

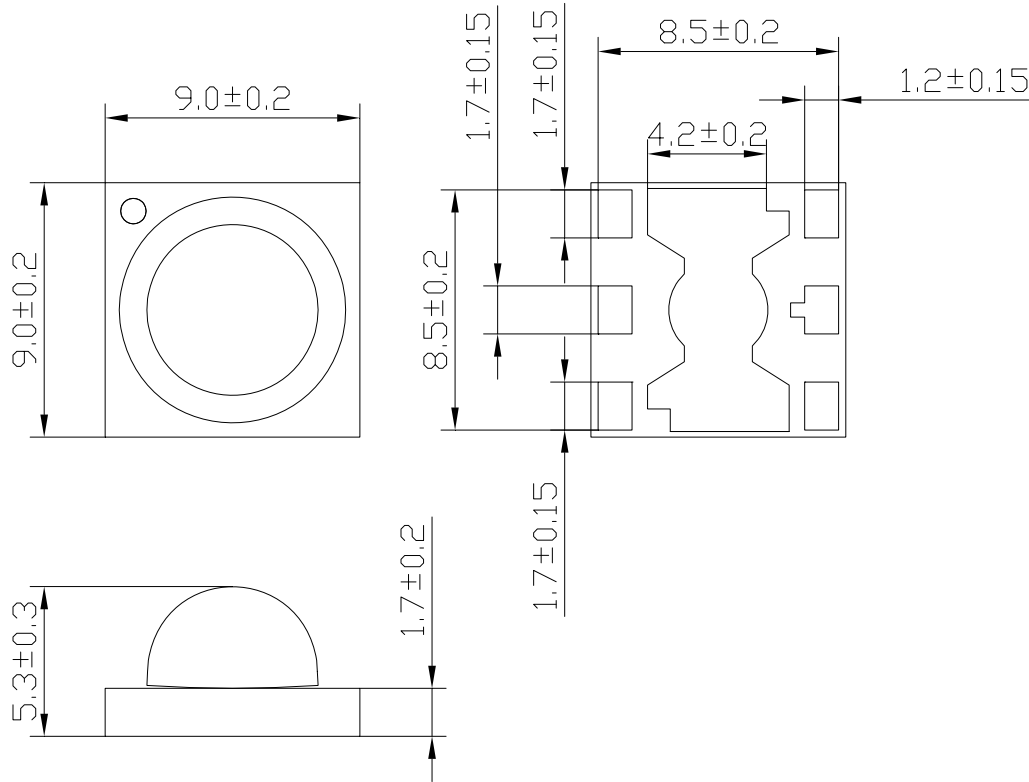


# American Opto Plus LED Corp.

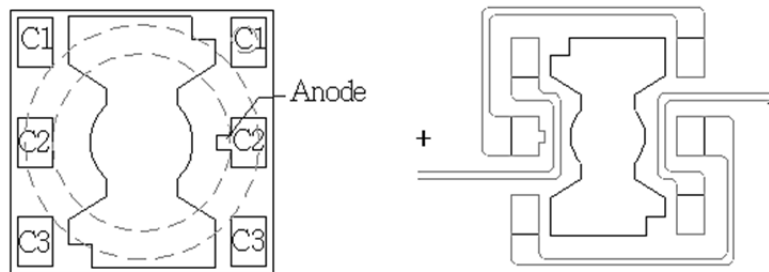
## L999-UV365

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-UV365  | InGaN         | 365nm           | 70°           |



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## L999-UV365

9.0 x 9.0 x 5.3 mm Dome Lens UV SMD LED

### ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

| Parameter                         | Symbol         | Value               | Unit |
|-----------------------------------|----------------|---------------------|------|
| Forward Current                   | $I_F$          | 1000                | mA   |
| Forward Pulse Current*            | $I_{FP}$       | 700                 | 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       |                | $\Phi_e$        | 225 | 360  | --  | mW   |
| Peak Wavelength    |                | $\lambda_P$     | --  | 365  | --  | Nm   |
| Spectra Half-Width |                | $\Delta\lambda$ | --  | 15   | --  | Nm   |



