

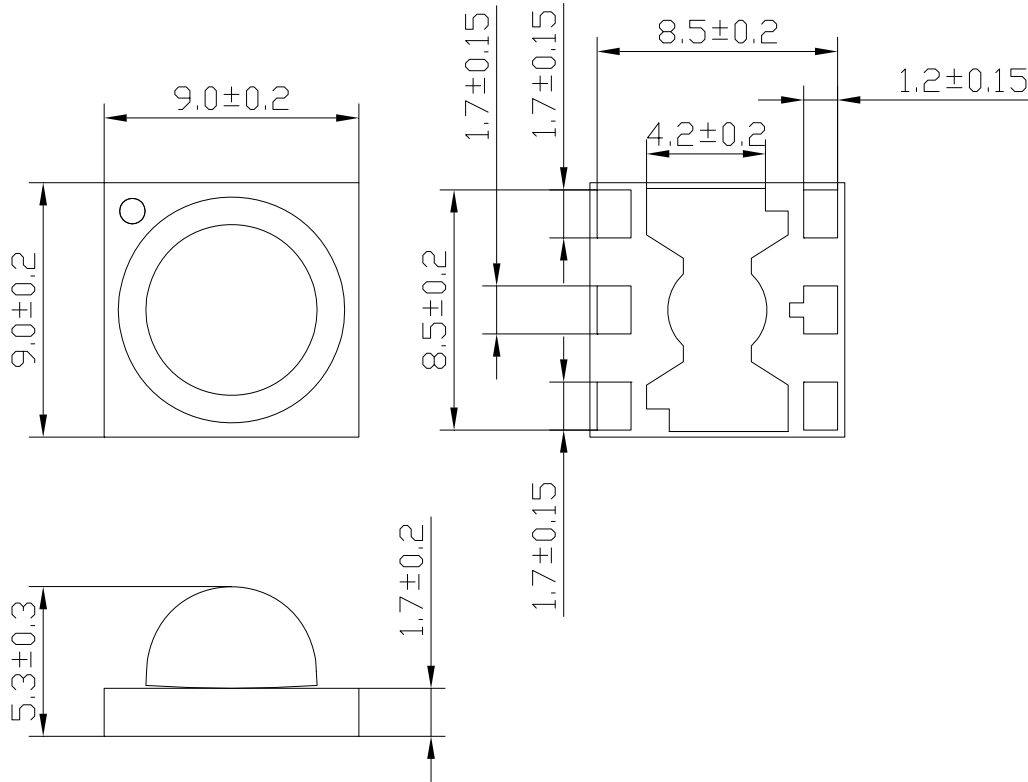


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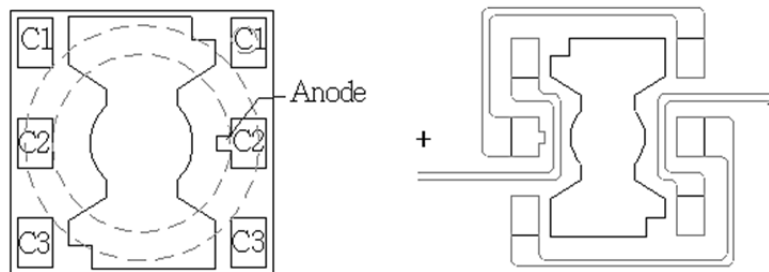
L999-UV395

9.0 x 9.0 x 5.3 mm Dome Lens UV SMD LED

PACKAGE OUTLINES



PAD CONFIGURATION



| Part Number | Chip Material | Peak Wavelength | Viewing Angle |
|-------------|---------------|-----------------|---------------|
| L990-UV395 | InGaN | 395nm | 70° |



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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

| Parameter | Symbol | Value | Unit |
|-----------------------------------|----------------|---------------------|------|
| Forward Current | I_F | 700 | mA |
| Forward Pulse Current* | I_{FP} | 1000 | mA |
| Power Dissipation | P_D | 9 | W |
| Thermal Resistance, Junction-Case | $R_{th, J-C1}$ | 3.3 | °C/W |
| LED Junction Temperature | T_J | 125 | °C |
| Operating Temperature Range | T_{OPR} | -40~+80 | °C |
| Storage Temperature Range | T_{STG} | -40~+120 | °C |
| Soldering Condition | T_{SOL} | 260°C for 5 seconds | |

