

Model No:LZ-5054BIN1

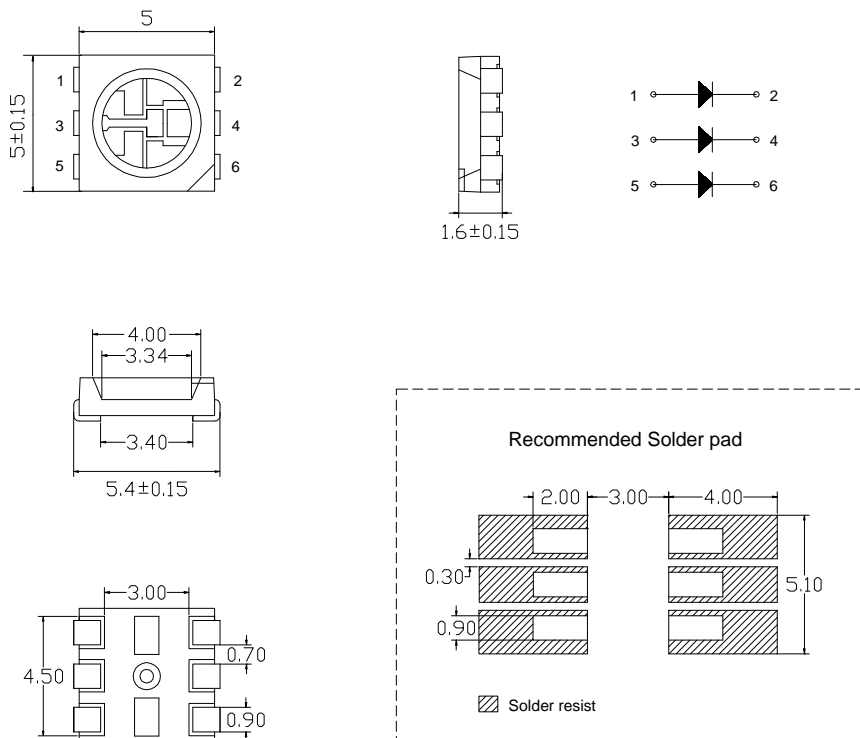
White TOP LED (5050)

Lead(Pb) Free Product-ROHS Compliant

■ Applications

1. Interior automotive lighting(dashboard backlight etc...)
2. Optical indicators
3. Communication Products
4. Backlighting
5. Flash
6. Toys

■ Package Dimensions



Notes:

All dimensions in mm tolerance is ±0.1mm unless otherwise noted.

■ Absolute Maximum Ratings (Ta = 25°C)

| Items | Symbol | Absolute maximum Rating | Unit |
|------------------------|------------------|-------------------------|------|
| Power Dissipation | P _D | 3*100 | mW |
| Forward Current(DC) | I _F | 3*25 | mA |
| Peak Forward Current** | I _{FP} | 3*100 | mA |
| Operation Temperature | T _{opr} | -40~ +85 | °C |
| Storage Temperature | T _{stg} | -40 ~ +100 | °C |

**Pulse width ≤ 0.1msec duty ≤ 1/10

■ Typical Electrical & Optical Characteristics (Ta = 25°C)

| Items | Symbol | Condition | Min. | Typ. | Max. | Unit |
|-------------------------|----------------|-------------------------|------|------|------|------|
| Forward Voltage | V _F | I _F = 3*20mA | 2.8 | 3.2 | | V |
| Reverse Current | I _R | V _R = 5V | --- | --- | 10 | μ A |
| Chromatic Coordinates** | CCT | I _F = 3*20mA | 6000 | 6500 | 7000 | K |
| Luminous Intensity** | I _V | I _F = 3*20mA | 5800 | 6783 | --- | mcd |
| Luminous flux** | Flux | I _F = 60mA | '--- | 10 | '--- | lm |
| 50% Power Angle** | 2 θ ½ | I _F = 3*20mA | --- | 120 | --- | Deg |

** Luminous intensity , Luminous flux ,CIE and View angle data are the Values when 3 circuits are lit simultaneously.

■ Ranks Combination (IF = 60mA)

| Rank | T1 | T2 |
|-------------------------|-----------|-----------|
| Luminous Intensity(mcd) | 5800-6783 | 4577-5800 |

