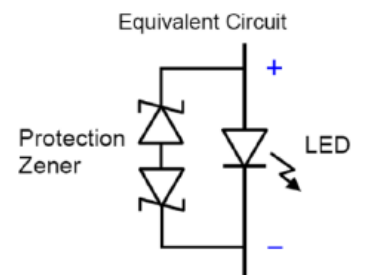
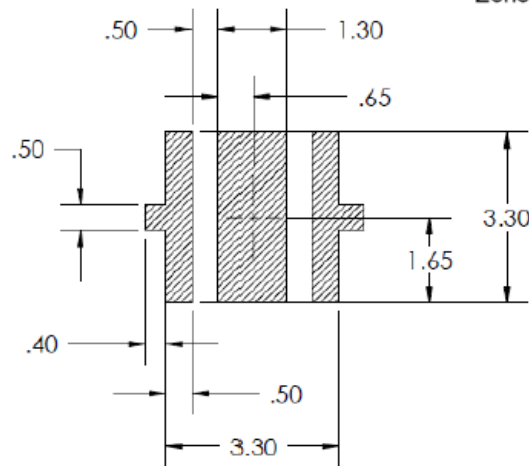
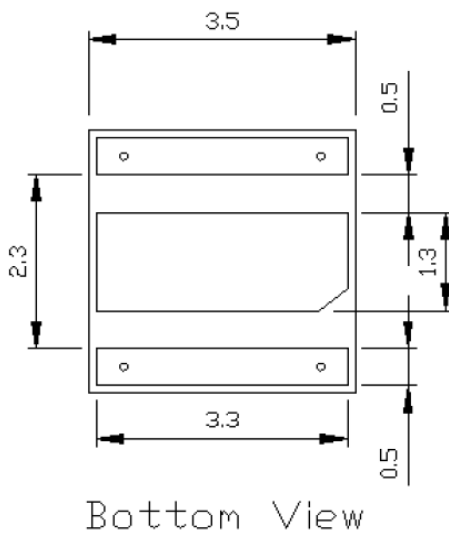
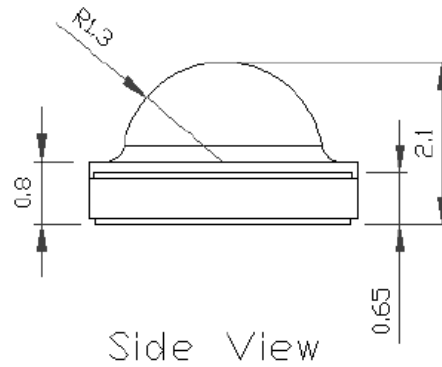
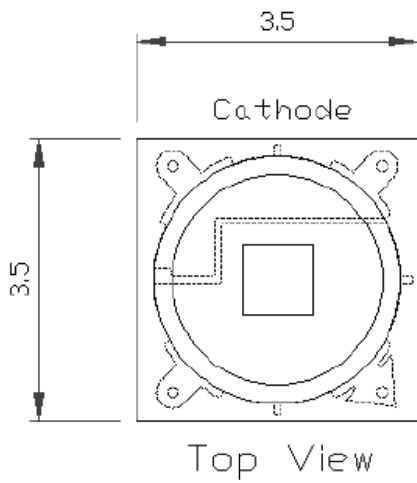
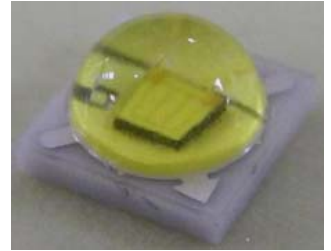


■ Package Dimension:



| Part NO. | Chip | Emitting Color | Lens Color |
|------------------|-------|----------------|-------------|
| AL-01CEW01WCP-A2 | InGaN | Cool White | Water Clear |

Notes:

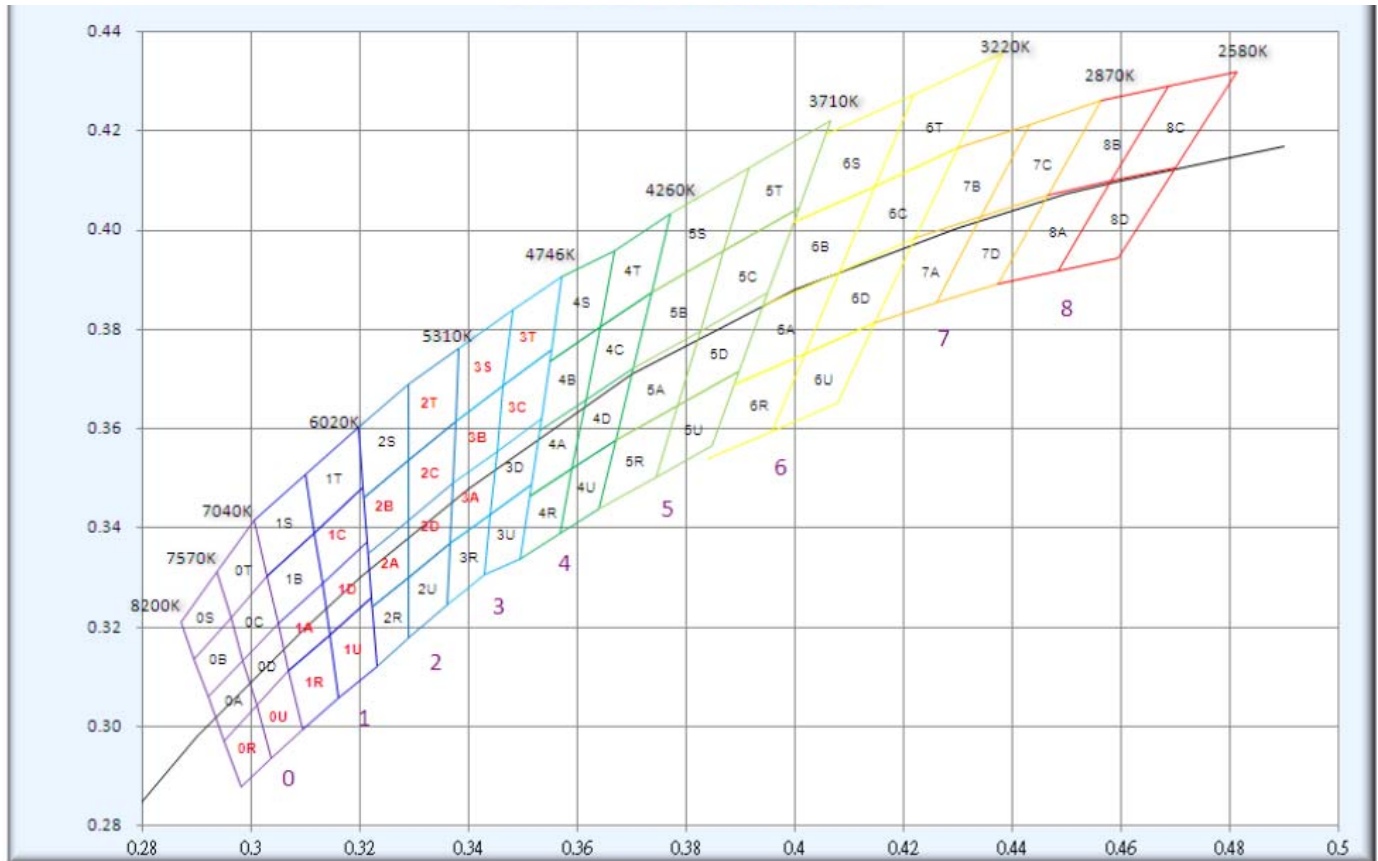
1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm(.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. This data-sheet only valid for six months.

