

Electrical/Optical characteristics at T_A = 25°C

| Parameter | Symbol | Min. | Type | Max. | Unit | Test |
|--|-----------|------|------|------|------|-----------|
| Luminous Intensity | IV | 18.5 | 36 | 45 | mcd | IF = 20mA |
| Viewing Angle | 2θ½ | | 120 | | Deg. | IF = 20mA |
| Peak Emission Wavelength | λp | | 571 | | nm | |
| Dominant Wavelength | λD | 567 | 571 | 577 | nm | IF = 20mA |
| Spectral Line Half-Width | Δλ | | 30 | | nm | |
| Forward Voltage | VF | 1.8 | 2.1 | 2.3 | V | IF = 20mA |
| Power Dissipation | Pd | | | 78 | mW | |
| Peak Forward Current (Duty1/10 @ 1kHz) | IF (Peak) | | | 60 | mA | |
| Recommended Operating Current | IF (Rec) | | 30 | | mA | |

Absolute Maximum Ratings : (T_A = 25°C)

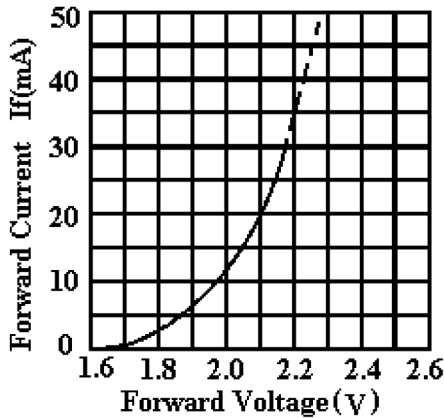
| | |
|---|------------------------------|
| Reverse Voltage | : 5 Volt |
| Reverse Current | : 10μA (V _R = 5V) |
| Operating Temperature Range | : -40°C to +85°C |
| Storage Temperature Range | : -40°C to +100°C |
| Lead Soldering Temperature Range {1.6mm (1/16 inch) from body} | : 260°C For 5 Seconds |

Reliability test For LED Lamps

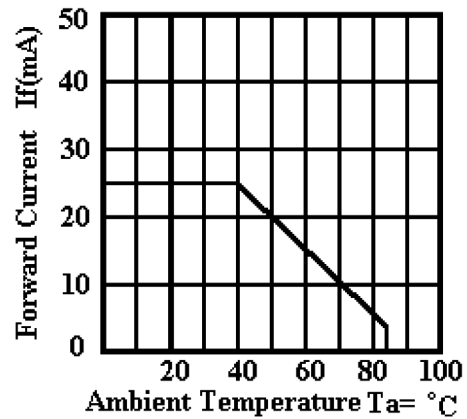
| Item | Test Conditions | Test Time/Cycle | Sample Size | Ac/Re |
|--------------------------------|--|-----------------|-------------|-------|
| DC Operating Life | Temperature : 25°C IF : 20mA | 1,000 Hrs. | 76 Pcs. | 0/1 |
| High Temperature High Humidity | Temperature : 85°C 85%RH | | | |
| High Temperature Storage | Temperature : 100°C | | | |
| Low Temperature Storage | Temperature : -40°C | | | |
| Temperature Cycling | 85°C~ 25°C~-35°C 15min~ 5min~ 15min | 15 Cycles | | |
| Thermal Shock | 85°C~ 25°C~-10°C 5min~ 10sec ~ 5min | | | |
| Solder Heat | Temperature : 260°C ±5°C | 10 Sec. | | |

Typical Electro-Optical Characteristics Curves

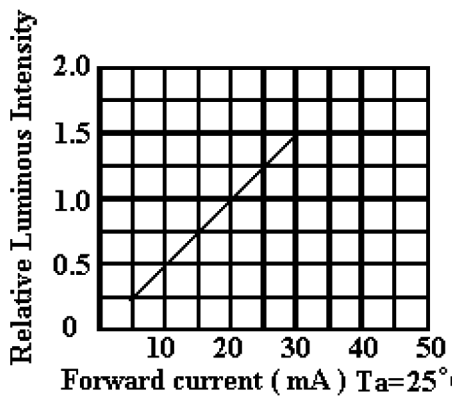
Super Green (AlInGaP $\lambda_P=570\text{nm}$)



