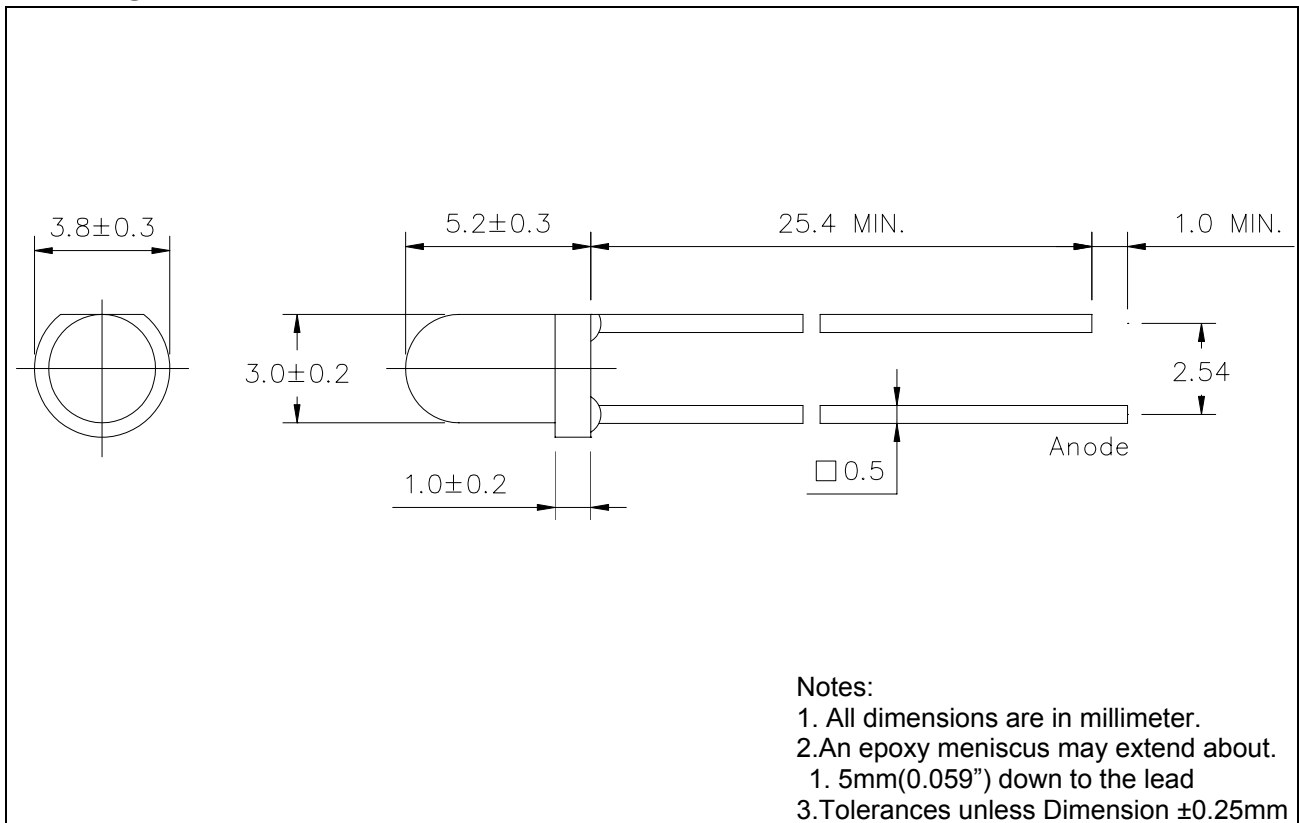


|          |             |                  |
|----------|-------------|------------------|
| Part No. | AL-314B3C-A | Diff No.         |
| 3 mm     | Round       | Type : LED Lamps |

Package Dimension :



- | ■ Features :                        | ■ Descriptions :                                                                  | ■ Applications : |
|-------------------------------------|-----------------------------------------------------------------------------------|------------------|
| ● Choice of various viewing angles. | ● The series is specially designed for application requiring higher brightness.   | ● TV set         |
| ● Available on Tape and Reel.       |                                                                                   | ● Monitor        |
| ● Reliable and robust.              | ● The LED lamps are available with different colors, intensity, epoxy colors etc. | ● Telephone      |

Part No.

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Diff No.