■ Electrical Optical Characteristics at Ta=25°C

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|-------------------------|-------------------|------|-------|------|------|-----------------------|
| Luminous Flux | Φ_V | --- | 120 | --- | Lm | I _F =350mA |
| Forward Voltage | V _F | --- | 3.1 | 3.5 | V | I _F =350mA |
| Chromaticity Coordinate | X | --- | 0.329 | --- | --- | I _F =350mA |
| | Y | --- | 0.342 | --- | --- | |
| Color Temperature | CCT | --- | 5700 | --- | K | I _F =350mA |
| Color Render Index | CRI | 70 | --- | --- | --- | I _F =350mA |
| Reverse Current | I _R | --- | --- | 5 | μA | V _R =5V |
| Thermal Resistance | R _{th} | --- | 9 | --- | °C/W | --- |
| LED Junction Temp | T _j | --- | --- | 150 | °C | --- |
| Emission Angle | 2θ _{1/2} | --- | 120 | --- | Deg | I _F =350mA |

■ Chromaticity Coordinate

LED BINNING



| region | x | y | region | x | y | region | x | y | region | x | y |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0A | 0.2950 | 0.2970 | 0B | 0.2920 | 0.3060 | 0C | 0.2984 | 0.3133 | 0D | 0.2984 | 0.3133 |
| | 0.2920 | 0.3060 | | 0.2895 | 0.3135 | | 0.2962 | 0.3220 | | 0.3048 | 0.3207 |
| | 0.2984 | 0.3133 | | 0.2962 | 0.3220 | | 0.3028 | 0.3304 | | 0.3068 | 0.3113 |
| | 0.3009 | 0.3042 | | 0.2984 | 0.3133 | | 0.3048 | 0.3207 | | 0.3009 | 0.3042 |
| 0R | 0.2980 | 0.2880 | 0S | 0.2895 | 0.3135 | 0T | 0.2962 | 0.3220 | 0U | 0.3037 | 0.2937 |
| | 0.2950 | 0.2970 | | 0.2870 | 0.3210 | | 0.2937 | 0.3312 | | 0.3009 | 0.3042 |
| | 0.3009 | 0.3042 | | 0.2937 | 0.3312 | | 0.3005 | 0.3415 | | 0.3068 | 0.3113 |
| | 0.3037 | 0.2937 | | 0.2962 | 0.3220 | | 0.3028 | 0.3304 | | 0.3093 | 0.2993 |
| 1A | 0.3048 | 0.3207 | 1B | 0.3028 | 0.3304 | 1C | 0.3115 | 0.3391 | 1D | 0.3130 | 0.3290 |
| | 0.3130 | 0.3290 | | 0.3115 | 0.3391 | | 0.3205 | 0.3481 | | 0.3213 | 0.3373 |
| | 0.3144 | 0.3186 | | 0.3130 | 0.3290 | | 0.3213 | 0.3373 | | 0.3221 | 0.3261 |
| | 0.3068 | 0.3113 | | 0.3048 | 0.3207 | | 0.3130 | 0.3290 | | 0.3144 | 0.3186 |

