

# Kingbright

## T-1 (3mm) INFRA-RED EMITTING DIODE

P/N: WP34F3BT

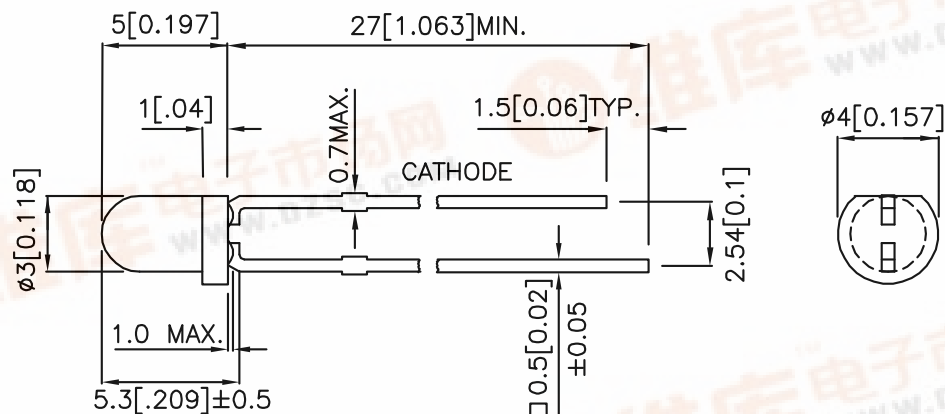
### Features

- MECHANICALLY AND SPECTRALLY MATCHED TO THE WP34P3BT PHOTOTRANSISTOR.
- BLUE TRANSPARENT LENS.
- RoHS COMPLIANT.

### Description

F3 Made with Gallium Arsenide Infrared Emitting diodes.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

## Selection Guide

| Part No. | Dice | Lens Type        | Po (mW/sr)<br>@20mA*50mA |      | Viewing<br>Angle |
|----------|------|------------------|--------------------------|------|------------------|
|          |      |                  | Min.                     | Typ. | 2 $\theta$ 1/2   |
| WP34F3BT | GaAs | BLUE TRANSPARENT | 1.6                      | 10   | 50°              |
|          |      |                  | *7                       | *20  |                  |

Notes:

1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. \* Luminous intensity with asterisk is measured at 50mA.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

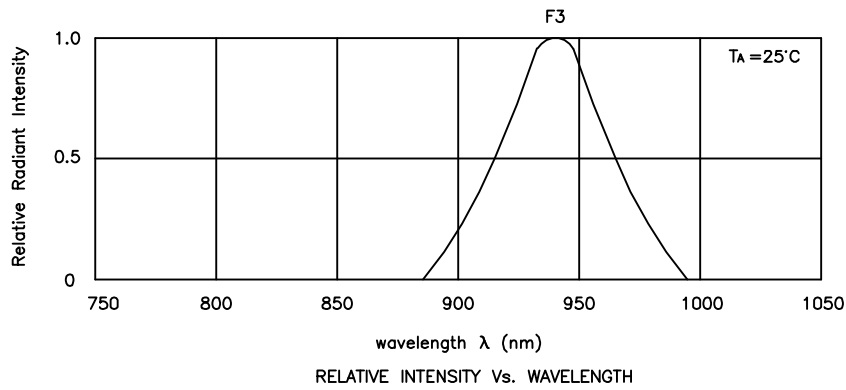
| Item                     | P/N | Symbol                 | Typ. | Max. | Units | Test Conditions           |
|--------------------------|-----|------------------------|------|------|-------|---------------------------|
| Forward Voltage          | F3  | V <sub>F</sub>         | 1.2  | 1.6  | V     | I <sub>F</sub> =20mA      |
| Reverse Current          | F3  | I <sub>R</sub>         | -    | 10   | uA    | V <sub>R</sub> =5V        |
| Capacitance              | F3  | C                      | 90   | -    | pF    | V <sub>F</sub> =0V;f=1MHz |
| Peak Spectral Wavelength | F3  | $\lambda$ <sub>P</sub> | 940  | -    | nm    | I <sub>F</sub> =20mA      |
| Spectral Bandwidth       | F3  | $\Delta\lambda$ 1/2    | 50   | -    | nm    | I <sub>F</sub> =20mA      |

