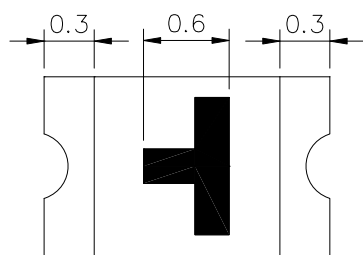
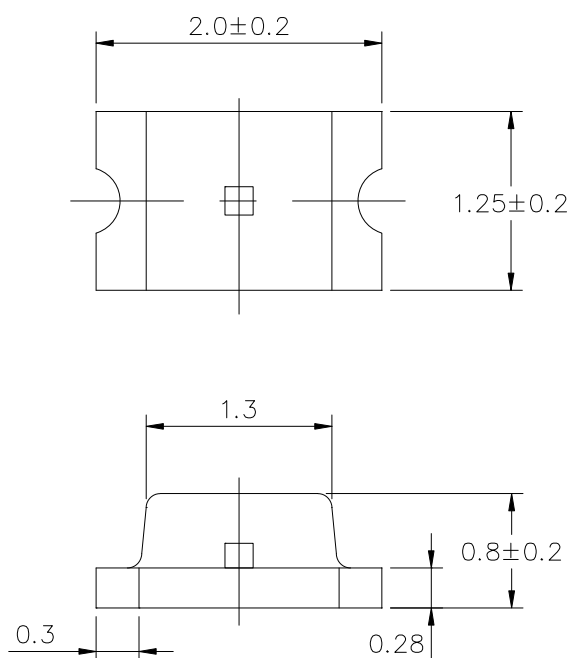
# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD.

## SURFACE MOUNT LED LAMPS

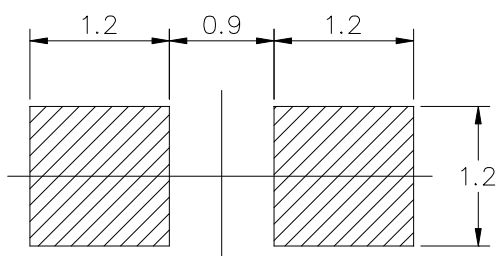
### 0805 Package Pure Green SMD Chip LED Lamps

Part Number: AL-HG635A

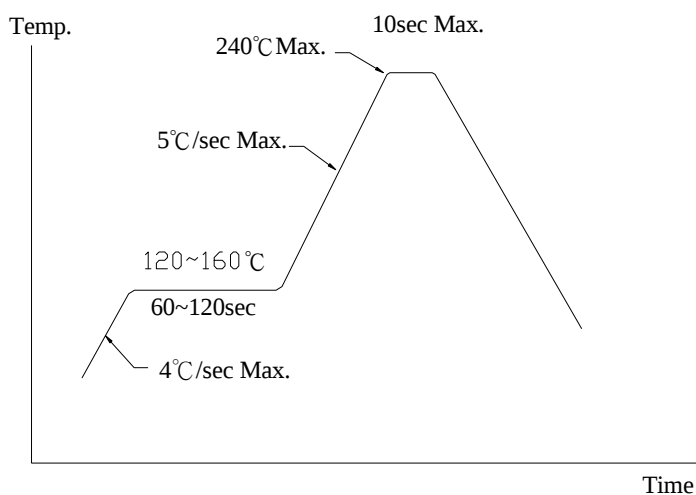
### Package outlines & Re-flow Profile



Recommend Pad Layout



#### ■ 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.

| ITEM                  | MATERIALS   |
|-----------------------|-------------|
| Resin (mold)          | Epoxy       |
| Lens color            | Water Clear |
| Printed circuit board | BT          |
| Dice                  | InGaN       |
| Emitted color         | Pure Green  |

#### NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ±0.1mm (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-HG635A**