■ Chromaticity Coordinate

| | | | | | | | | | | | |
|----|--------|--------|----|--------|--------|----|--------|--------|----|--------|--------|
| 1R | 0.3068 | 0.3113 | 1S | 0.3005 | 0.3415 | 1T | 0.3099 | 0.3509 | 1U | 0.3144 | 0.3186 |
| | 0.3144 | 0.3186 | | 0.3099 | 0.3509 | | 0.3196 | 0.3602 | | 0.3221 | 0.3261 |
| | 0.3161 | 0.3059 | | 0.3115 | 0.3391 | | 0.3205 | 0.3481 | | 0.3231 | 0.3120 |
| | 0.3093 | 0.2993 | | 0.3028 | 0.3304 | | 0.3115 | 0.3391 | | 0.3161 | 0.3059 |
| 2A | 0.3215 | 0.3350 | 2B | 0.3207 | 0.3462 | 2C | 0.3290 | 0.3538 | 2D | 0.3290 | 0.3417 |
| | 0.3290 | 0.3417 | | 0.3290 | 0.3538 | | 0.3376 | 0.3616 | | 0.3371 | 0.3490 |
| | 0.3290 | 0.3300 | | 0.3290 | 0.3417 | | 0.3371 | 0.3490 | | 0.3366 | 0.3369 |
| | 0.3222 | 0.3243 | | 0.3215 | 0.3350 | | 0.3290 | 0.3417 | | 0.3290 | 0.3300 |
| 2R | 0.3222 | 0.3243 | 2S | 0.3196 | 0.3602 | 2T | 0.3290 | 0.3690 | 2U | 0.3290 | 0.3300 |
| | 0.3290 | 0.3300 | | 0.3290 | 0.3690 | | 0.3381 | 0.3762 | | 0.3366 | 0.3369 |
| | 0.3290 | 0.3180 | | 0.3290 | 0.3538 | | 0.3376 | 0.3616 | | 0.3361 | 0.3245 |
| | 0.3231 | 0.3120 | | 0.3207 | 0.3462 | | 0.3290 | 0.3538 | | 0.3290 | 0.3180 |
| 3A | 0.3371 | 0.3490 | 3B | 0.3376 | 0.3616 | 3C | 0.3463 | 0.3687 | 3D | 0.3451 | 0.3554 |
| | 0.3451 | 0.3554 | | 0.3463 | 0.3687 | | 0.3551 | 0.3760 | | 0.3533 | 0.3620 |
| | 0.3440 | 0.3427 | | 0.3451 | 0.3554 | | 0.3533 | 0.3620 | | 0.3515 | 0.3487 |
| | 0.3366 | 0.3369 | | 0.3371 | 0.3490 | | 0.3451 | 0.3554 | | 0.3440 | 0.3427 |
| 3R | 0.3366 | 0.3369 | 3S | 0.3381 | 0.3762 | 3T | 0.3480 | 0.3840 | 3U | 0.3440 | 0.3428 |
| | 0.3440 | 0.3428 | | 0.3480 | 0.3840 | | 0.3571 | 0.3907 | | 0.3515 | 0.3487 |
| | 0.3429 | 0.3307 | | 0.3463 | 0.3687 | | 0.3551 | 0.3760 | | 0.3495 | 0.3339 |
| | 0.3361 | 0.3245 | | 0.3376 | 0.3616 | | 0.3463 | 0.3687 | | 0.3429 | 0.3307 |
| 4A | 0.3530 | 0.3597 | 4B | 0.3548 | 0.3736 | 4C | 0.3641 | 0.3804 | 4D | 0.3615 | 0.3659 |
| | 0.3615 | 0.3659 | | 0.3641 | 0.3804 | | 0.3736 | 0.3874 | | 0.3702 | 0.3722 |
| | 0.3590 | 0.3521 | | 0.3615 | 0.3659 | | 0.3702 | 0.3722 | | 0.3670 | 0.3578 |
| | 0.3512 | 0.3465 | | 0.3530 | 0.3597 | | 0.3615 | 0.3659 | | 0.3590 | 0.3521 |
| 4R | 0.3512 | 0.3465 | 4S | 0.3571 | 0.3907 | 4T | 0.3668 | 0.3957 | 4U | 0.3590 | 0.3521 |
| | 0.3590 | 0.3521 | | 0.3668 | 0.3957 | | 0.3771 | 0.4034 | | 0.3670 | 0.3578 |
| | 0.3567 | 0.3389 | | 0.3641 | 0.3804 | | 0.3736 | 0.3874 | | 0.3640 | 0.3440 |
| | 0.3495 | 0.3339 | | 0.3548 | 0.3736 | | 0.3641 | 0.3804 | | 0.3567 | 0.3389 |

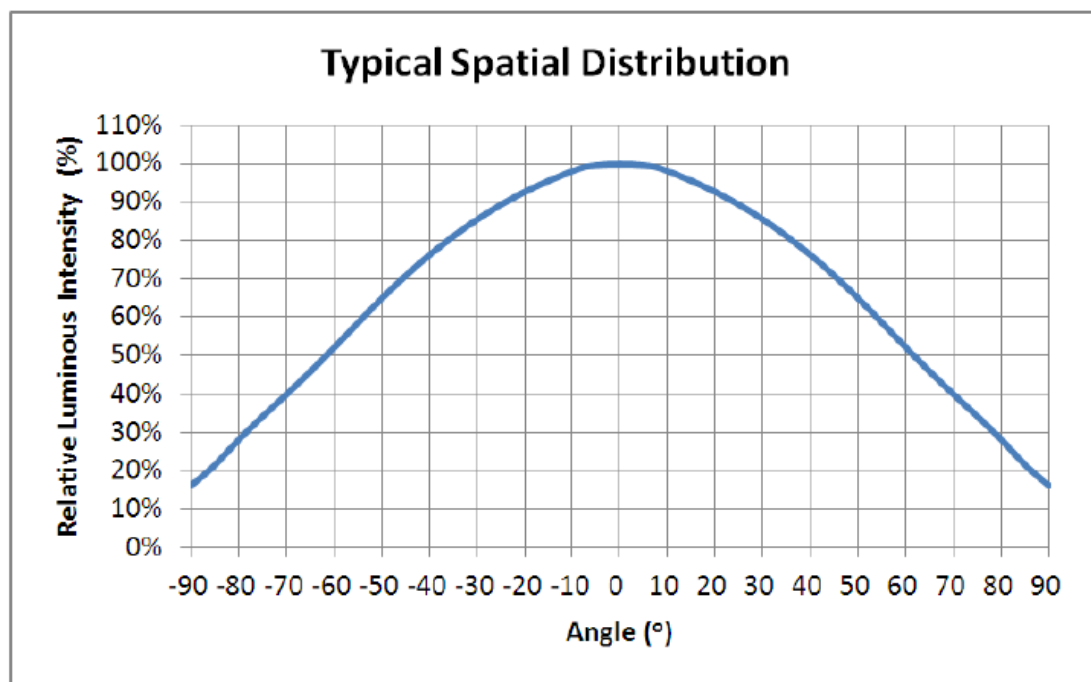
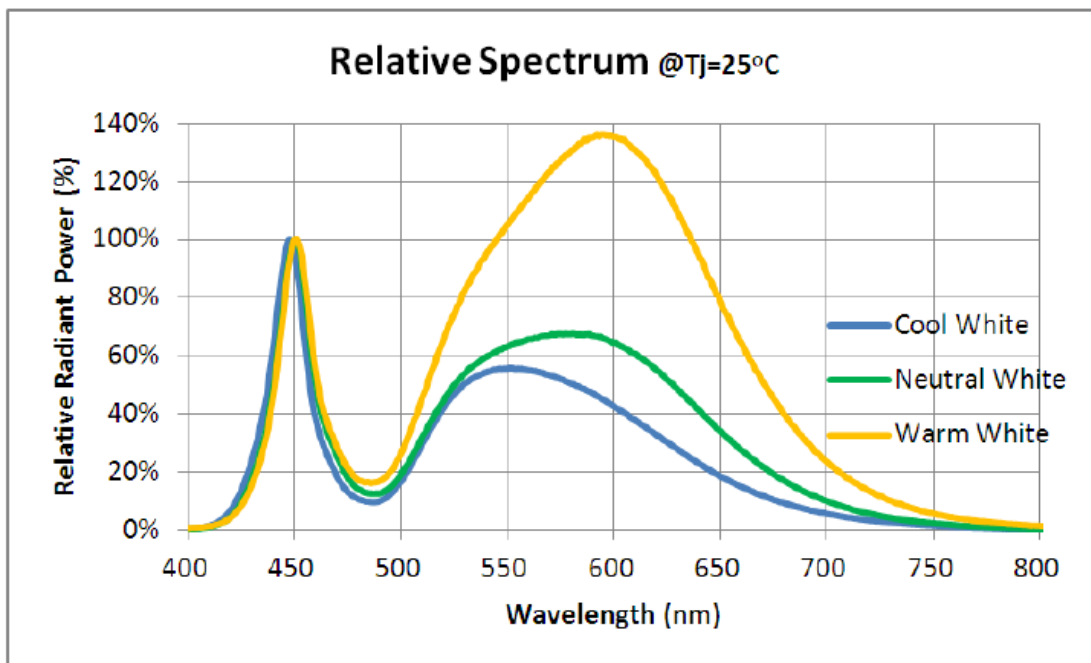
■ Bin Code

