

Part Number: KPG1-1608SEC-E-TT

Hyper-Red

Features

- 1.6mmX0.8mm SMD LED, 0.2mm thickness.
- Low power consumption.
- Wide viewing angle.
- Compatible with automatic placement equipment.
- Ideal for backlight and indicator.
- Package: 4000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

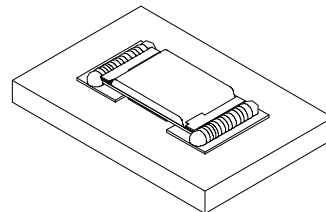
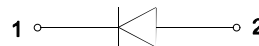
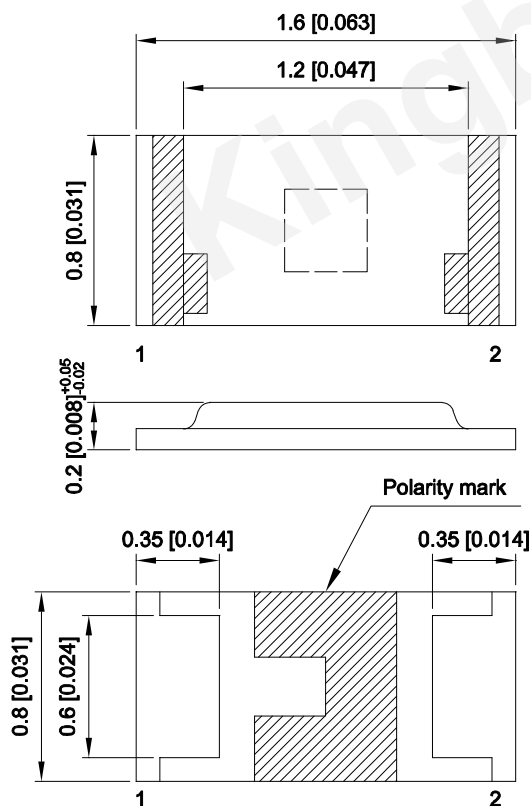
Description

The Hyper-Red source color devices are made with Al-GaN/P on GaAs substrate Light Emitting Diode.

Applications

- 1.Mobile phone Keypad indicator and backlight.
- 2.Flat backlight for LCD, switch and symbol.
- 3.Toys.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.1 (0.004") unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



Selection Guide

| Part No. | Emitting Color (Material) | Lens Type | Iv (mcd) [2] @ 20mA | | Viewing Angle [1] |
|-------------------|---------------------------|-------------|------------------------|------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| KPG1-1608SEC-E-TT | Hyper-Red (AlGaInP) | Water Clear | 60 | 225 | 120° |
| | | | *20 | *75 | |

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity / luminous Flux: +/-15%.
- * Luminous intensity value is traceable to CIE127-2007 standards.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Emitting Color | Typ. | Max. | Units | Test Conditions |
|--------|--------------------------|----------------|------|------|-------|-----------------|
| λpeak | Peak Wavelength | Hyper-Red | 632 | | nm | IF=20mA |
| λD [1] | Dominant Wavelength | Hyper-Red | 624 | | nm | IF=20mA |
| Δλ1/2 | Spectral Line Half-width | Hyper-Red | 20 | | nm | IF=20mA |
| C | Capacitance | Hyper-Red | 25 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Hyper-Red | 2 | 2.4 | V | IF=20mA |
| IR | Reverse Current | Hyper-Red | | 10 | uA | VR=5V |

Notes:

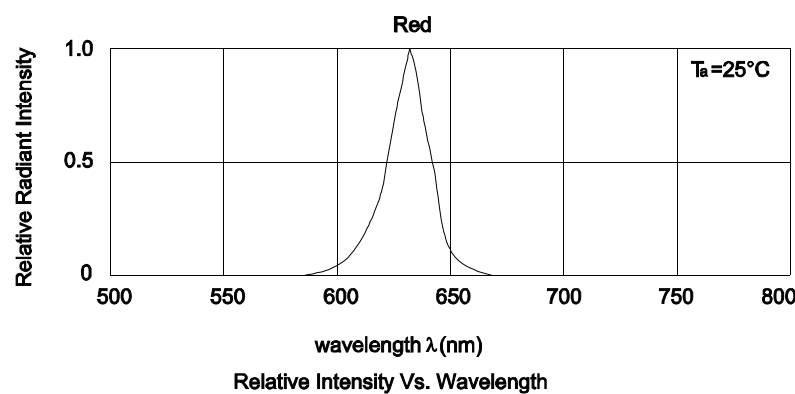
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