*Note: Forward Pulse Current=1/10 Duty Cycle, 400msec Pulse Width

OPTICAL-ELECTRO CHARACTERISTICS

(Ta=25°C)

| Parameter | Test Condition | Symbol | Min | Typ | Max | Unit |
|--------------------|----------------|-----------------|------|------|-----|------|
| Forward Voltage | $I_F=700mA$ | V_F | -- | 11.2 | -- | V |
| Radiant Flux | | Φ_e | 1050 | 1650 | -- | mW |
| Peak Wavelength | | λ_P | -- | 395 | -- | Nm |
| Spectra Half-Width | | $\Delta\lambda$ | -- | 15 | -- | Nm |



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CHARACTERISTIC DIAGRAM

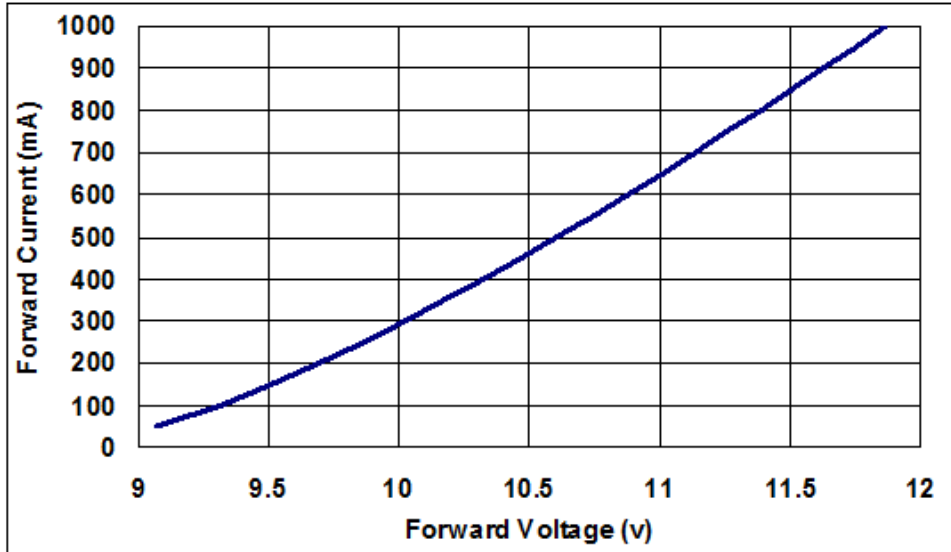


Fig. Forward Current vs. Forward Voltage

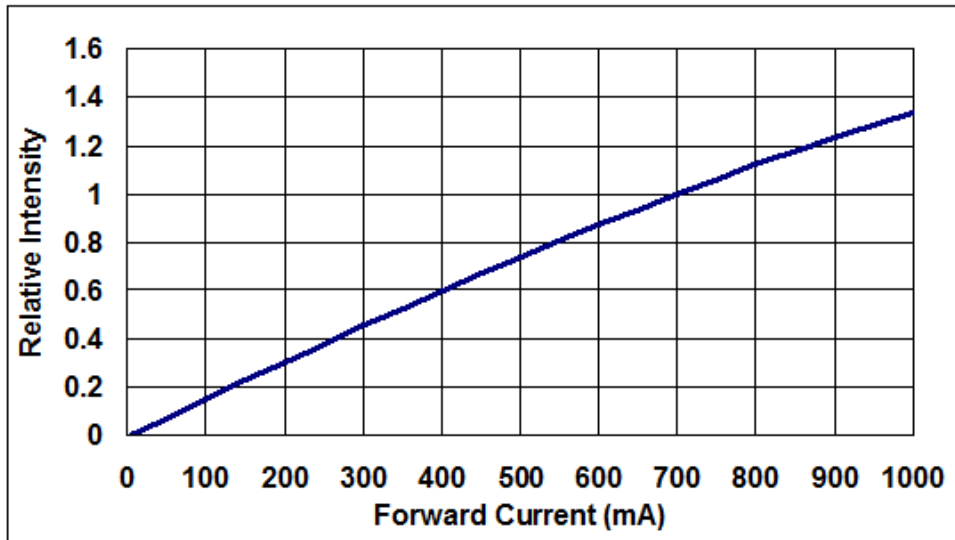


Fig. Relative Intensity vs. Forward Current



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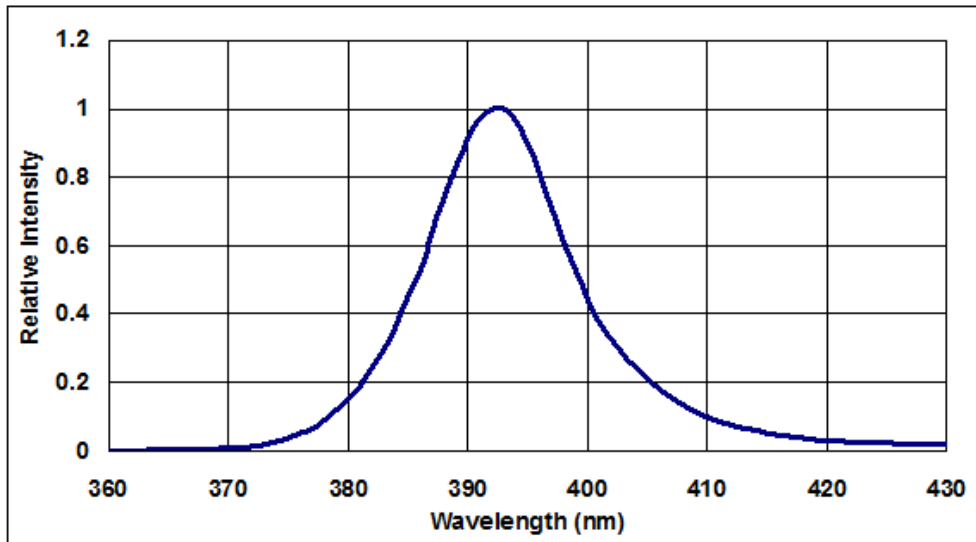