| CW | Bin Code (Region) | | | | | | | | | |
|---------|-------------------|----|----|----|----|----|----|----|----|----|
| | 0R | 1A | 1C | 1D | 2A | 2B | 2C | 3A | 3B | 3C |
| | 0U | 1R | 1U | | 2D | 2T | | 3S | 3T | |
| NW | 5A | 5B | 5C | 5D | 5R | 5S | 5T | 5U | | |
| | | | | | | | | | | |
| WW3000K | 7A | 7B | 7C | 7D | | | | | | |
| | | | | | | | | | | |
| WW2700K | 8A | 8B | 8C | 8D | | | | | | |
| | | | | | | | | | | |

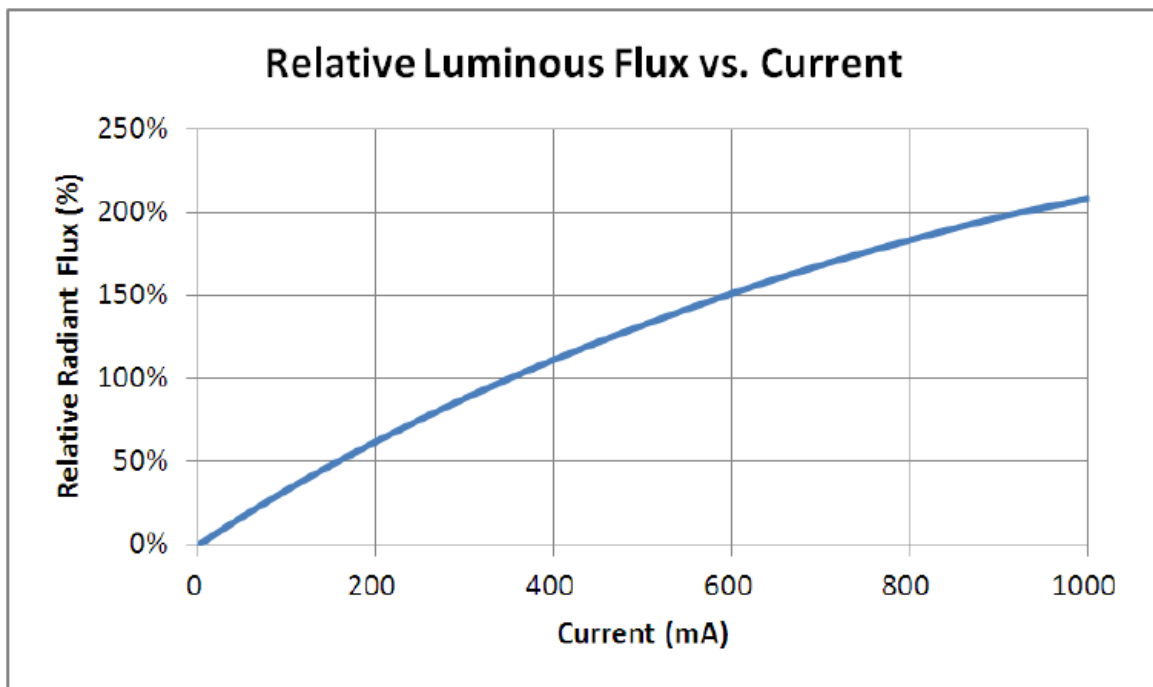
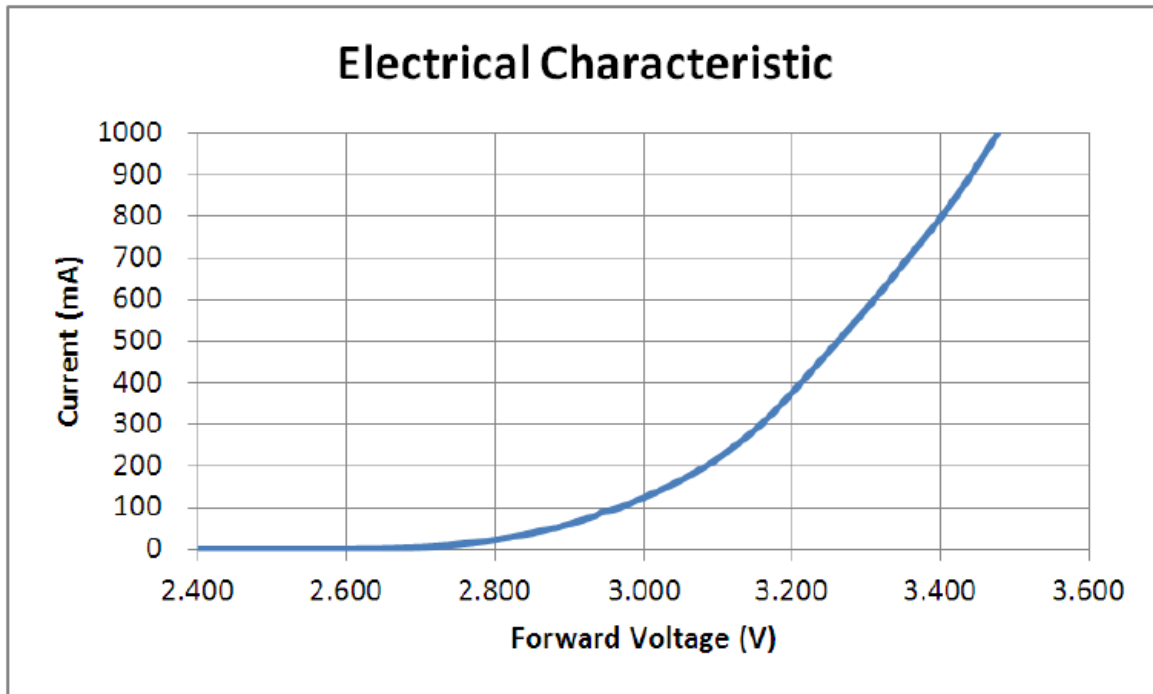
| Bin | P4 | Q2 | Q3 | Q4 | Q5 | R2 | R3 | R4 | R5 |
|----------------------|------|------|------|-----|-----|-----|-----|-----|-----|
| Flux(lm) @350 mA | 80.6 | 87.4 | 93.9 | 100 | 107 | 114 | 122 | 130 | 139 |
| Flux(lm) @700 mA | 143 | 155 | 167 | 178 | 190 | 203 | 217 | 231 | 247 |
| Flux(lm) @1000 mA | 185 | 201 | 216 | 230 | 246 | 262 | 281 | 299 | 320 |