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### CHARACTERISTIC DIAGRAM

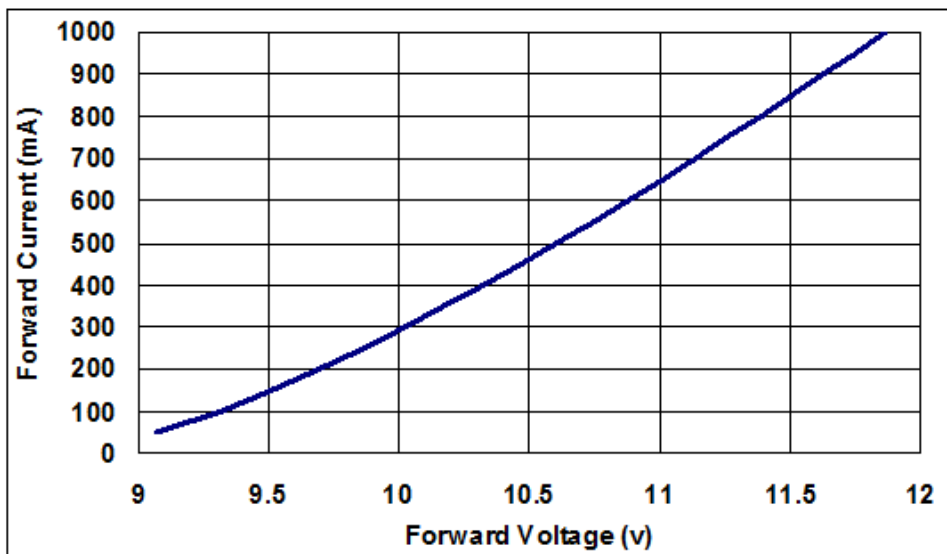


Fig. Forward Current vs. Forward Voltage

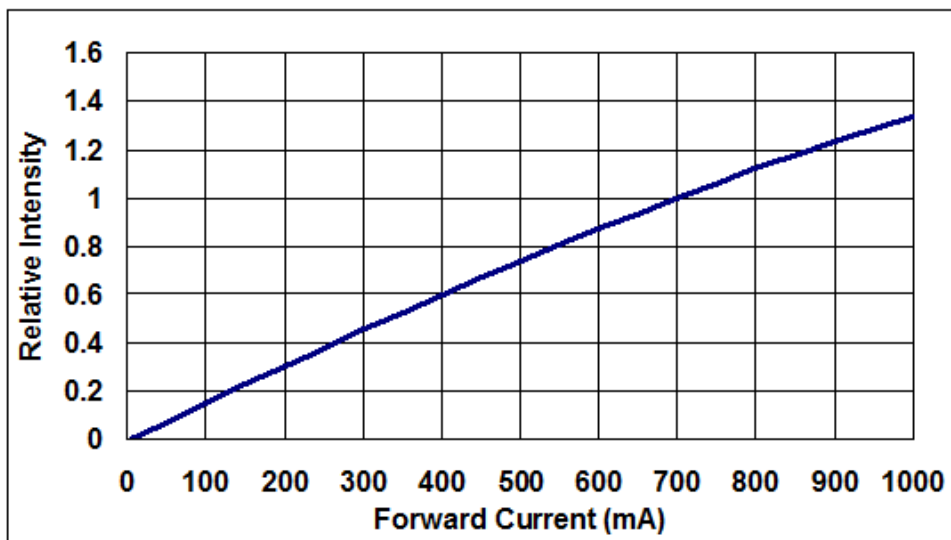