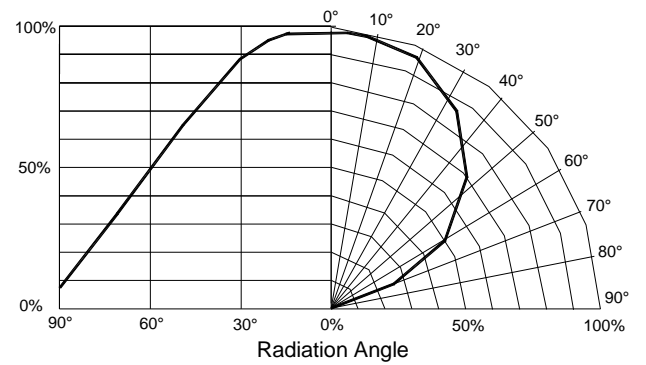
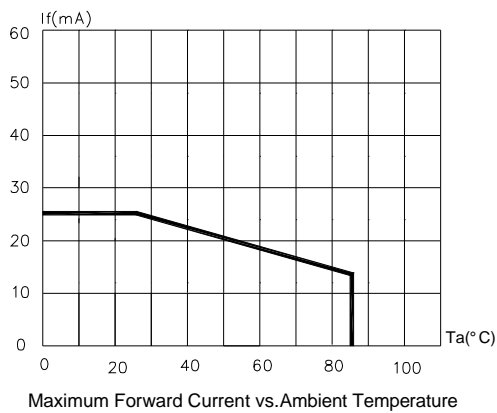
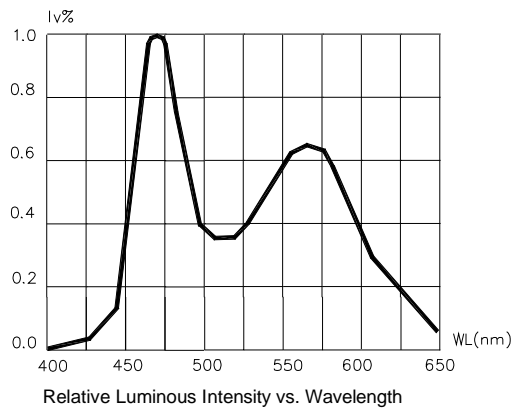
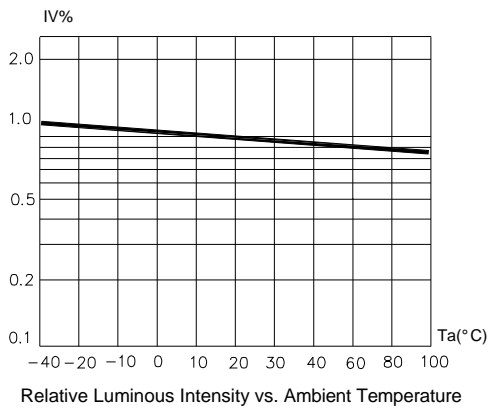
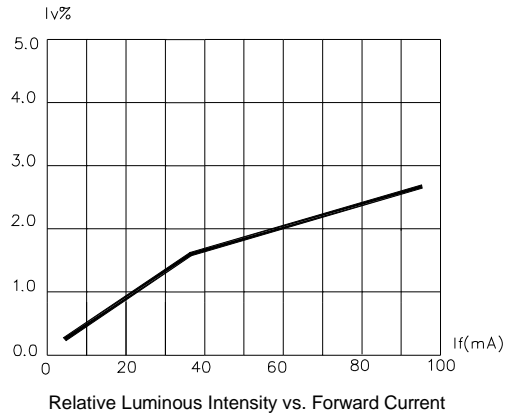
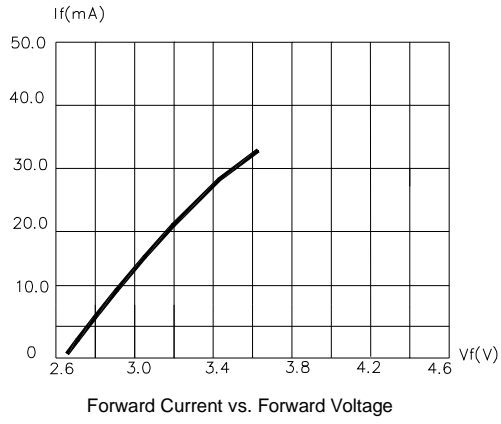
■ Notes