Fig. Typical Relative Intensity vs. wavelength

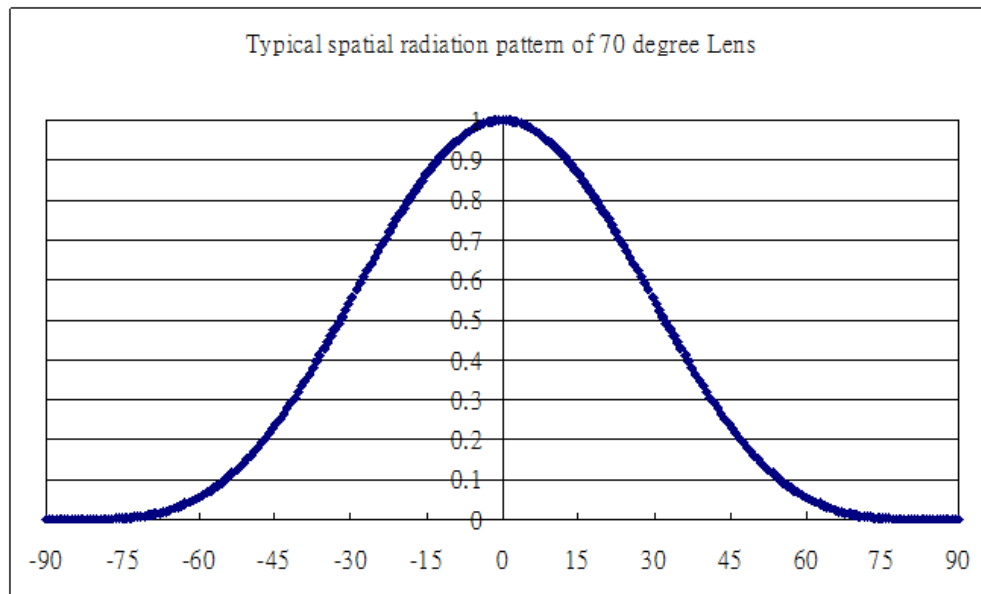


Fig. (70° Lens) Typical Representative Spatial Radiation Pattern

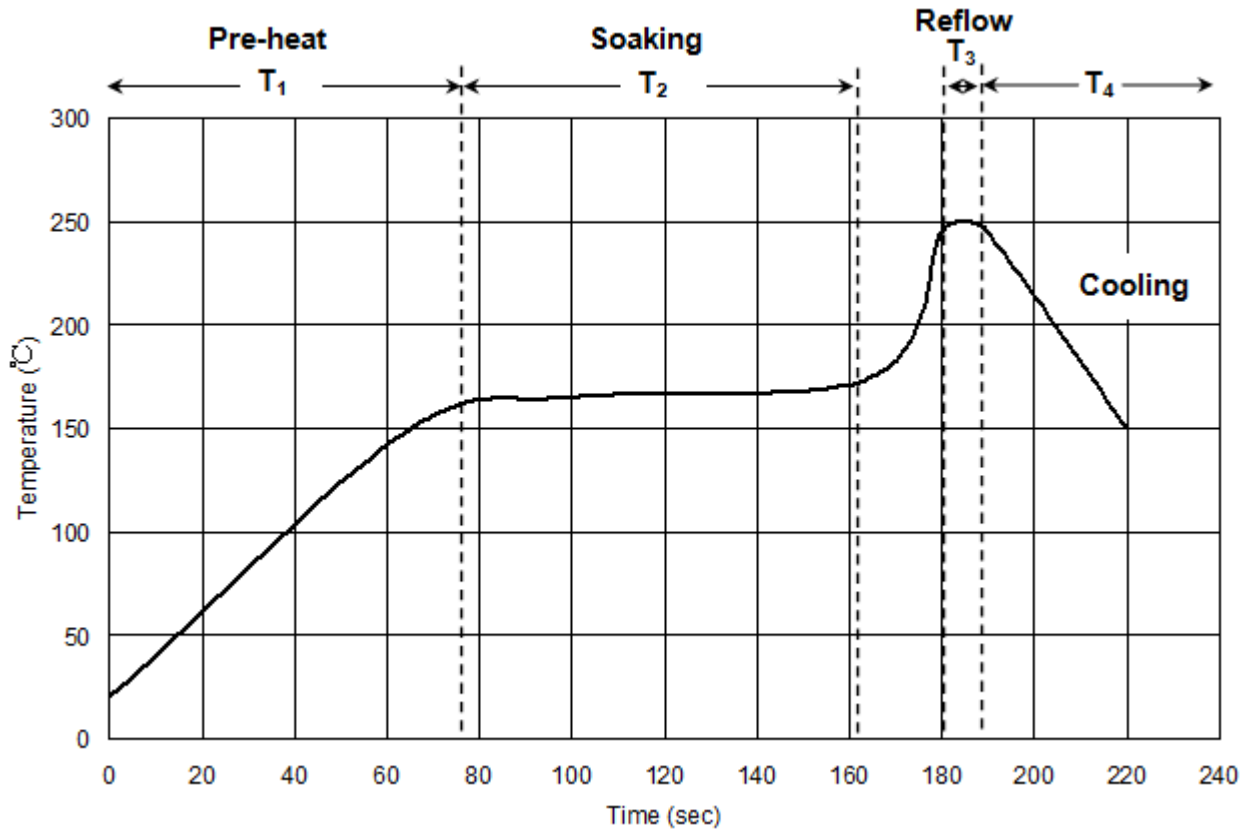


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REFLOW SOLDERING CHARACTERISTICS



| | | |
|----|----------------------------|----------------|
| T1 | Ramp up rate | 1.0~3.0 °C/sec |
| | Pre-heat time | 50~80 sec |
| T2 | Soaking temperature | 155~185 °C |
| | Dwell time during soaking | 60~120 sec |
| T3 | Reflow temperature | 240~250 °C |
| | Reflow time | Max 10 sec |
| T4 | Ramp up rate during reflow | 1.2~2.3 °C/sec |
| | Cooling | 1.0~6.0 °C.sec |

Note: suggest using Sn96Ag3Cu0.5 lead free solder



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RELIABILITY TEST

| Classification | Test Item | Test conditions | Reference Standard |
|--------------------|--|---|--|
| Endurance Test | Operation Life | $I_f = 700\text{mA}$ $T_a = 25^\circ\text{C}$ Test Duration = 1000hrs | MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1 |