| Bin | 0F | 0G | 0H | | | | | | |
|----------|-----------|-----------|-----------|---------|---------|---------|---------|---------|---------|
| Vf(v) | 2.75-3.00 | 3.00-3.25 | 3.25-3.50 | | | | | | |
| CW Bin | | | | Q4 | Q5 | R2 | R3 | R4 | R5 |
| Flux(lm) | | | | 100-107 | 107-114 | 114-122 | 122-130 | 130-139 | 139-148 |
| NW Bin | | | Q3 | Q4 | Q5 | R2 | | | |
| Flux(lm) | | | 93.9-100 | 100-107 | 107-114 | 114-122 | | | |
| WW Bin | P4 | Q2 | Q3 | Q4 | Q5 | | | | |
| Flux(lm) | 80.6-87.4 | 87.4-93.9 | 93.9-100 | 100-107 | 107-114 | | | | |

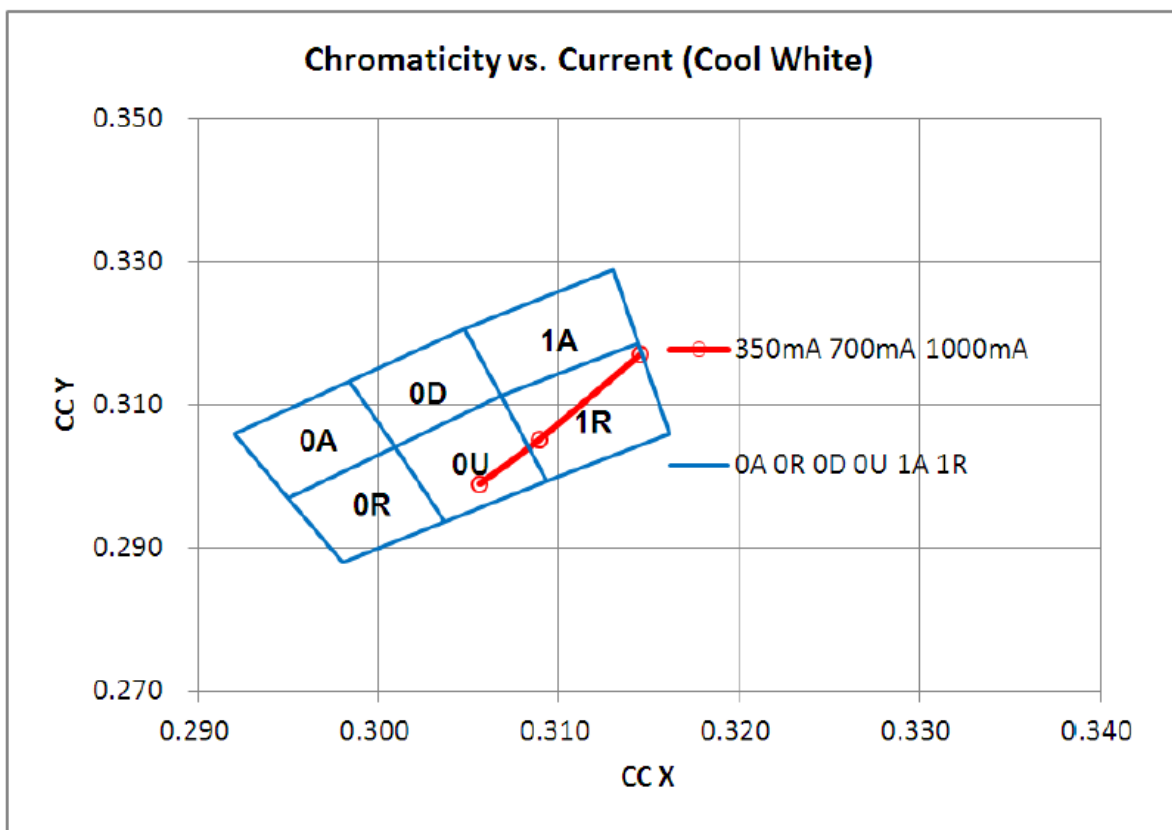
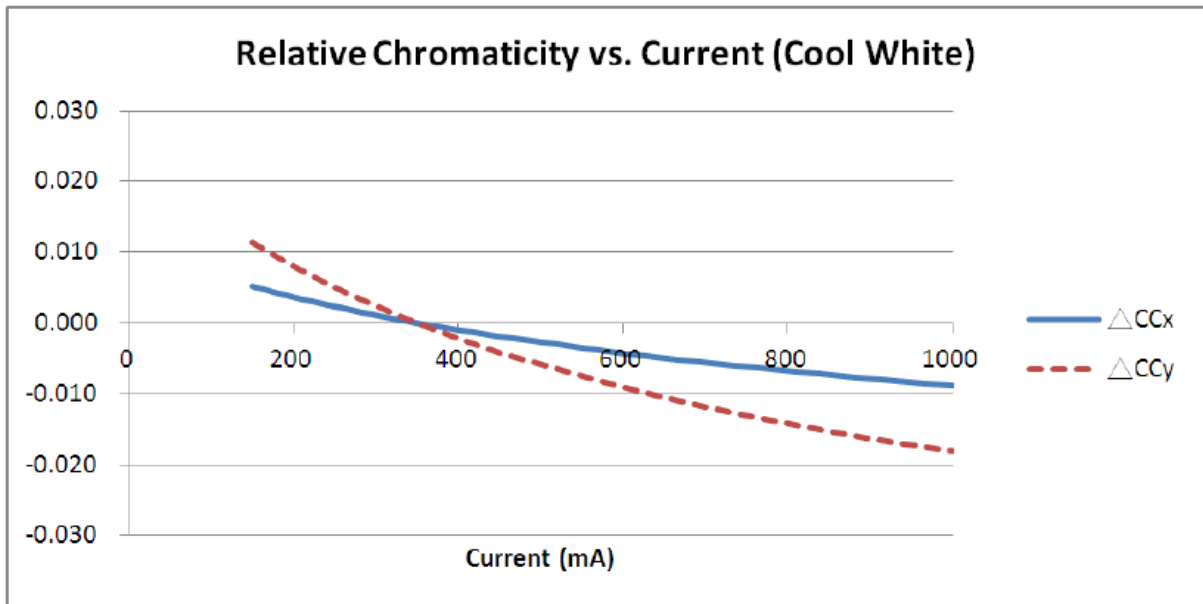
■ **Optical Characteristics**