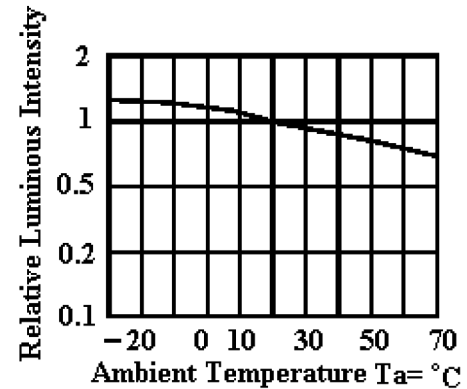
Forward current vs. Forward Voltage



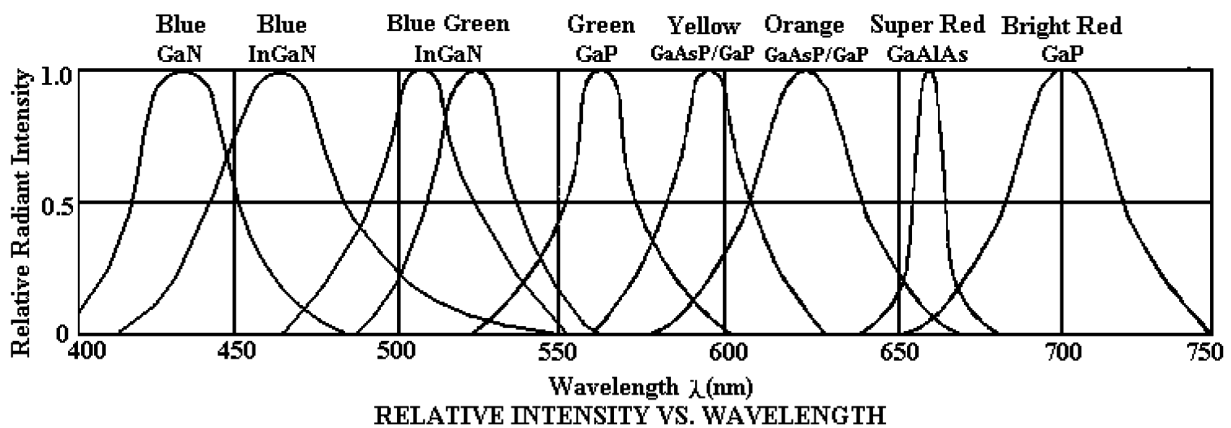
Forward current Derating curve



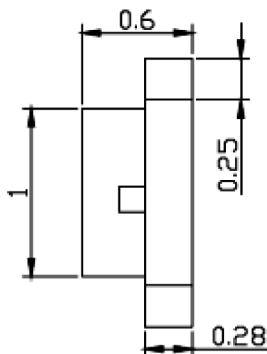
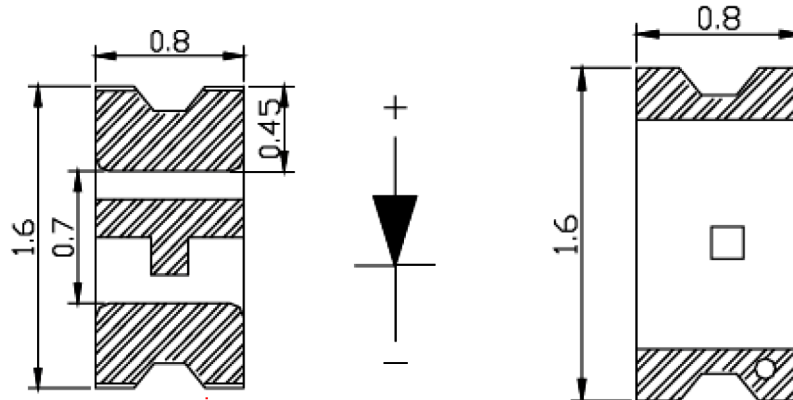
Luminous Intensity vs. Forward current



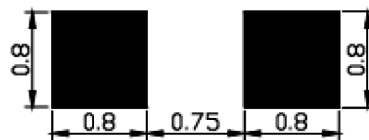
Luminous Intensity vs. Ambient Temperature



Dimensions:



Recommended soldering pad design



Dimensions : Millimetres
 All tolerance shall be
 $\pm 0.02\text{mm}$

Part Number Table

| Description | Part Number |
|---------------------------------|----------------|
| LED, 0.8mm, Green, 36mcd, 571nm | MCL-S291SGC-ML |

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