

## Optoelectronic Devices

Order code	Manufacturer code	Description
72-8966	n/a	INFRA-RED EMITTING DIODE

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The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

# Kingbright®

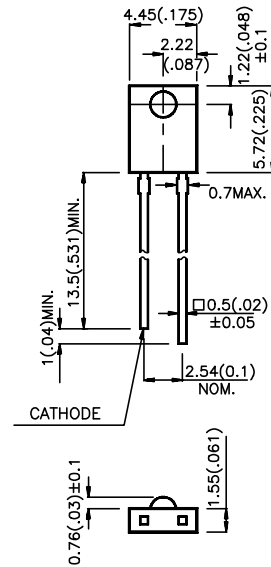
## INFRA-RED EMITTING DIODES

KM-4457F3C

### Features

- | MECHANICALLY AND SPECTRALLY MATCHED TO THE L-610MP4BT/BD PHOTOTRANSISTOR.
- | BOTH WATER CLEAR LENS AND BLUE TRANSPARENT LENS AVAILABLE
- | HIGH POWER OUTPUT.

### Package Dimensions



### Description

F3 Made with Gallium Arsenide Infrared Emitting diodes.

### 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 emerge package.
4. Specifications are subjected to change without notice.

### Selection Guide

Part No.	Lens Type	Iv (mW/sr) @20mA		Viewing Angle
		Min.	Max.	
KM-4457F3C	Water Clear	1.25	5	2 $\theta$ 1/2 150°

### Note:

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

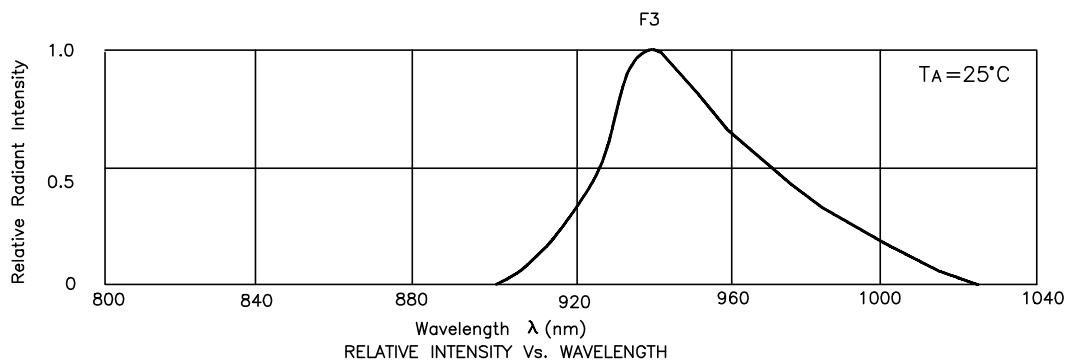
Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Item	P/N	Symbol	Typ.	Max.	Unit	Condition
Forward Voltage	KM-4457F3C	VF	1.2	1.5	V	IF=20mA
Reverse Current	KM-4457F3C	IR	-	10	uA	VR=5V
Junction Capacitance	KM-4457F3C	Co	90	-	pF	V=0 f=1MHz
Peak Spectral Wavelength	KM-4457F3C	IR	940	-	nm	IF=20mA
Spectral Bandwidth	KM-4457F3C	Δλ	50	-	nm	IF=20mA

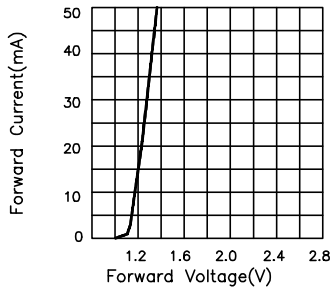
Absolute Maximum Ratings at T<sub>A</sub>=25°C

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

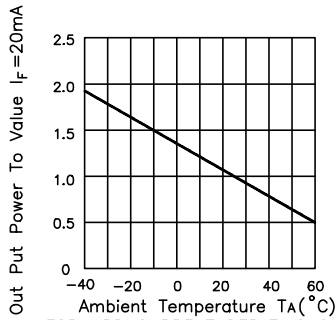
Note:  
1. Ip Condition : 1/10 Duty Cycle, 0.1ms Pluse Width.



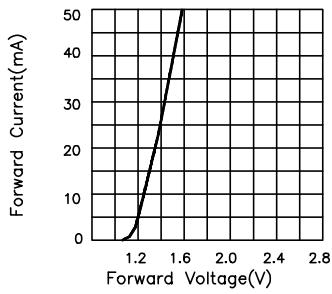
KM-4457F3C



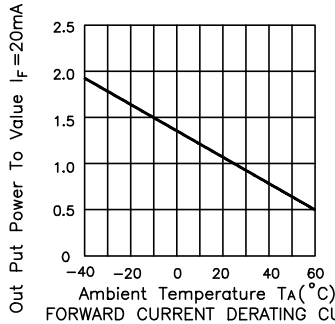
FORWARD CURRENT Vs. FORWARD VOLTAGE



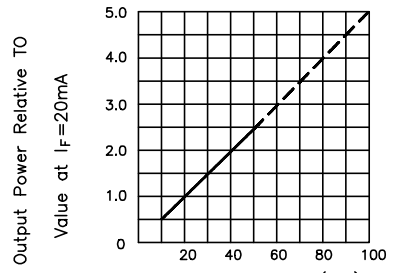
FORWARD CURRENT DERATING CURVE



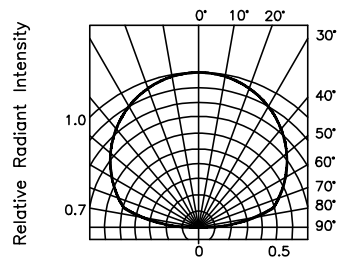
FORWARD CURRENT Vs. FORWARD VOLTAGE



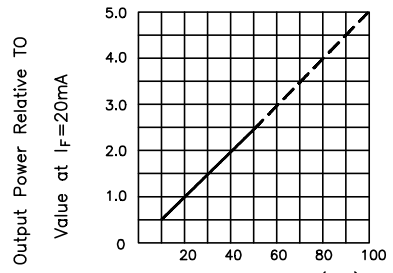
FORWARD CURRENT DERATING CURVE



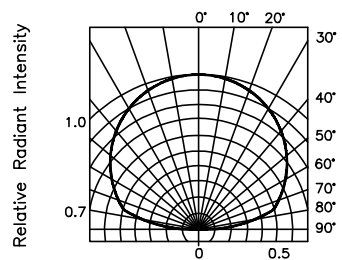
Relative Radiant Intensity Vs. Forward Current



RADIATION DIAGRAM



Relative Radiant Intensity Vs. Forward Current



RADIATION DIAGRAM