3 mm

Round

Type : LED Lamps

| PART NO.    | Chip     |               | Lens Color  |
|-------------|----------|---------------|-------------|
|             | Material | Emitted Color |             |
| AL-314B3C-A | InGaN    | Blue          | Water Clear |

■ Absolute Maximum Ratings at Ta=25℃

| Parameter                                | Symbol                | Rating     | Unit |
|------------------------------------------|-----------------------|------------|------|
| Forward Current                          | I <sub>F</sub>        | 30         | mA   |
| Operating Temperature                    | T <sub>opr</sub>      | -40 to +85 | ℃    |
| Storage Temperature                      | T <sub>stg</sub>      | -40 to +85 | ℃    |
| Soldering Temperature                    | T <sub>sol</sub>      | 260 ±5     | ℃    |
| Electrostatic Discharge                  | ESD                   | 1000       | V    |
| Power Dissipation                        | P <sub>D</sub>        | 120        | mW   |
| Peak Forward Current<br>(Duty 1/10@1KHz) | I <sub>F</sub> (Peak) | 100        | mA   |
| Reverse Voltage                          | V <sub>R</sub>        | 5          | V    |

■ Electronic Optical Characteristics :

| Parameter                    | Symbol         | Min. | Typ. | Max. | Unit | Condition            |
|------------------------------|----------------|------|------|------|------|----------------------|
| Luminous Intensity           | I <sub>v</sub> | 1000 | 1500 | /    | mcd  | I <sub>F</sub> =20mA |
| Viewing Angle                | 2θ1/2          | /    | 30   | /    | deg  | I <sub>F</sub> =20mA |
| Peak Wavelength              | λ <sub>p</sub> | /    | 475  | /    | nm   | I <sub>F</sub> =20mA |
| Dominant Wavelength          | λ <sub>d</sub> | /    | 470  | /    | nm   | I <sub>F</sub> =20mA |
| Spectrum Radiation Bandwidth | △λ             | /    | 30   | /    | nm   | I <sub>F</sub> =20mA |
| Forward Voltage              | V <sub>F</sub> | /    | 3.5  | 4.0  | V    | I <sub>F</sub> =20mA |
| Reverse Current              | I <sub>R</sub> | /    | /    | 50   | μA   | V <sub>R</sub> =5V   |

Part No. **AL-314B3C-A**

Diff No.

3 mm

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## ■ Reliability test items and conditions :

| NO | Item                             | Test Conditions                              | Test Hours/Cycle | Sample Size | Ac/Re |
|----|----------------------------------|----------------------------------------------|------------------|-------------|-------|
| 1  | Solder Heat                      | TEMP : 260°C ± 5°C                           | 5 SEC            | 76 PCS      | 0/1   |
| 2  | Temperature Cycle                | H : +85°C 30min<br>└ 5min<br>L : -55°C 30min | 50 CYCLES        | 76 PCS      | 0/1   |
| 3  | Thermal Shock                    | H : +100°C 5min<br>└ 10set<br>L : -10°C 5min | 50 CYCLES        | 76 PCS      | 0/1   |
| 4  | High Temperature Storage         | TEMP : 100°C                                 | 1000 HRS         | 76 PCS      | 0/1   |
| 5  | Low Temperature Storage          | TEMP : -55°C                                 | 1000 HRS         | 76 PCS      | 0/1   |
| 6  | DC Operating Life                | TEMP : 25°C<br>I <sub>F</sub> =20mA          | 1000 HRS         | 76 PCS      | 0/1   |
| 7  | High Temperature / High Humidity | 85°C / 85%RH                                 | 1000 HRS         | 76 PCS      | 0/1   |

Part No.