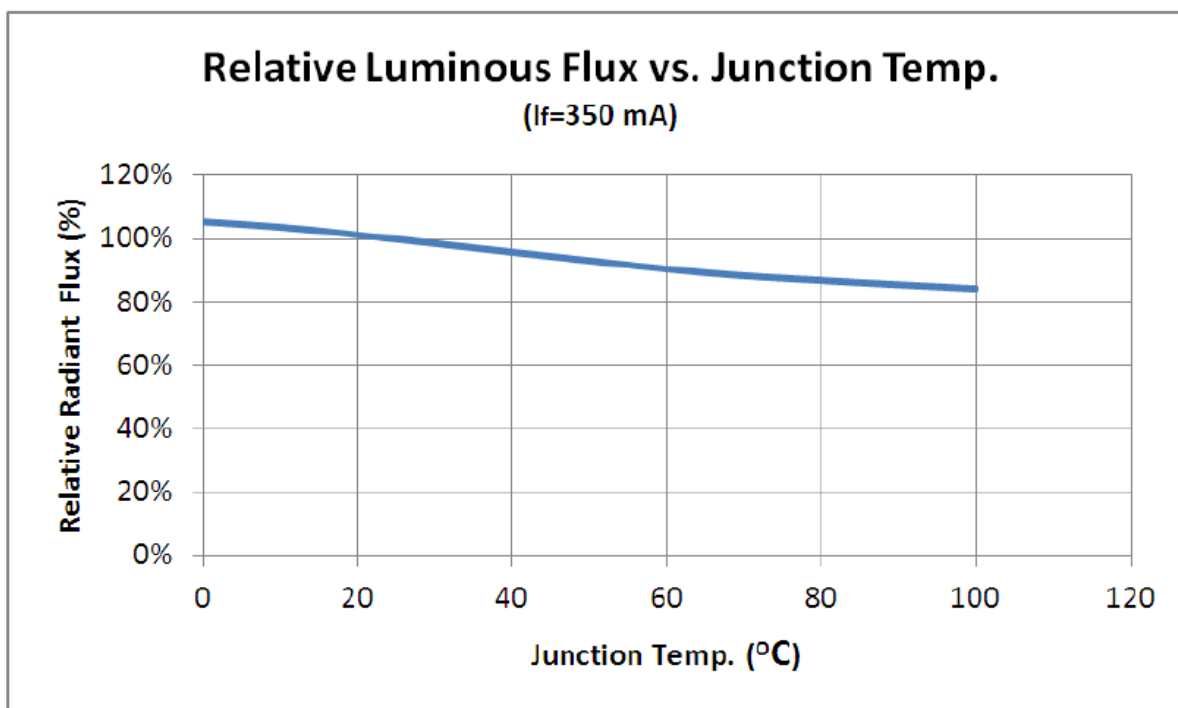
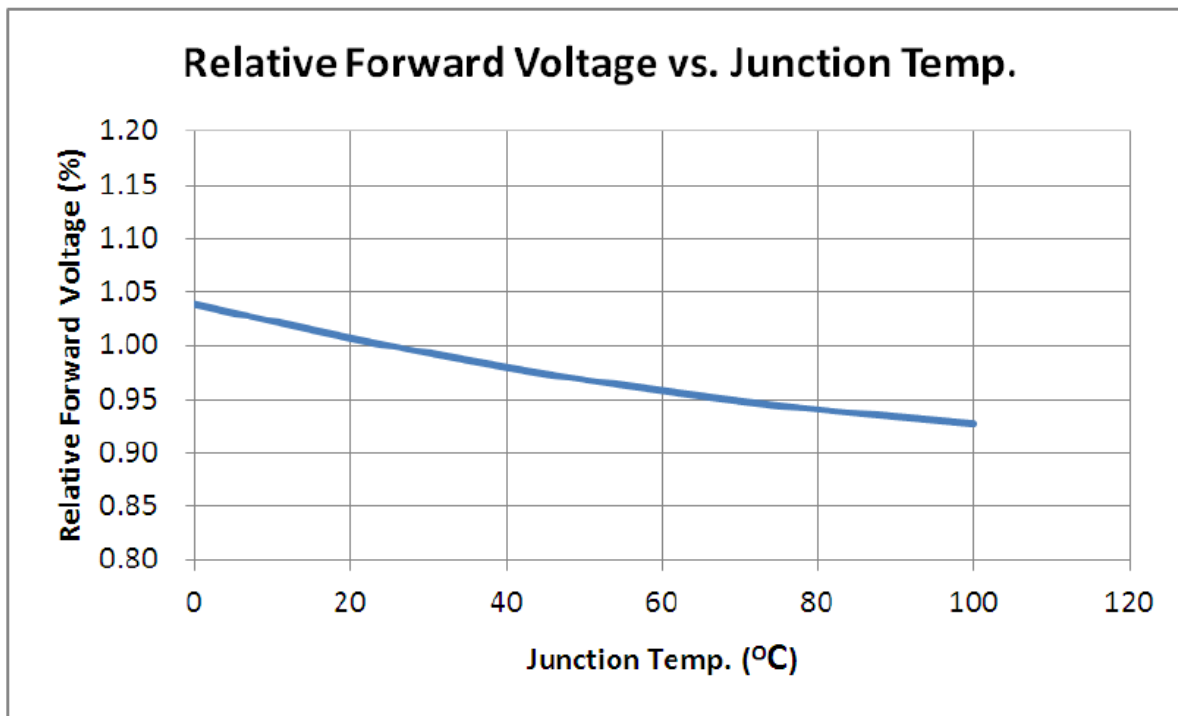
■ **Optical Characteristics**