| | High Temperature High Humidity Storage | $I_f = 700\text{mA}$ $T_a = 85 \pm 5^\circ\text{C}$ RH = 85 \pm 5% Test Duration = 1000hrs | MIL-STD-202: 103B JIS C 7021: B-11 |
| | High Temperature Storage | $T_a = 105 \pm 5^\circ\text{C}$ Test Duration = 1000hrs | MIL-STD-202: 1008 JIS C 7021: B10 |
| | Low Temperature Storage | $T_a = -40 \pm 5^\circ\text{C}$ Test Duration = 1000hrs | JIS C 7021: B-12 |
| Environmental Test | Temperature Cycling | $-40^\circ\text{C} \sim 25^\circ\text{C} \sim 105^\circ\text{C} \sim 25^\circ\text{C}$ 30min 5min 30min 5min Test Duration = 10 cycle | MIL-STD-202: 107D MIL-STD-750: 1051 MIL-STD-883: 1010 JIS C 7021: A-4 |
| | Thermal Shock | $-55 \pm 5^\circ\text{C} \sim 105 \pm 5^\circ\text{C}$ 30min 30min Test Duration = 10 cycle | MIL-STD-202: 107D MIL-STD-750: 1051 MIL-STD-883: 1011 |
| | Solder Resistance | $T_{\text{sol}} = 260 \pm 5^\circ\text{C}$ Dwell Time = 10sec | MIL-STD-202: 210A MIL-STD-750: 2031 JIS C 7021: A-1 |
| Measuring Items | Symbol | Measuring Conditions | Failure Criteria |
| Forward voltage | V_f | $I_f = 700\text{mA}$ | V_f shift > 10% |
| Luminous | $I_v\%$ | $I_f = 700\text{mA}$ | $I_v\%$ shift > 10% |