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

| Parameter                               | Test Condition       | Symbol          | Value |      |      | Unit |
|-----------------------------------------|----------------------|-----------------|-------|------|------|------|
|                                         |                      |                 | MIN.  | TYP. | MAX. |      |
| Viewing angle at 50% I <sub>V</sub>     | I <sub>F</sub> =20mA | 2 θ 1/2         | 130   |      |      | Deg  |
| Forward voltage                         | I <sub>F</sub> =20mA | V <sub>F</sub>  | 2.8   | 3.2  | 3.6  | V    |
| Luminous intensity                      | I <sub>F</sub> =20mA | I <sub>V</sub>  | —     | 500  | —    | mcd  |
| Dominant Wavelength                     | I <sub>F</sub> =20mA | λ d             | —     | 525  | —    | nm   |
| Peak Emission Wavelength                | I <sub>F</sub> =20mA | λ p             | —     | 530  | —    | nm   |
| Peak pulsing current (1/10 duty f=1kHz) |                      | I <sub>FP</sub> | 100   |      |      | mA   |

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

| Parameter                   | Symbol         | Value    | Unit |
|-----------------------------|----------------|----------|------|
| Forward current             | I <sub>F</sub> | 30       | mA   |
| Reverse voltage             | V <sub>R</sub> | 5        | V    |
| Reverse current             | I <sub>R</sub> | 10       | μA   |
| Power Dissipation           | P <sub>D</sub> | 62       | mW   |
| Operating temperature range | Top            | -30 ~+80 | °C   |
| Storage temperature range   | Tstg           | -40 ~+90 | °C   |

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

**Part Number: AL-HG635A**

**Test items and results of reliability**

| No. | Items                               | Test Condition                              | Test Hours/Cycles | Sample Size |
|-----|-------------------------------------|---------------------------------------------|-------------------|-------------|
| 1   | Solder Heat                         | TEMP : 260°C±5°C                            | 5 sec             | 48 pcs      |
| 2   | Temperature Cycle                   | 90°C ~ 25°C ~ -30°C ~ 25°C<br>30m 5m 30m 5m | 300Cycles         | 48 pcs      |
| 3   | Thermal Shick                       | 100°C ~ -55°C<br>10m 10m                    | 100Cycles         | 48 pcs      |
| 4   | Operation Life                      | I <sub>F</sub> =20mA                        | 1000 Hrs          | 48 pcs      |
| 5   | High Temperature Storage            | Temp : 90°C                                 | 1000Hrs           | 48 pcs      |
| 6   | Low Temperature Storage             | Temp : -30°C                                | 1000Hrs           | 48 pcs      |
| 7   | High Temperature /<br>High Humidity | 80°C / R.H80%                               | 1000Hrs           | 48 pcs      |

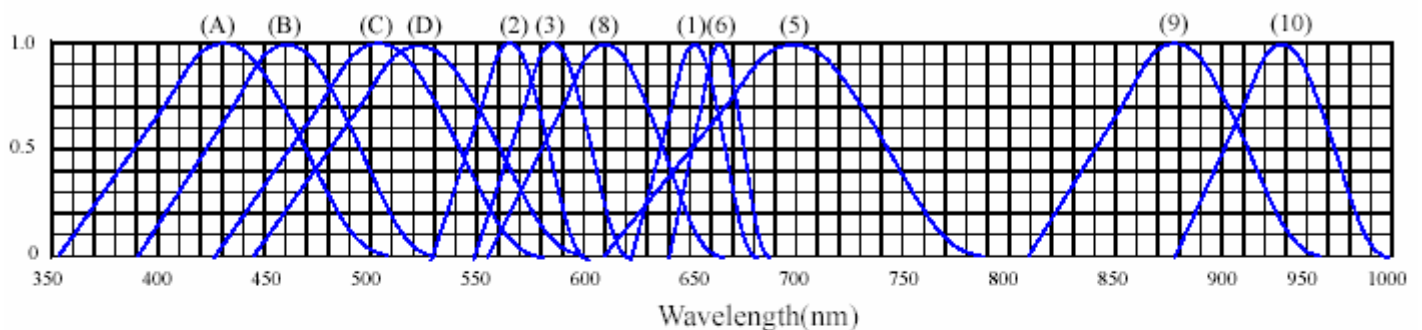
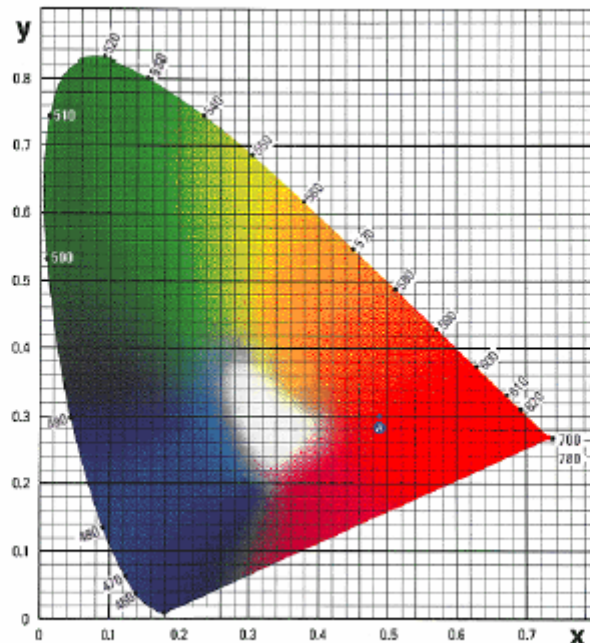
\* Refer to reliability test standard specification for in this line.

