

Part No. AL-513GT

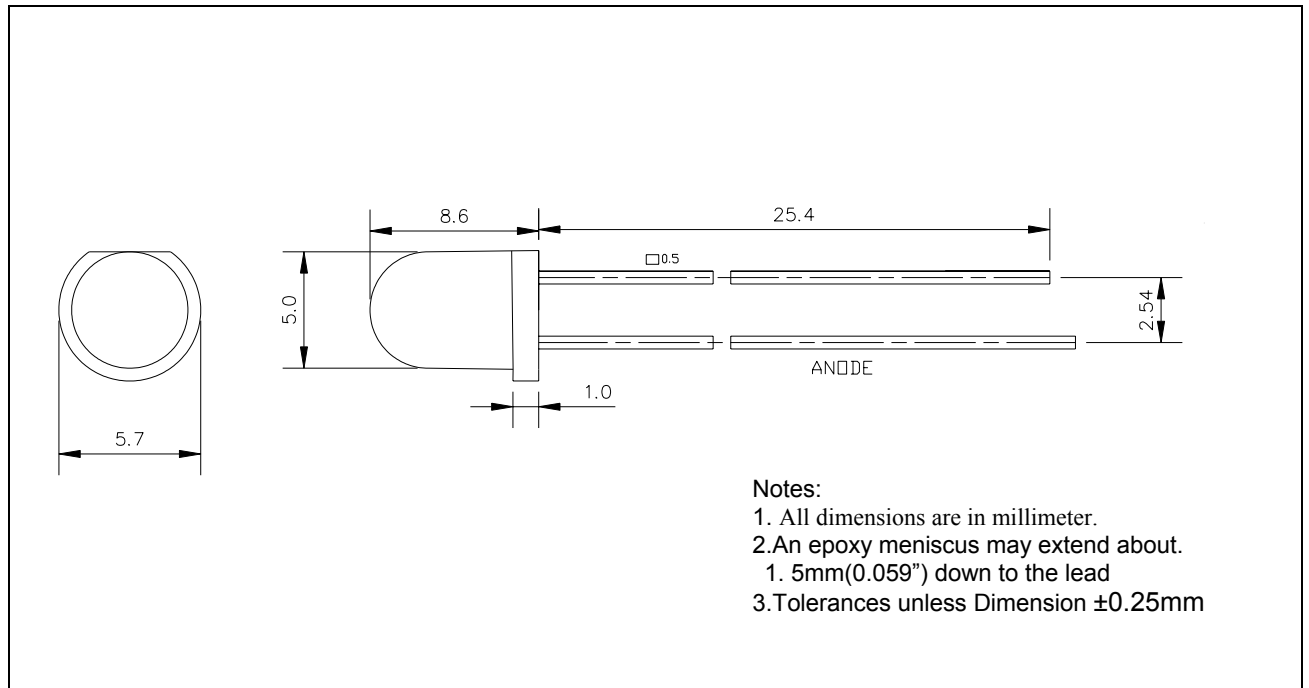
Diff No.

5 mm

Type

LED Lamps

Package Dimension:



■ 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 colors, intensity, epoxy colors etc.

■ Applications:

- TV set
- Monitor
- Telephone

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| PART NO. | Chip | | Lens Color |
|----------|----------|---------------|-------------------|
| | Material | Emitted Color | |
| AL-513GT | GaP | YELLOW/GREEN | Color Transparent |

■ Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Rating | Unit |
|------------------------------------------|----------|-------------|------|
| Forward Current | IF | 30 | mA |
| Operating Temperature | Topr | -40 to +85 | °C |
| Storage Temperature | Tstg | -40 to +100 | °C |
| Soldering Temperature | Tsol | 260 ±5 | °C |
| Electrostatic Discharge | ESD | 1000 | V |
| Power Dissipation | Pd | 100 | mW |
| Peak Forward Current (Duty 1/10@1KHz) | IF(Peak) | 160 | mA |
| Reverse Voltage | VR | 5 | V |

■ Electronic Optical Characteristics :