**AL-314B3C-A**

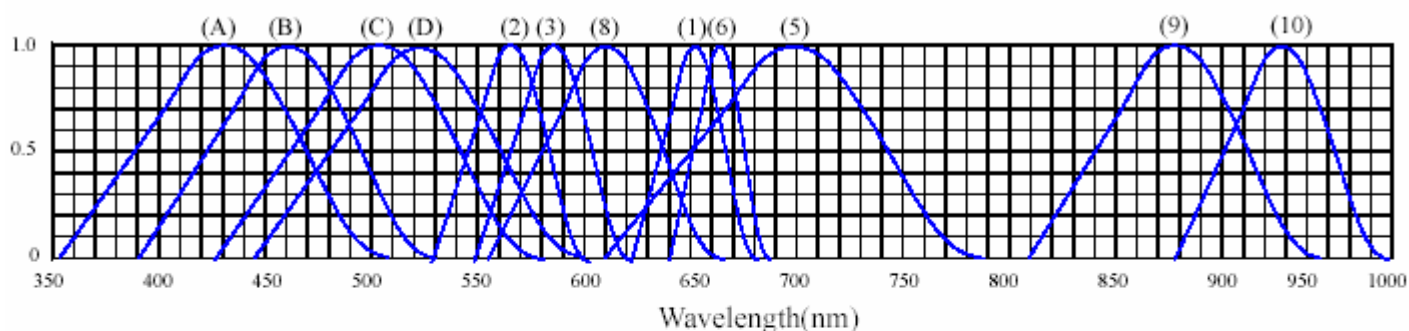
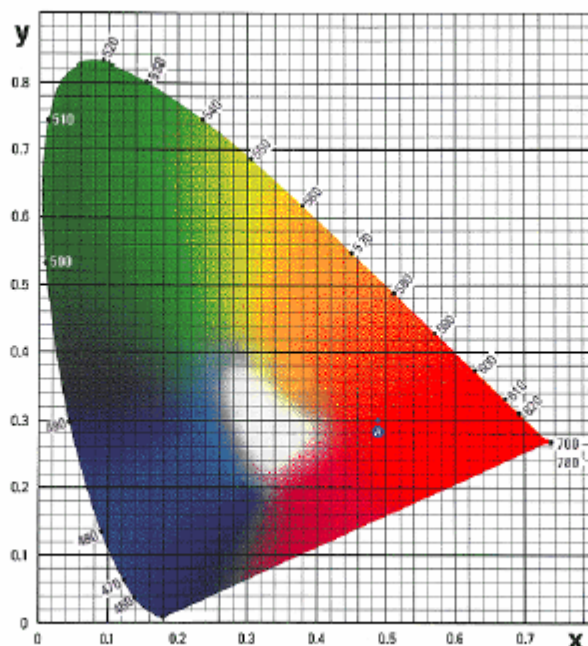
Diff No.

3 mm

Round

Type : LED Lamps

◆ 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

Part No.

**AL-314B3C-A**

Diff No.

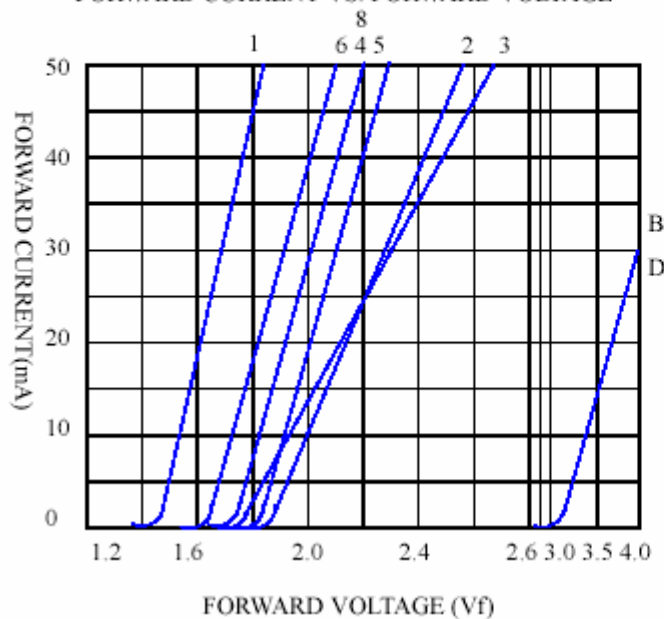
3 mm

Round

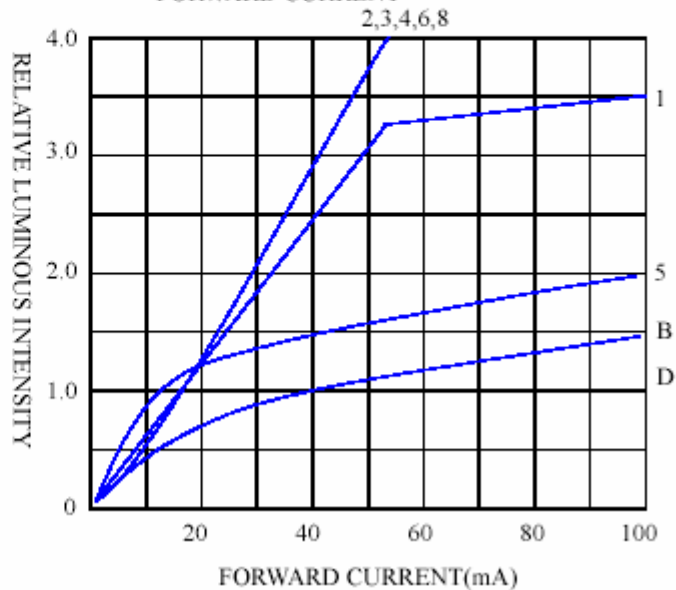
Type : LED Lamps

◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

