

Part Number: KP-1608F3C

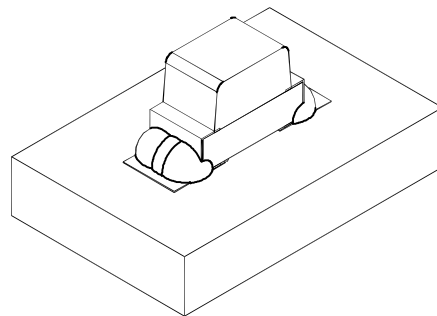
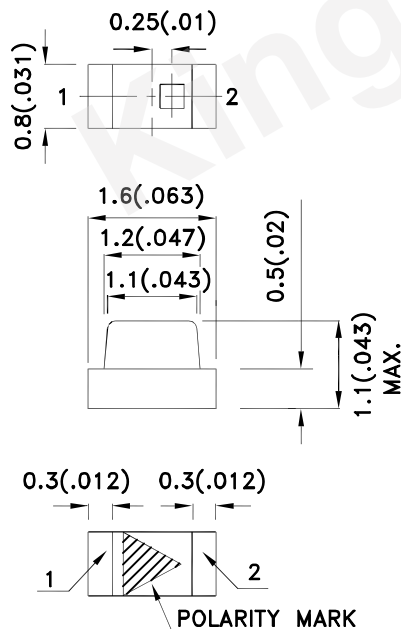
Features

- 1.6mmX0.8mm SMT LED, 1.1mm thickness.
- Mechanically and spectrally matched to the phototransistor.
- Package: 2000pcs / reel.
- Moisture sensitivity level : level 3.
- RoHS compliant.

Description

F3 Made with Gallium Arsenide Infrared Emitting diodes.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ 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. | Dice | Lens Type | Po (mW/sr) [2] @ 20mA | | Viewing Angle [1] |
|------------|-----------|-------------|--------------------------|------|----------------------|
| | | | Min. | Typ. | 2θ1/2 |
| KP-1608F3C | F3 (GaAs) | Water Clear | 1.2 | 3 | 120° |
| | | | *0.8 | *2 | |

Notes:

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

Electrical / Optical Characteristics at TA=25°C

| Parameter | P/N | Symbol | Typ. | Max. | Units | Test Conditions |
|--------------------------|-----|----------------|------|------|-------|---------------------------|
| Forward Voltage [1] | F3 | V _F | 1.2 | 1.6 | V | I _F =20mA |
| Reverse Current | F3 | I _R | | 10 | uA | V _R = 5V |
| Capacitance | F3 | C | 90 | | pF | V _F =0V;f=1MHz |
| Peak Spectral Wavelength | F3 | λ _P | 940 | | nm | I _F =20mA |
| Spectral Bandwidth | F3 | Δλ1/2 | 50 | | nm | I _F =20mA |

Note:

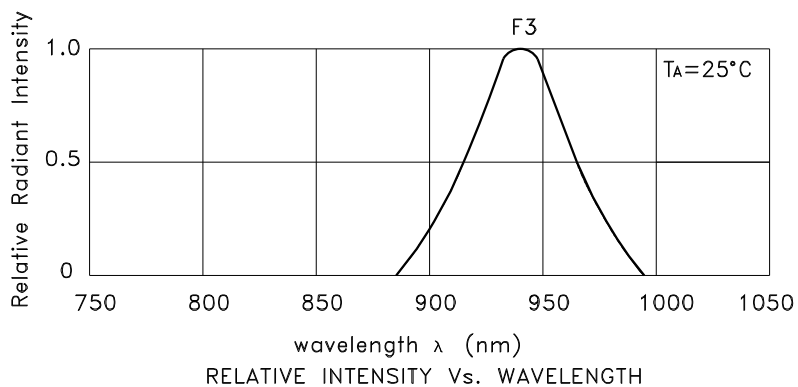
- 1.Forward Voltage: +/-0.1V.
- 2.Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 3.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

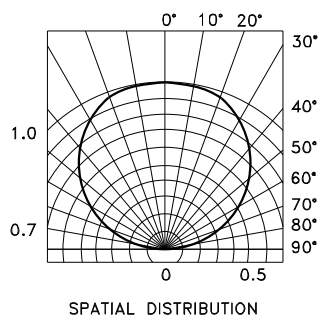
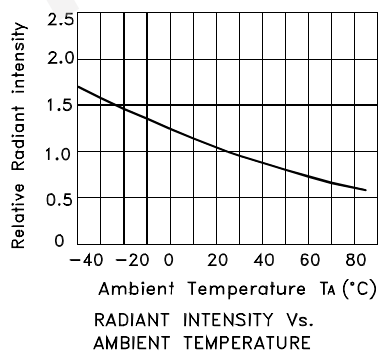
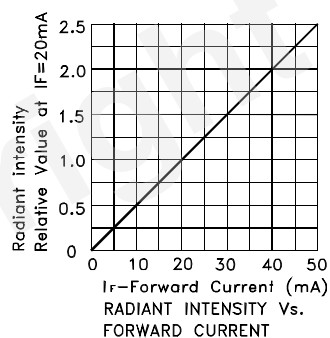
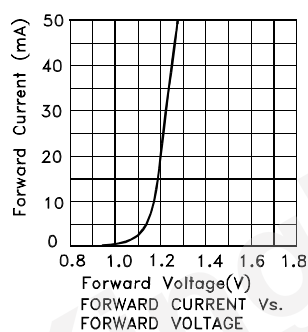
| Parameter | Symbol | F3 | Units |
|--------------------------|------------------|------------|-------|
| Power dissipation | P _D | 80 | mW |
| DC Forward Current | I _F | 50 | mA |
| Peak Forward Current [1] | i _{FS} | 1.2 | A |
| Reverse Voltage | V _R | 5 | V |
| Operating Temperature | T _A | -40 To +85 | °C |
| Storage Temperature | T _{STG} | -40 To +85 | °C |

Note:

1. 1/100 Duty Cycle, 10μs Pulse Width.