| Parameter | Values | Units |
|--------------------------|----------------|-------|
| Power dissipation | 60 | mW |
| DC Forward Current | 25 | mA |
| Peak Forward Current [1] | 120 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature | -40°C To +85°C | |
| Storage Temperature | -40°C To +85°C | |

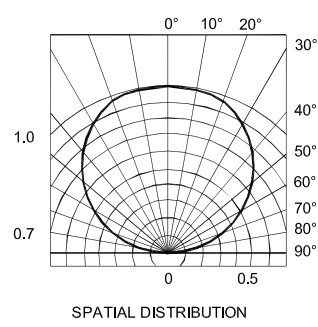
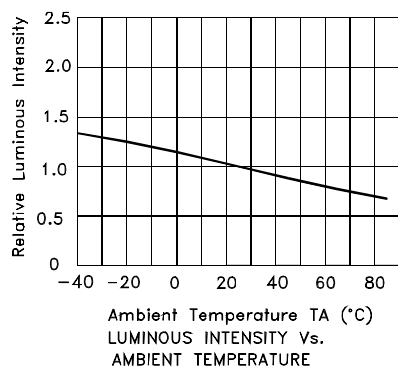
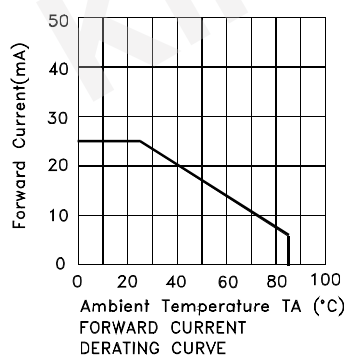
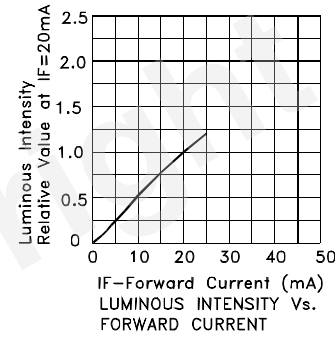
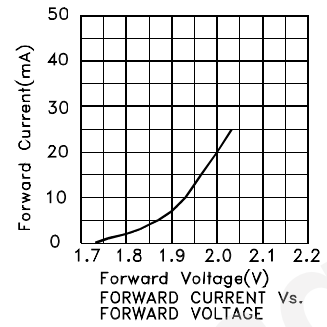
Notes:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



Hyper-Red

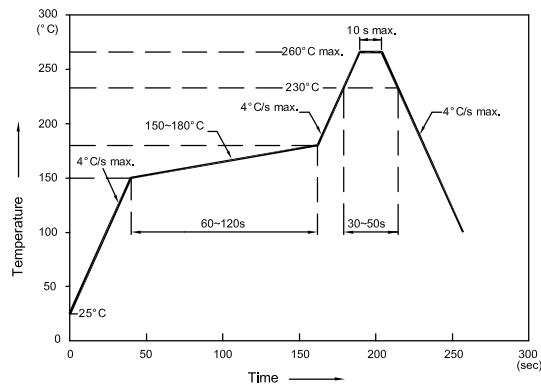
KPG1-1608SEC-E-TT



KPG1-1608SEC-E-TT

Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.

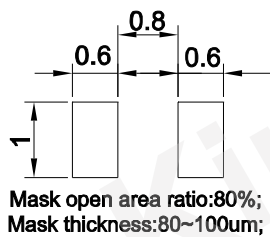
Reflow Soldering Profile For Lead-free SMT Process.