Fig. Relative Intensity vs. Forward Current



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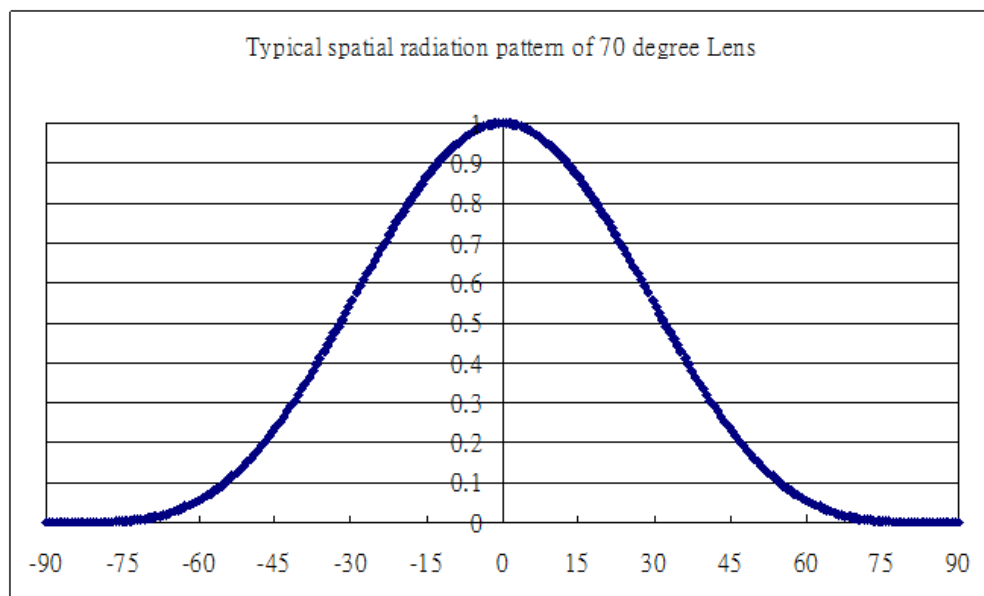
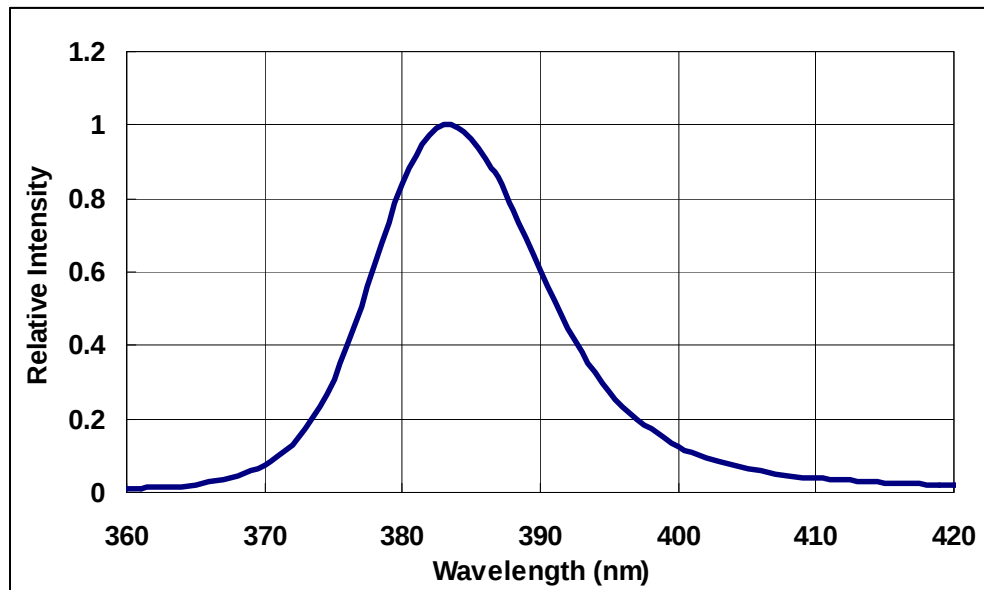