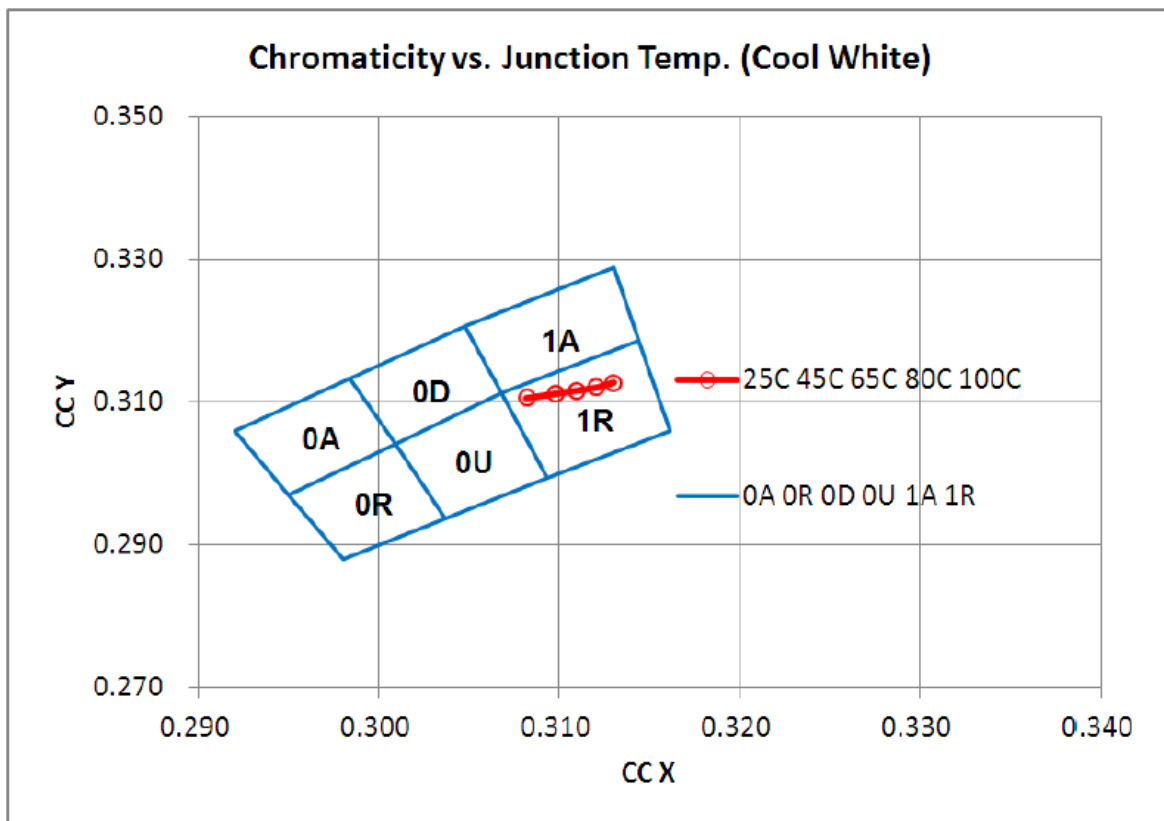
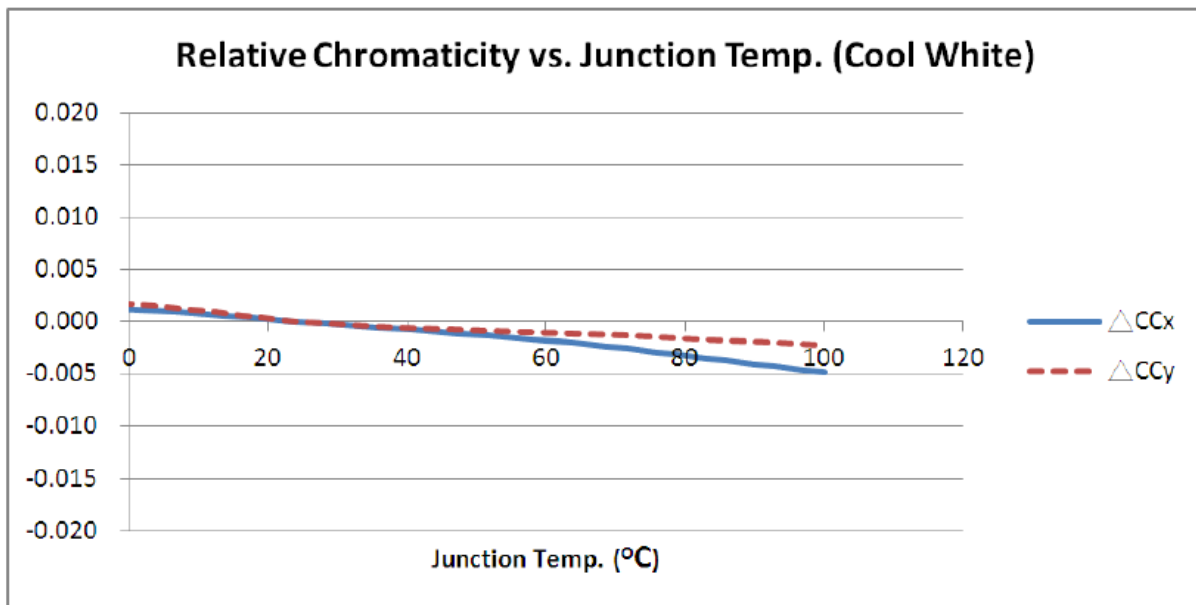
■ **Optical Characteristics**