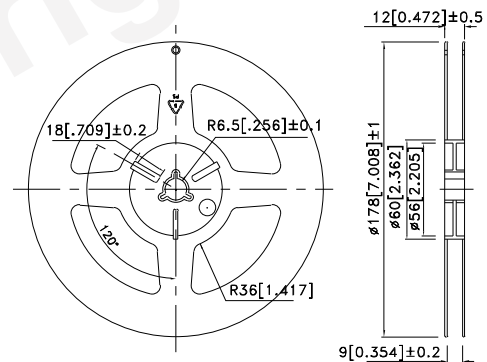
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

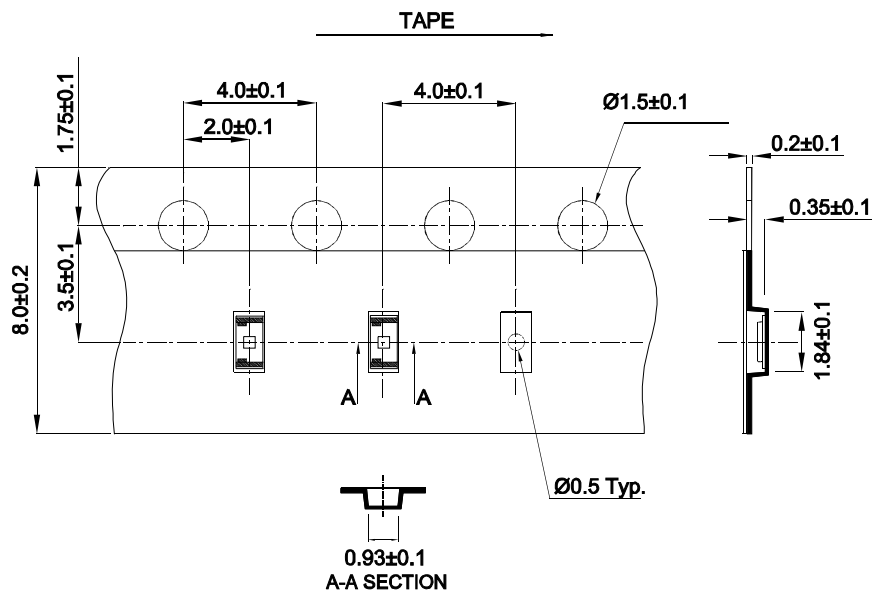
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

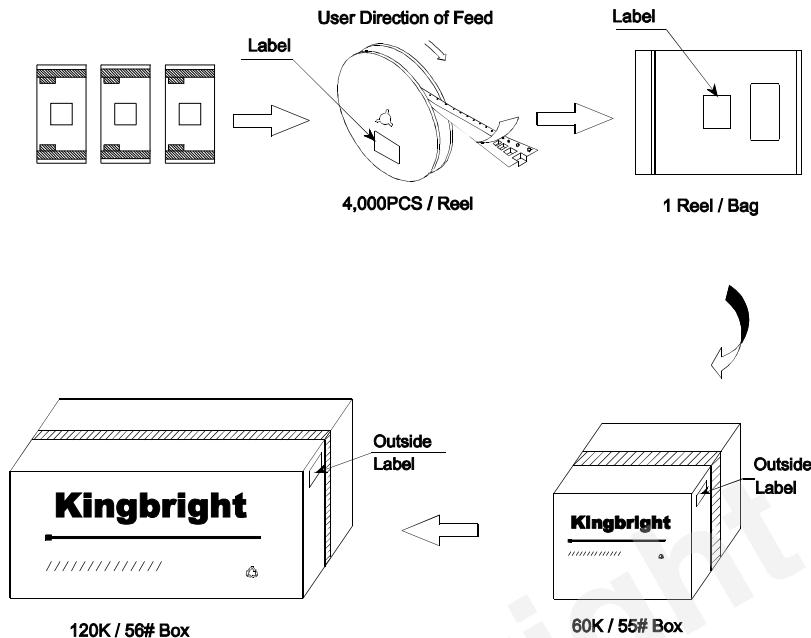



Tape Dimensions (Units : mm)



PACKING & LABEL SPECIFICATIONS

KPG1-1608SEC-E-TT



| | |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Kingbright | |
| P/NO: KPG1-1608xxx | |
| QTY: 4,000 PCS | Q.C. |
| S/N: XXXX | <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> Q.C. XXXXXXX PASSED </div> |
| CODE: XXX | |
| LOT NO: | |
|  | |
| RoHS Compliant | |

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