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|------------------------------|--------|------|------|------|------|-----------|
| Luminous Intensity | IV | 2.0 | 10.0 | / | mcd | IF=20mA |
| Viewing Angle | 2θ 1/2 | / | 36 | / | deg | IF=20mA |
| Peak Wavelength | λ p | / | 568 | / | nm | IF=20mA |
| Dominant Wavelength | λ d | / | 570 | / | nm | IF=20mA |
| Spectrum Radiation Bandwidth | △ λ | / | 30 | / | nm | IF=20mA |
| Forward Voltage | VF | / | 2.1 | 2.4 | V | IF=20mA |

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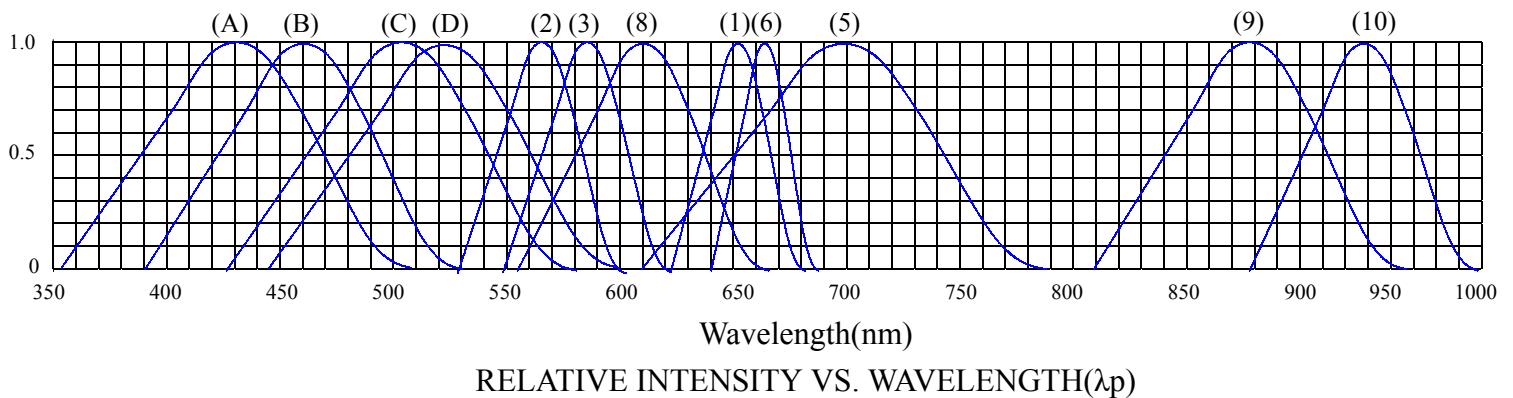
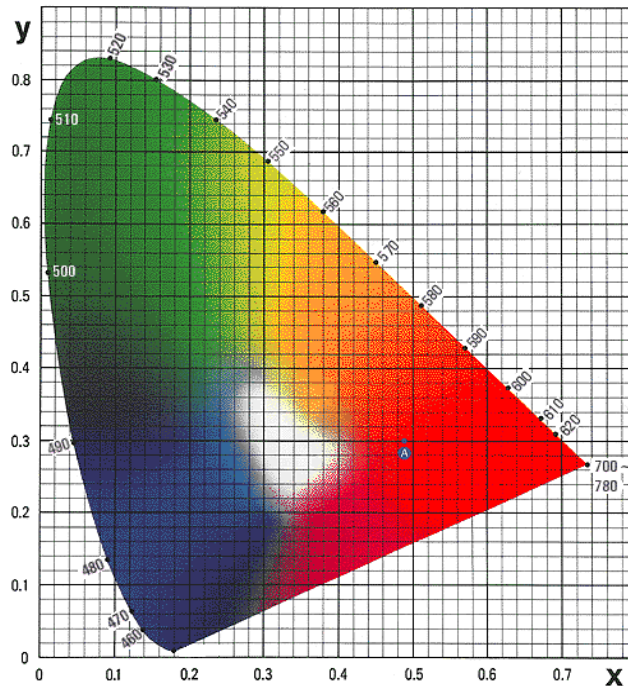
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Reliability test items and conditions :

| 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 ∩ 5min L:-55°C 30min | 50 CYCLES | 76 PCS | 0/1 |
| 3 | Thermal Shock | H:+100°C 5min ∩ 10set 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 IF=20mA | 1000 HRS | 76 PCS | 0/1 |
| 7 | High Temperature/High Humidity | 85°C/85%RH | 1000 HRS | 76 PCS | 0/1 |