1. Tolerance of measurement of luminous intensity : ±15%
2. Tolerance of measurement of chromatic coordinates : ±0.02
3. Tolerance of measurement of forward voltage : ±0.1V

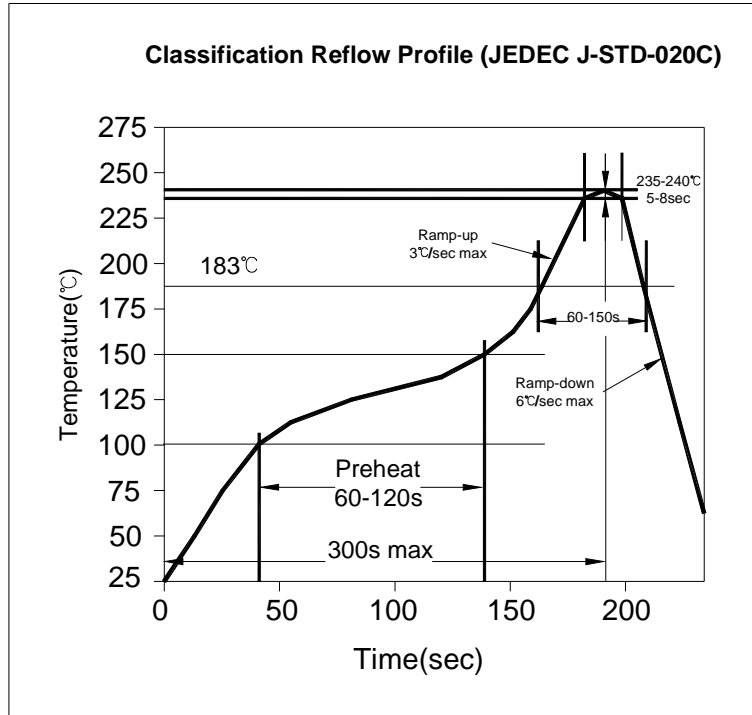
■ Chromatic Coordinates Ranks

| | S11 | | S12 | | S13 | | S14 | | S15 | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X | 0.2958 | 0.3000 | 0.3000 | 0.3043 | 0.3043 | 0.3085 | 0.3085 | 0.3127 | 0.3127 | 0.3170 |
| Y | 0.3396 | 0.3443 | 0.3443 | 0.3490 | 0.3490 | 0.3537 | 0.3537 | 0.3584 | 0.3584 | 0.3632 |
| X | 0.3032 | 0.3073 | 0.3073 | 0.3115 | 0.3115 | 0.3157 | 0.3157 | 0.3199 | 0.3199 | 0.3242 |
| Y | 0.3365 | 0.3412 | 0.3412 | 0.3459 | 0.3459 | 0.3506 | 0.3506 | 0.3553 | 0.3553 | 0.3602 |
| | S21 | | S22 | | S23 | | S24 | | S25 | |
| X | 0.2988 | 0.3032 | 0.3032 | 0.3073 | 0.3073 | 0.3115 | 0.3115 | 0.3157 | 0.3157 | 0.3199 |
| Y | 0.3307 | 0.3365 | 0.3365 | 0.3412 | 0.3412 | 0.3459 | 0.3459 | 0.3506 | 0.3506 | 0.3553 |
| X | 0.3059 | 0.3104 | 0.3104 | 0.3146 | 0.3146 | 0.3188 | 0.3188 | 0.3230 | 0.3230 | 0.3273 |
| Y | 0.3276 | 0.3334 | 0.3334 | 0.3380 | 0.3380 | 0.3428 | 0.3428 | 0.3475 | 0.3475 | 0.3522 |
| | S31 | | S32 | | S33 | | S34 | | | |
| X | 0.3016 | 0.3059 | 0.3059 | 0.3104 | 0.3104 | 0.3146 | 0.3146 | 0.3188 | | |
| Y | 0.3219 | 0.3276 | 0.3276 | 0.3334 | 0.3334 | 0.3380 | 0.3380 | 0.3428 | | |
| X | 0.3091 | 0.3134 | 0.3134 | 0.3178 | 0.3178 | 0.3220 | 0.3220 | 0.3262 | | |
| Y | 0.3186 | 0.3244 | 0.3244 | 0.3301 | 0.3301 | 0.3349 | 0.3349 | 0.3396 | | |
| | S41 | | S42 | | S43 | | S44 | | | |
| X | 0.3047 | 0.3091 | 0.3091 | 0.3134 | 0.3134 | 0.3178 | 0.3178 | 0.3220 | | |
| Y | 0.3129 | 0.3186 | 0.3186 | 0.3244 | 0.3244 | 0.3301 | 0.3301 | 0.3349 | | |
| X | 0.3117 | 0.3161 | 0.3161 | 0.3204 | 0.3204 | 0.3248 | 0.3248 | 0.3290 | | |
| Y | 0.3099 | 0.3156 | 0.3156 | 0.3214 | 0.3214 | 0.3271 | 0.3271 | 0.3318 | | |
| | S51 | | S52 | | S53 | | | | | |
| X | 0.3074 | 0.3117 | 0.3117 | 0.3161 | 0.3161 | 0.3204 | | | | |
| Y | 0.3041 | 0.3099 | 0.3099 | 0.3156 | 0.3156 | 0.3214 | | | | |
| X | 0.3147 | 0.3090 | 0.3190 | 0.3234 | 0.3234 | 0.3277 | | | | |
| Y | 0.3010 | 0.3067 | 0.3067 | 0.3125 | 0.3125 | 0.3182 | | | | |

