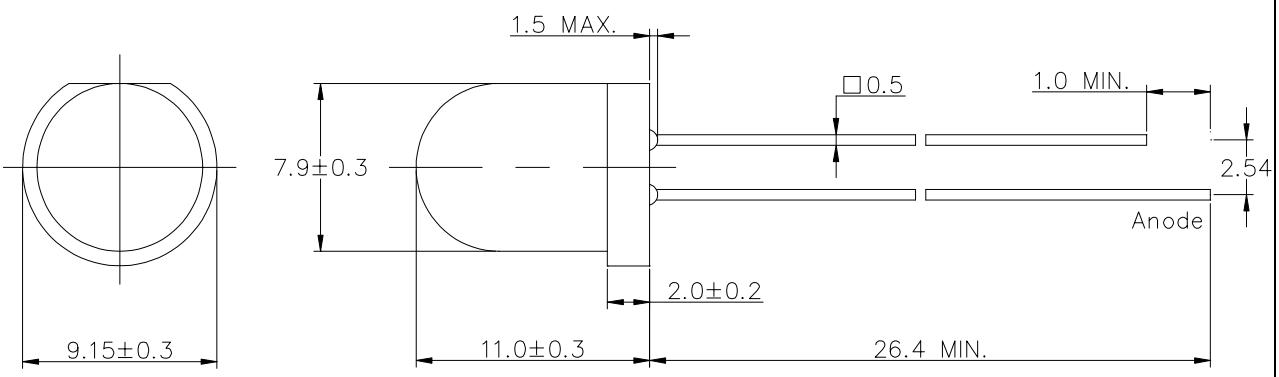
Part No. **AL-813W2C** Diff No.

8 mm Round Type : LED Lamps

Package Dimension：




Notes:
1. All dimensions are in millimeter.
2.An epoxy meniscus may extend about.
1. 5mm(0.059") down to the lead
3.Tolerances unless Dimension ±0.25mm

■ Features：

- Choice of various viewing angles.
- Available on Tape and Reel.
- Reliable and robust.

■ Descriptions：

- The series is specially designed for application requiring higher brightness.
- The LED lamps are available with different color, intensities, epoxy colors etc.

■ Applications：

- TV set
- Monitor
- Telephone

# Part No. **AL-813W2C** Diff No.

## 8 mm Round Type : LED Lamps

| PART NO. | Chip | | Lens Color |
|---|---|---|---|
| | Material | Emitted Color | |
| AL-813W2C | InGaN / SiC | White | Water Clear |

■ Absolute Maximum Ratings at Ta=25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Forward Current | $I_F$ | 30 | mA |
| Operating Temperature | Topr | -40 to +85 | ℃ |
| Storage Temperature | Tstg | -40 to +85 | ℃ |
| Soldering Temperature | Tsol | 260 ±5 | ℃ |
| Electrostatic Discharge | ESD | 1000 | V |
| Power Dissipation | $P_D$ | 130 | mW |
| Peak Forward Current (Duty 1/10@1KHz) | $I_F$ (Peak) | 100 | mA |
| Reverse Voltage | $V_R$ | 5 | V |

■ Electronic Optical Characteristics：

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|---|---|---|---|---|---|---|
| Luminous Intensity | $I_V$ | 3500 | 5000 | ／ | mcd | $I_F$=20mA |
| Viewing Angle | 2θ1/2 | ／ | 25 | ／ | deg | $I_F$=20mA |
| Chromaticity Coordinates | X | ／ | 0.31 | ／ | ／ | $I_F$=20mA |
| | Y | ／ | 0.32 | ／ | ／ | $I_F$=20mA |
| Forward Voltage | $V_F$ | ／ | 3.50 | 4.30 | V | $I_F$=20mA |
| Reverse Current | $I_R$ | ／ | ／ | 50 | μA | $V_R$=5V |

Part No. **AL-813W2C** Diff No.

8 mm Round Type : LED Lamps

■ Reliability test items and conditions：

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

Part No. **AL-813W2C** Diff No.

8 mm Round Type : LED Lamps

■ Color Ranks

| | Rank a | | | |
|---|---|---|---|---|
| x | 0.280 | 0.264 | 0.283 | 0.296 |
| y | 0.248 | 0.267 | 0.305 | 0.276 |

Approximate Color Temperature : 6500-10000K

| | Rank b1 | | | |
|---|---|---|---|---|
| x | 0.287 | 0.283 | 0.330 | 0.330 |
| y | 0.295 | 0.305 | 0.360 | 0.339 |

Approximate Color Temperature : 5500-6500K

| | Rank b2 | | | |
|---|---|---|---|---|
| x | 0.296 | 0.287 | 0.330 | 0.330 |
| y | 0.276 | 0.295 | 0.339 | 0.318 |

Approximate Color Temperature : 5500-6500K

| | Rank C | | | |
|---|---|---|---|---|
| x | 0.330 | 0.330 | 0.361 | 0.356 |
| y | 0.318 | 0.360 | 0.385 | 0.351 |

Approximate Color Temperature : 4500-5500K

■ CIE Chromatacity Diagram