Fig. (70° Lens) Typical Representative Spatial Radiation Pattern

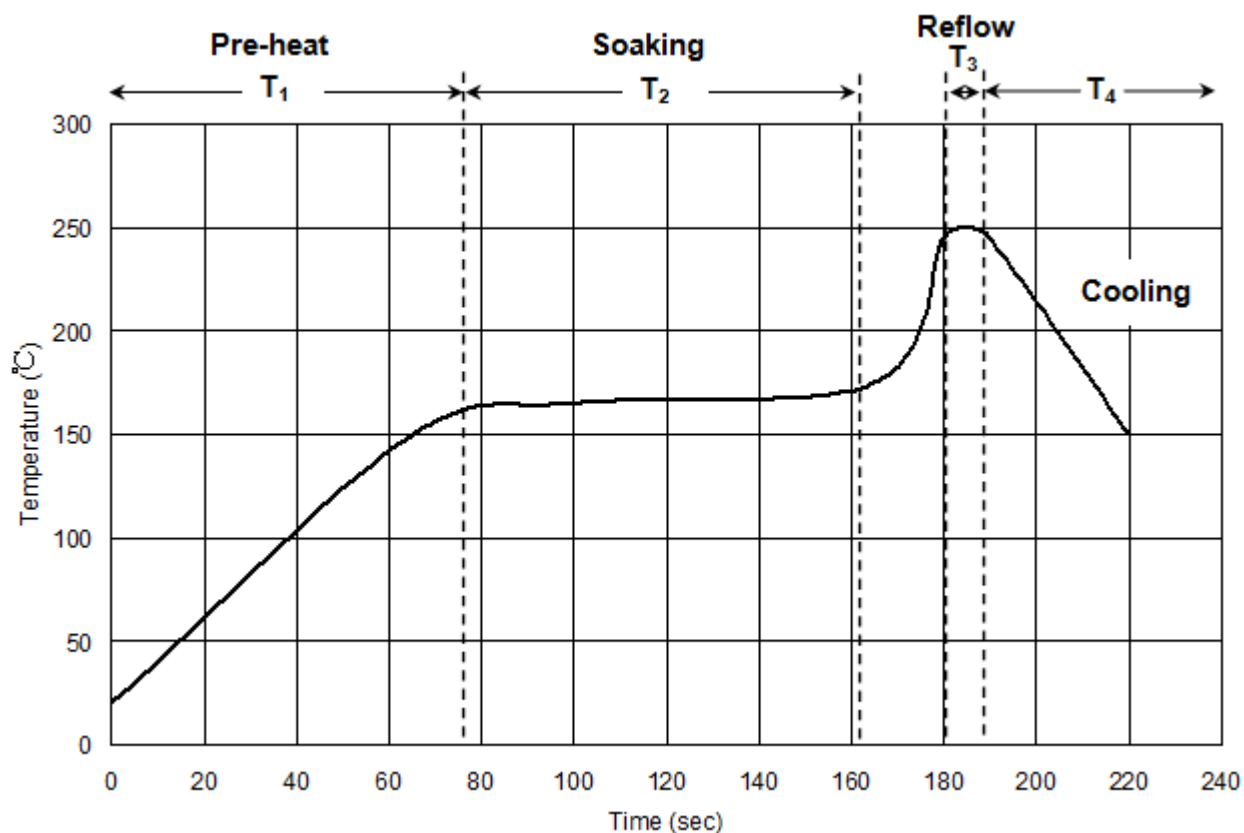


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## L999-UV365

9.0 x 9.0 x 5.3 mm Dome Lens UV SMD LED

### 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

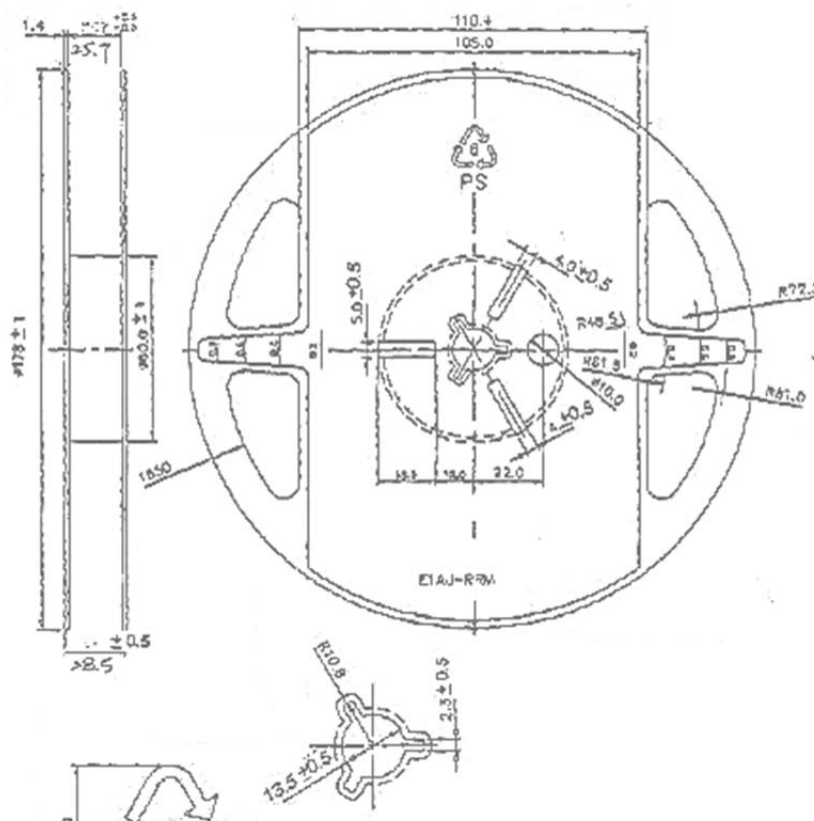
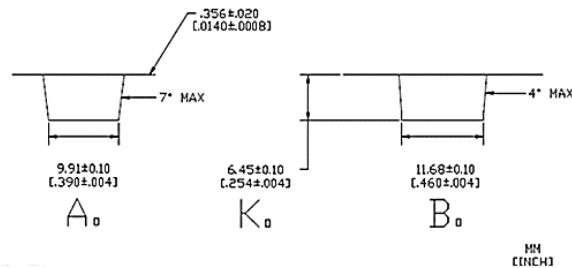
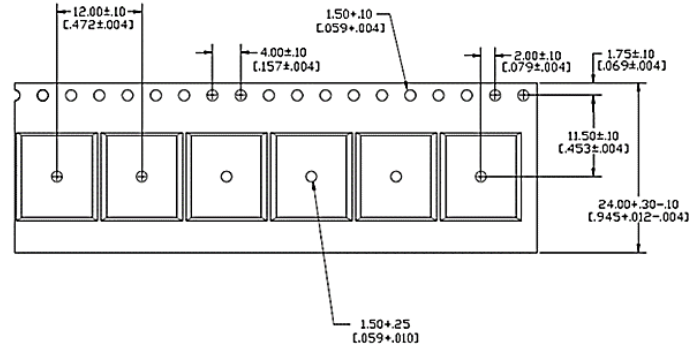


# American Opto Plus LED Corp.

## L999-UV365

9.0 x 9.0 x 5.3 mm Dome Lens UV SMD LED

### SHIPPING PACKAGE DIMENSIONS



- 150 (Max)/Reel

Version 1.0 Date: 01-20-2014 Specifications are subject to change without notice.

American Opto Plus LED Corp. 1206 E. Lexington Ave., Pomona CA 91766 Tel: 909-465-0080 Fax: 909-465-0130 [www.aopled.com](http://www.aopled.com)



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### RELIABILITY TEST

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