◆ TYPICAL ELECTRICAL-OPTICAL CHARACTERISTICS CURVES

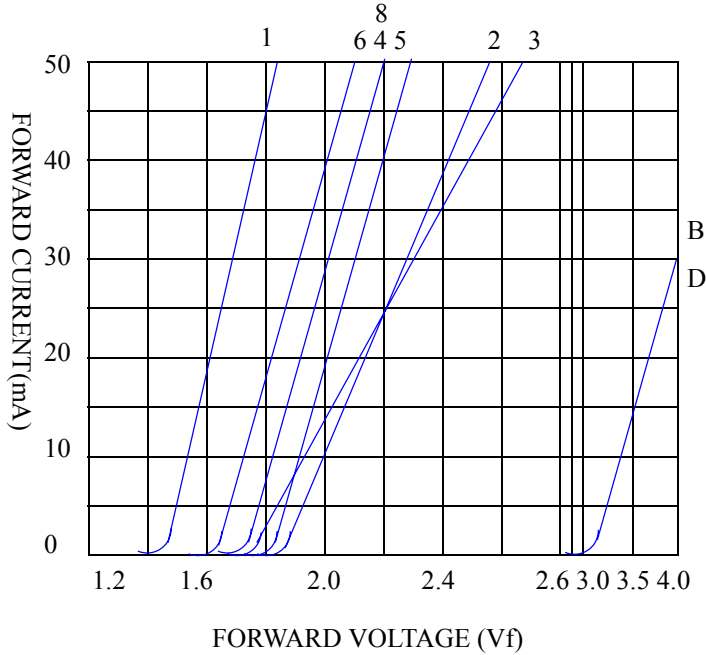


- (1) GaAsP/GaAs 655nm/Red
- (2) GaP 568nm/ Yellow Green
- (3) GaAsP/GaP 585nm/Yellow
- (4) GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) GaP 700nm/Bright Red
- (6) GaAlAs/GaAs 660nm/Super Red
- (8) GaAsP/GaP 610nm/Super Red

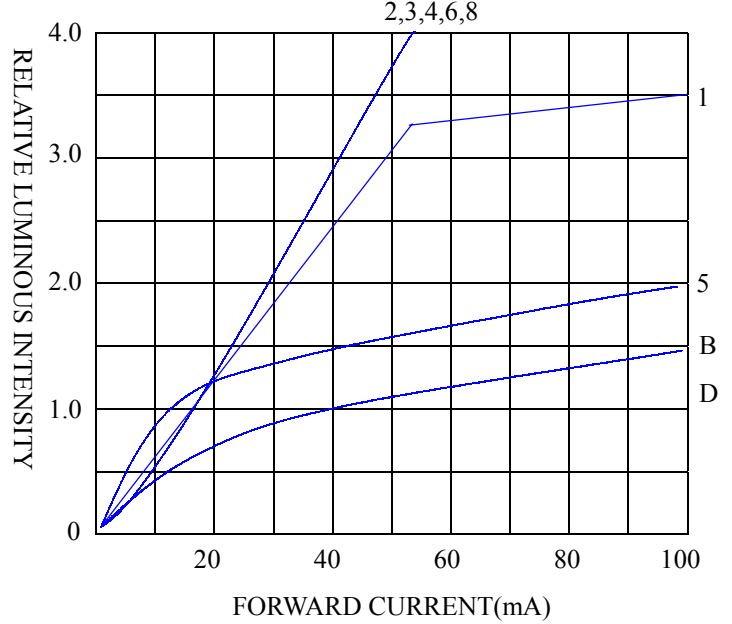
- (9)- GaAlAs 880nm
- (10)-GaAs/GaAs&GaAlAs/GaAs 940nm
- (A)- GaN 430nm/Blue
- (B)- InGaN 470nm/Blue
- (C)- InGaN 502nm/Ultra Green
- (D)- InGaN 523nm/Ultra Green

◆ CHARACTERISTICS DIAGRAMS

FORWARD CURRENT VS. FORWARD VOLTAGE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



FORWARD CURRENT VS. AMBIENT TEMPERATURE

