

# Kingbright®

## T-1 3/4(5mm) INFRA-RED EMITTING DIODES

L53SF5C

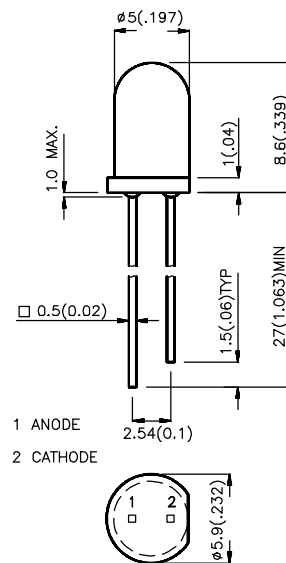
### Features

- MECHANICALLY AND SPECTRALLY MATCHED TO THE L51P3C PHOTOTRANSISTOR.
- BOTH WATER CLEAR LENS AND BLUE TRANSPARENT LENS AVAILABLE HIGH POWER OUTPUT.

### Description

SF5 Made with Gallium Aluminum Arsenide 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 lead emerges package.
4. Specifications are subjected to change without notice.

### Selection Guide

| Part No. | Lens Type   | Iv (mW/sr)<br>@20mA |      | Iv (mW/sr)<br>@50mA |      | Viewing<br>Angle |
|----------|-------------|---------------------|------|---------------------|------|------------------|
|          |             | Min.                | Max. | Min.                | Max. |                  |
| L53SF5C  | Water Clear | 8                   | 40   | 12.5                | 40   | 30°              |

#### Note:

1.  $\theta 1/2$  is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

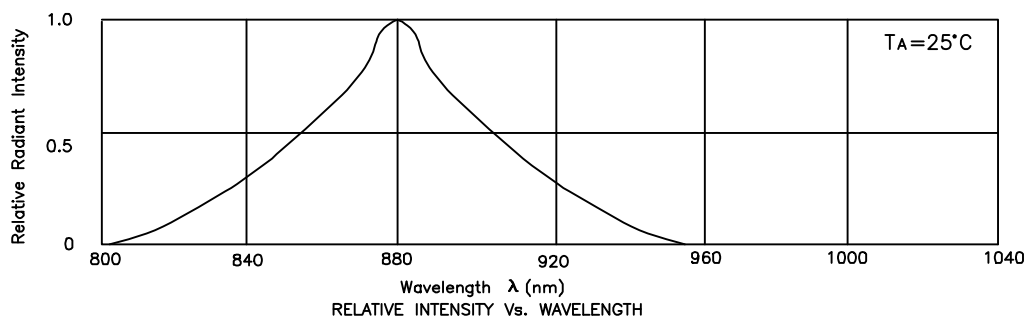
### Electrical / Optical Characteristics at T<sub>A</sub>=25° C

| Item                     | P/N      | Symbol | Typ. | Max. | Unit | Condition  |
|--------------------------|----------|--------|------|------|------|------------|
| Forward Voltage          | L-53SF5C | VF     | 1.4  | 1.7  | V    | IF=20mA    |
| Reverse Current          | L-53SF5C | IR     | -    | 10   | uA   | VR=5V      |
| Junction Capacitance     | L-53SF5C | Co     | 90   | -    | pF   | V=0 f=1MHz |
| Peak Spectral Wavelength | L-53SF5C | IR     | 880  | -    | nm   | IF=20mA    |
| Spectral Bandwidth       | L-53SF5C | DI     | 50   | -    | nm   | IF=20mA    |

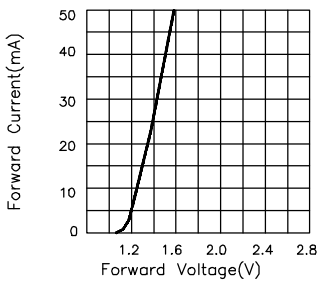
### Absolute Maximum Ratings at T<sub>A</sub>=25° C

| Item                  | Symbol | Maximum Rating | Units |
|-----------------------|--------|----------------|-------|
| Power Dissipation     | Pd     | 100            | mW    |
| Forward Current       | IF     | 50             | mA    |
| Peak Forward Current  | Ip     | 1.2            | A     |
| Reverse Voltage       | VR     | 5              | V     |
| Operating Temperature | Topr   | -45~ +80       | ° C   |
| Storage Temperature   | Tstg   | -45~ +80       | ° C   |

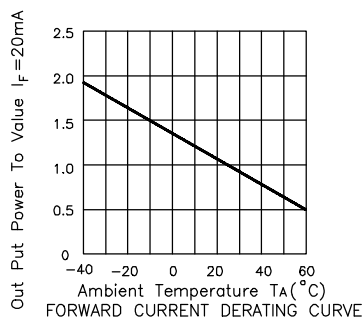
Note:  
1.Ip Condition : 1/10 Duty Cycle, 0.1ms Pluse width .



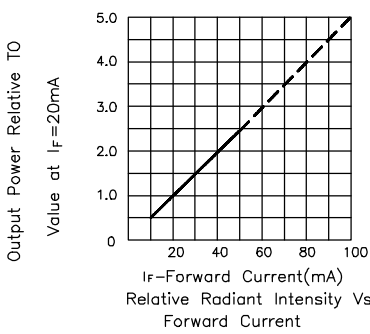
L53SF5C



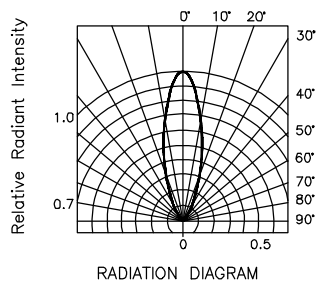
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



Relative Radiant Intensity Vs. Forward Current



RADIATION DIAGRAM