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

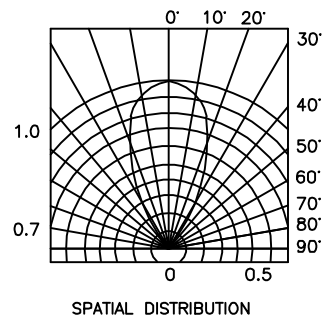
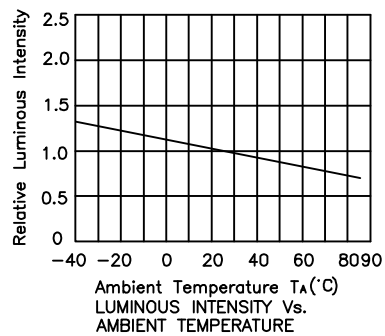
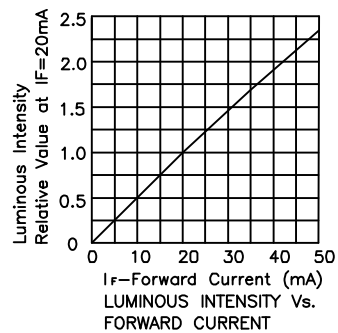
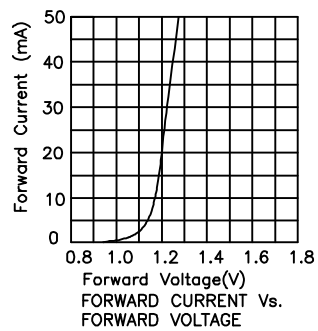
| Parameter                   | Symbol              | F3         | Units |
|-----------------------------|---------------------|------------|-------|
| Power Dissipation           | P <sub>T</sub>      | 100        | mW    |
| DC Forward Current          | I <sub>F</sub>      | 50         | mA    |
| Peak Forward Current[1]     | i <sub>FS</sub>     | 1.2        | A     |
| Reverse Voltage             | V <sub>R</sub>      | 5          | V     |
| Operating Temperature       | T <sub>A</sub>      | -40 To +85 | °C    |
| Storage Temperature         | T <sub>STG</sub>    | -40 To +85 | °C    |
| Lead Solder Temperature [2] | 260°C For 3 Seconds |            |       |
| Lead Solder Temperature [3] | 260°C For 5 Seconds |            |       |

Notes:

1. 1/100 Duty Cycle, 10 $\mu$ s Pulse Width.
2. 2mm below package base.
3. 5mm below package base.

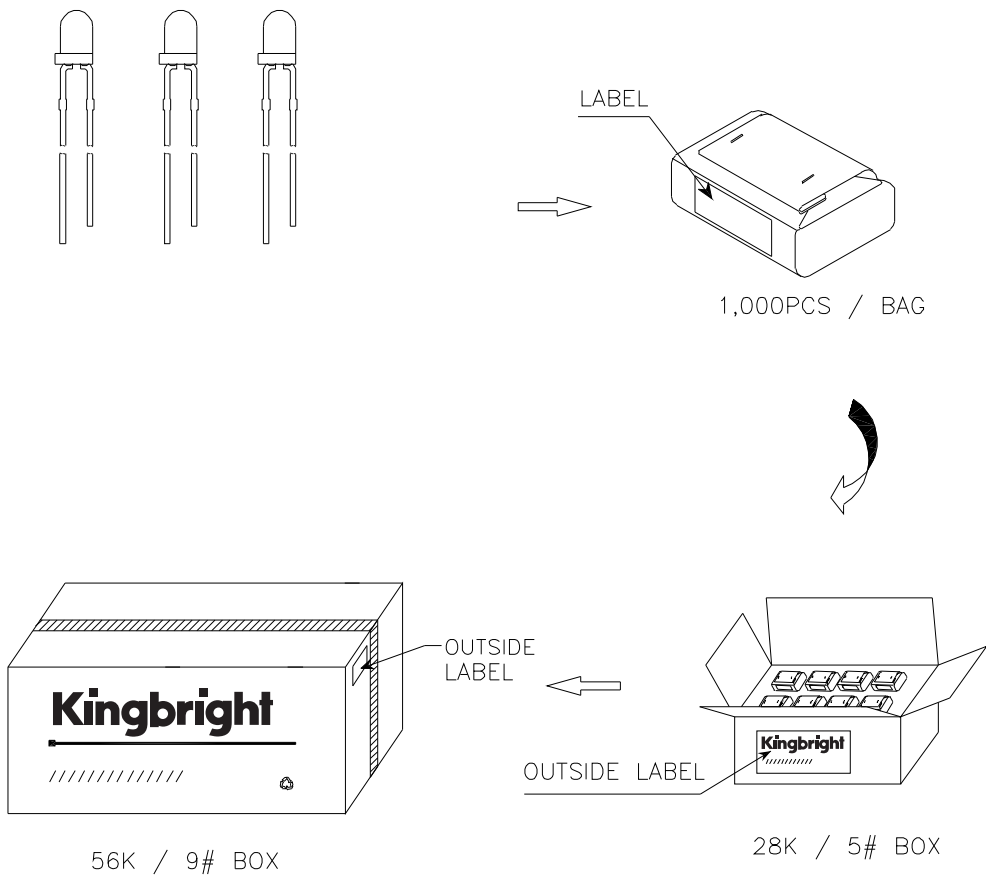


WP34F3BT



## PACKING & LABEL SPECIFICATIONS

WP34F3BT



| Kingbright                                                                                   |                            |
|----------------------------------------------------------------------------------------------|----------------------------|
| Q.C.                                                                                         |                            |
| TYPE NO : WP34XXX                                                                            | QC<br>xxx xx xxx<br>PASSED |
| QUANTITY : 1,000 pcs                                                                         | Date                       |
| S/N : XXX                                                                                    | CODE: XX                   |
| LOT NO :  | RoHS Compliant             |

### Remarks:

If special sorting is required (e.g. binning based on forward voltage or radiant intensity/ luminous flux), the typical accuracy of the sorting process is as follows:

1. Radiant Intensity/ luminous flux: +/-15%
2. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.