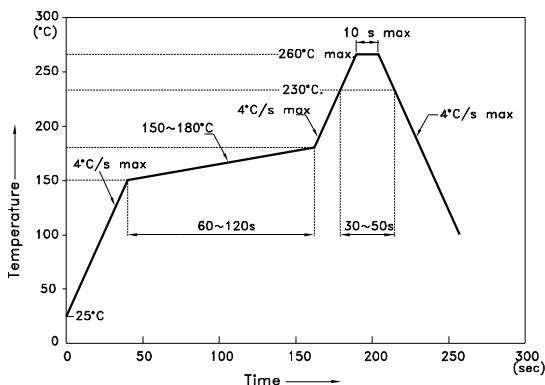
KP-1608F3C



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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.

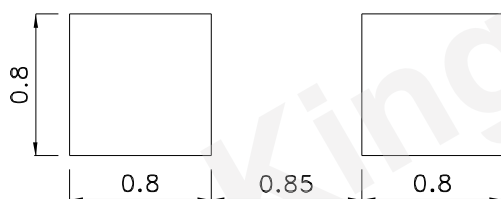
Reflow Soldering Profile For Lead-free SMT Process.



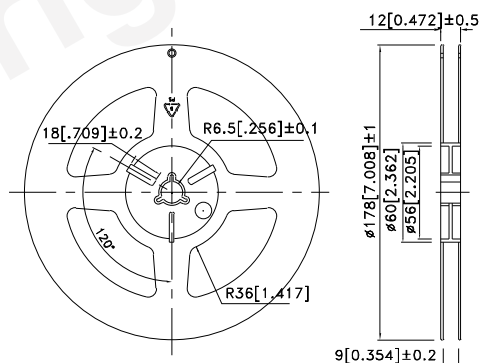
NOTES:

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.

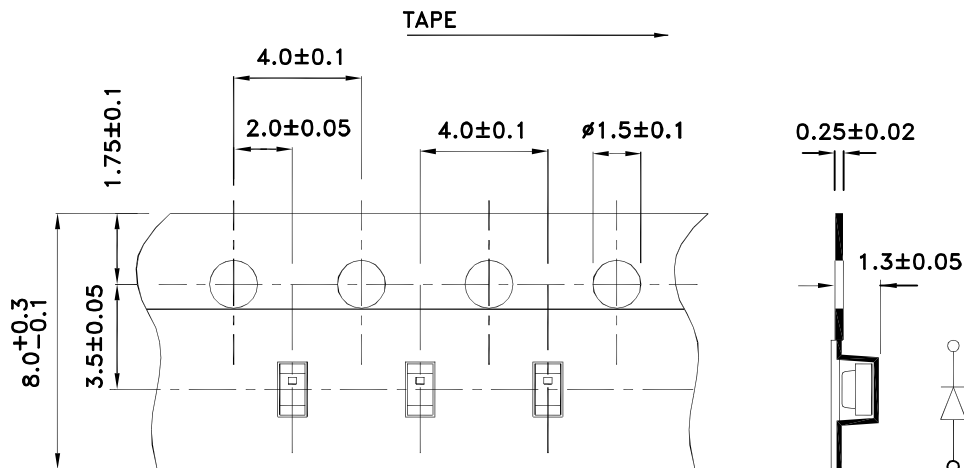
Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



Reel Dimension

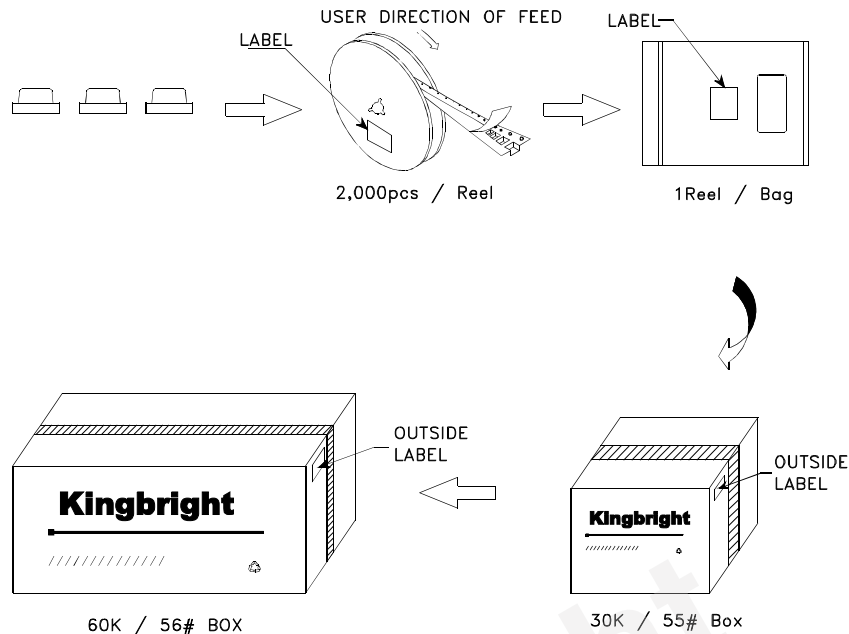



Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

KP-1608F3C



| | |
|--|--|
| Kingbright | |
| P/NO: KP-1608XXX | |
| QTY: 2,000 pcs | Q.C. Q C XX XX XXXX PASSED |
| S/N: XXXX | |
| CODE: XXX | |
| LOT NO: | |
|  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | |
| RoHS Compliant | |

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