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

## SURFACE MOUNT LED LAMPS

**Part Number: AL-HG635A**

### ◆ TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES



RELATIVE INTENSITY VS. WAVELENGTH( $\lambda_p$ )

- (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

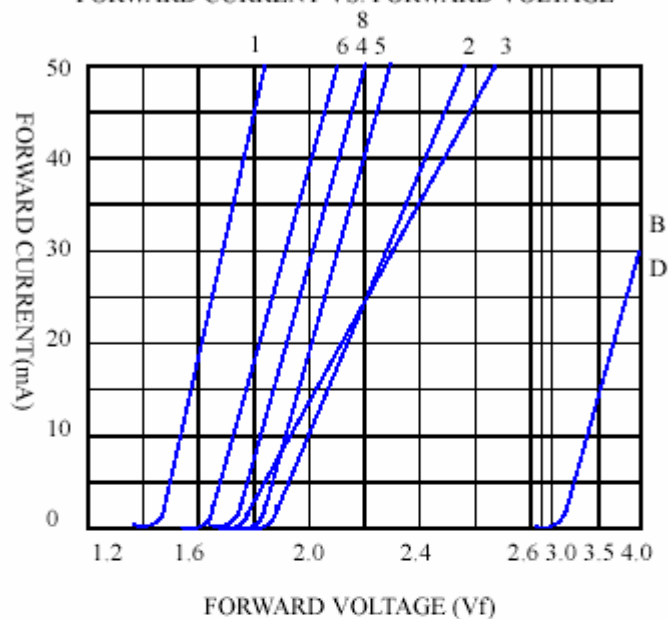
# **A-BRIGHT** A-BRIGHT INDUSTRIAL CO., LTD.

## SURFACE MOUNT LED LAMPS

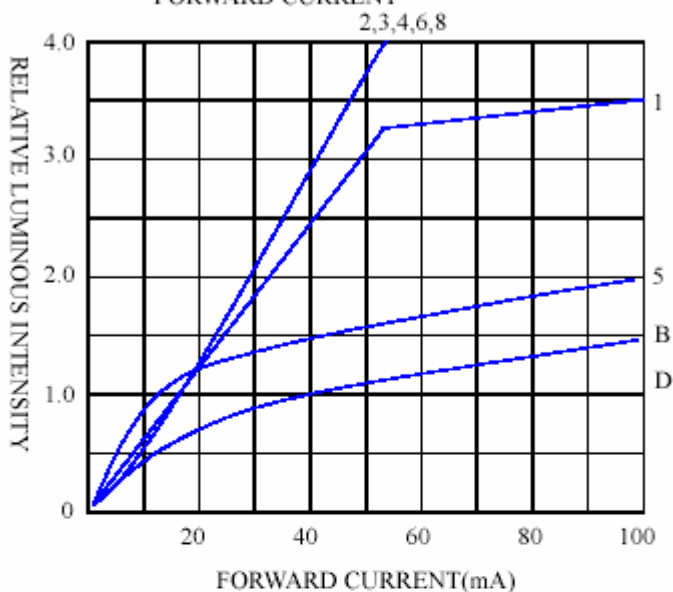
Part Number: AL-HG635A

### ◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