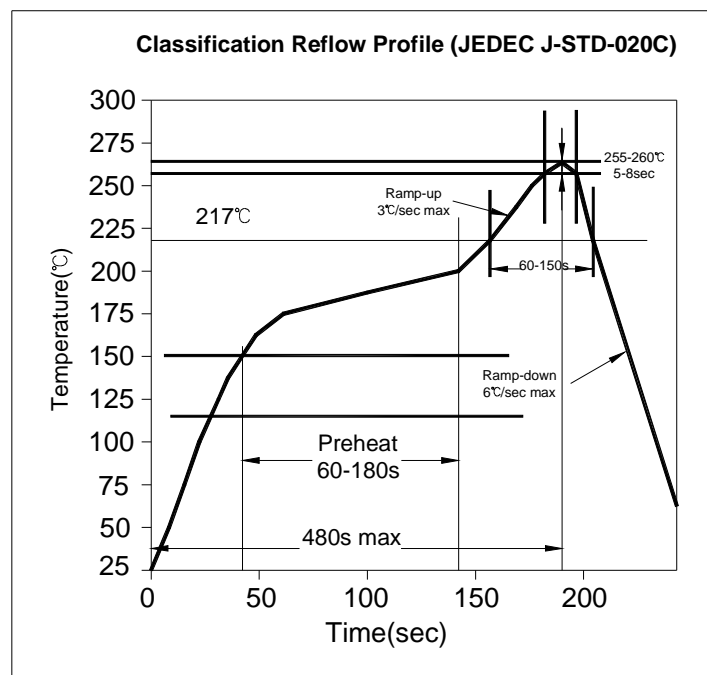
■ Typical Electrical/ Optical Characteristics Curves (Ta=25°C Unless Otherwise Noted)



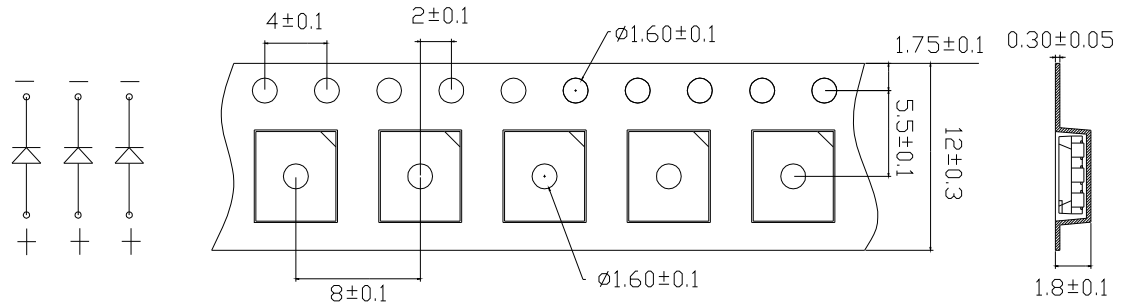
■ Soldering heat reliability:
Lead Solder