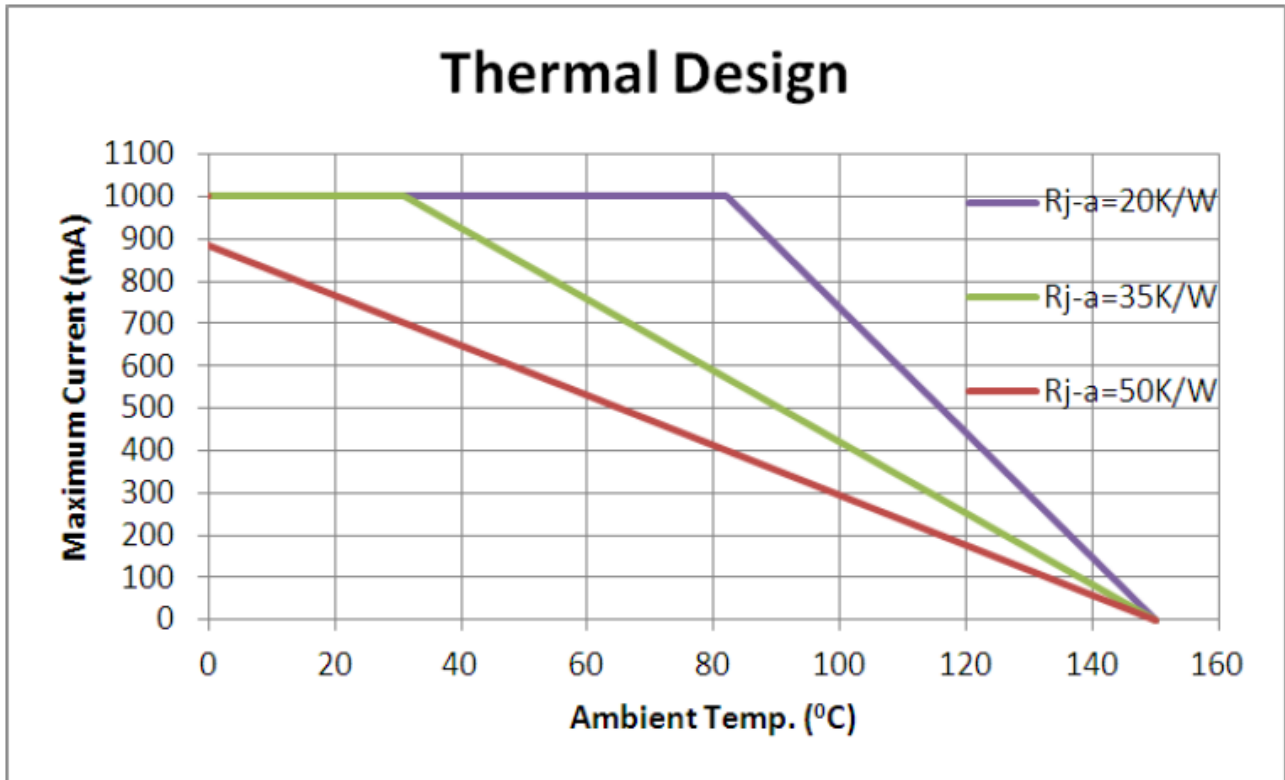
■ **Optical Characteristics**



■ **Optical Characteristics**



■ **Optical Characteristics**



■ Test item and Results of reliability

| Test Item | Test Conditions | Duration/ Cycle | Number of Damage | Reference |
|------------------------------|---|--------------------|---------------------|----------------------------------|
| Temperature Cycle | -40°C 30min ↑↓25°C (5 min) 100°C 30min | 100 cycles | 0/22 | JEITA ED-4701 300 303 |
| Thermal Shock | -40°C 30min ↑↓5sec 110°C 30min | 100 cycles | 0/22 | JEITA ED-4701 200 303 |
| High Temperature Storage | T _a =85°C | 1000 hrs | 0/22 | EIAJED-4701 200 201 |
| Humidity Heat Storage | T _a =85°C RH=85% | 1000 hrs | 0/22 | EIAJED-4701 100 103 |
| Low Temperature Storage | T _a =-40°C | 1000 hrs | 0/22 | EIAJED-4701 200 202 |
| Life Test | T _a =25°C I _f =1000mA | 1000 hrs | 0/22 | Tested with Optotech standard |
| High Humidity Heat Life Test | 60°C RH=90% I _f =700mA | 1000 hrs | 0/22 | Tested with Optotech standard |
| Low Temperature Life Test | T _a =-40°C I _f =1000mA | 1000 hrs | 0/22 | Tested with Optotech standard |
| ESD(HBM) | 1kV at 1.5kΩ;100pf | 3 Times | 0/22 | MIL-STD-883D |

■ **Packaging 800pcs/Reel**

Tape and Reel