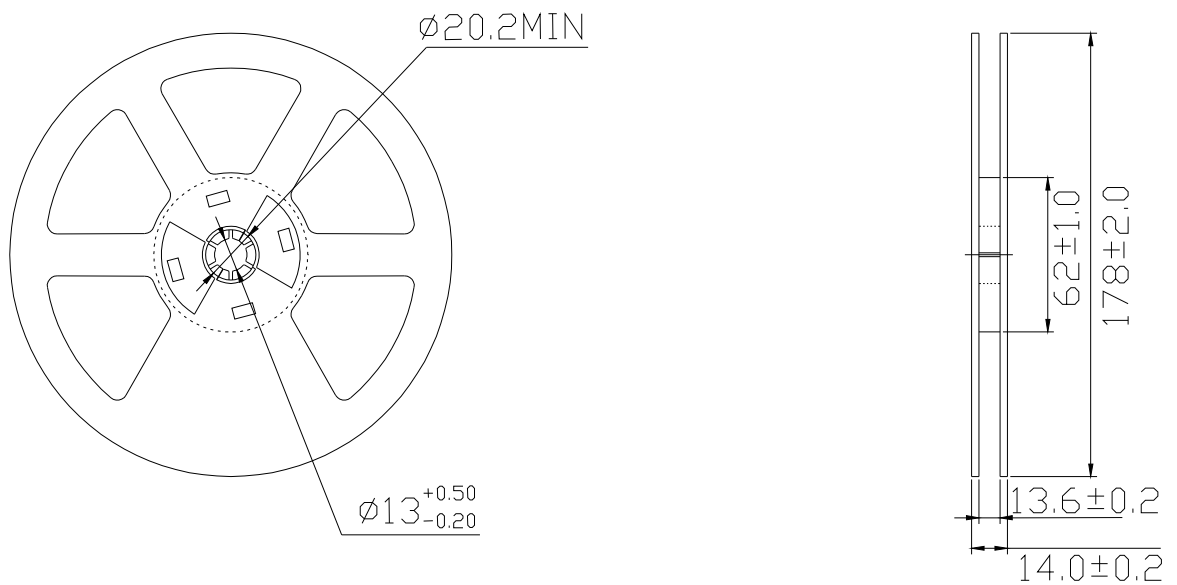
Lead Free Solder



■ Packing Specifications:



■ Reel Specifications



Dimensions are specified as follows: mm

Notes:

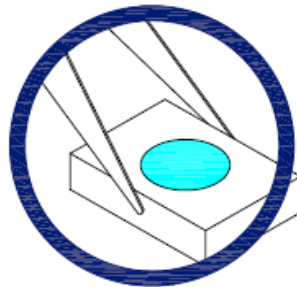
- 1) The packing only appropriate for LZGD
- 2) Normal packing quantity: 1,000pcs/reel

■ Handling Precautions

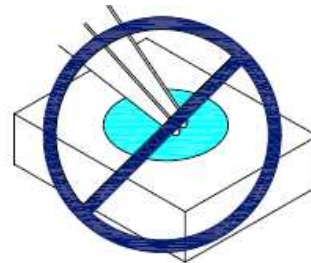
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might leads to damage and premature failure of the LED.

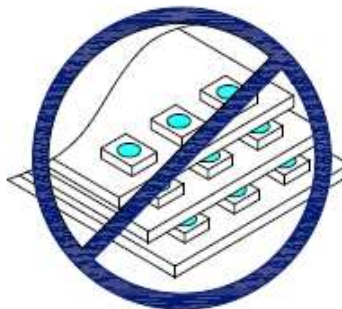
1. Handle the component along the side surfaces by using forceps or appropriate tools.



2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.



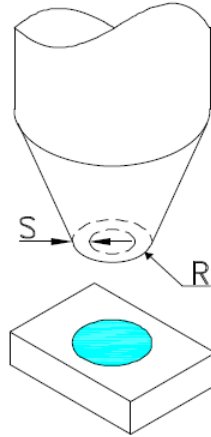
3. Do not stack together assembled PCBs containing exposed LEDs. Outside impact may scratch the silicone lens or damage the internal circuitry.



4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as

possible.

5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



| Revision History | | | | | |
|------------------|------------------------|-----------|-------------|------------|-------------|
| Rev.No. | Change Description | Date | Prepared By | Checked By | Approved By |
| 01 | New-made specification | 2013/1/18 | LF | LF | LF |
| | | | | | |
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