

Kingbright®

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

L-53F3C
L-53F3BT

L-53SF4C
L-53SF4BT

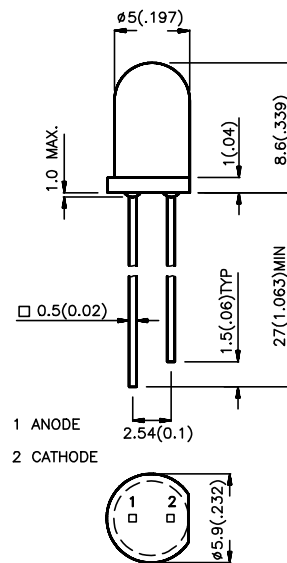
Features

- MECHANICALLY AND SPECTRALLY MATCHED TO THE L-51P3C PHOTOTRANSISTOR.
- BOTH WATER CLEAR LENS AND BLUE TRANSPARENT LENS AVAILABLE HIGH POWER OUTPUT.

Description

F3 Made with Gallium Arsenide Infrared Emitting diodes.
SF4 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 emerge package.
 4. Specifications are subjected to change without notice.

Selection Guide

Part No.	Lens Type	Iv (mW/sr) @20mA		Iv (mW/sr) @50mA		Viewing Angle
		Min.	Max.	Min.	Max.	
L-53F3C	Water Clear	8	40	12.5	40	30°
L-53F3BT	Blue Transparent	5	40	8	50	30°
L-53SF4C	Water Clear	8	40	12.5	40	30°
L-53SF4BT	Blue Transparent	5	40	8	50	30°

Note:
1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

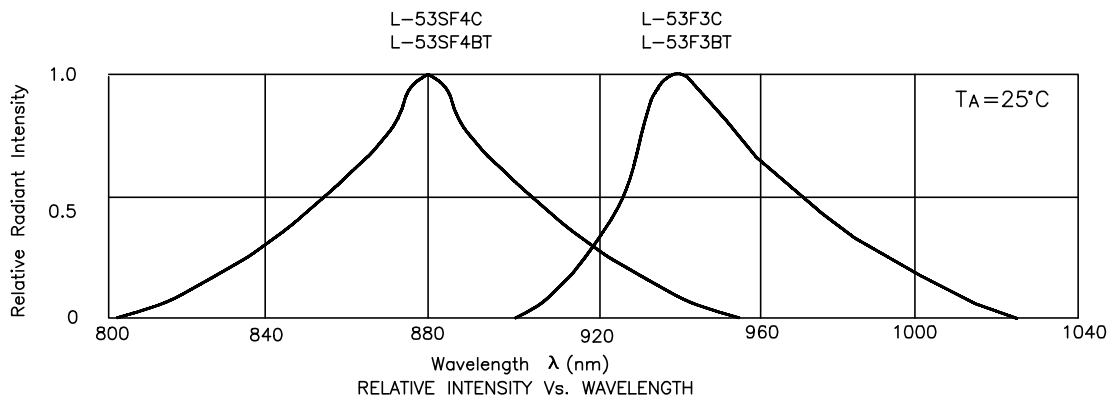
Electrical / Optical Characteristics at T_A=25°C

Item	P/N	Symbol	Typ.	Max.	Unit	Condition
Forward Voltage	L-53F3C L-53F3BT L-53SF4C L-53SF4BT	VF	1.2 1.2 1.4 1.4	1.5 1.5 1.7 1.7	V	IF=20mA
Reverse Current	L-53F3C L-53F3BT L-53SF4C L-53SF4BT	IR	-	10 10 10 10	μA	VR=5V
Junction Capacitance	L-53F3C L-53F3BT L-53SF4C L-53SF4BT	Co	90 90 90 90	-	pF	V=0 f=1MHz
Peak Spectral Wavelength	L-53F3C L-53F3BT L-53SF4C L-53SF4BT	IR	940 940 880 880	-	nm	IF=20mA
Spectral Bandwidth	L-53F3C L-53F3BT L-53SF4C L-53SF4BT	DI	50 50 50 50	-	nm	IF=20mA

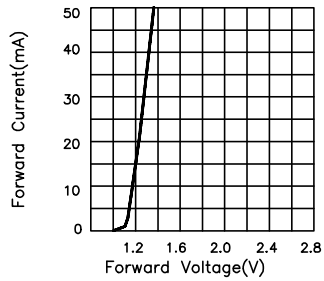
Absolute Maximum Ratings at T_A=25°C

Item	Symbol	Maximum Rating	Units
Power Dissipation	Pd	100	mW
Forward Current	IF	50	mA
Peak Forward Current	I _p	1.2	A
Reverse Voltage	VR	5	V
Operating Temperature	T _{opr}	-45~ +80	°C
Storage Temperature	T _{stg}	-45~ +80	°C

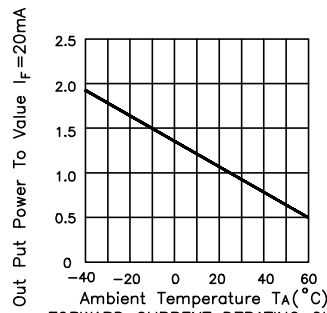
Note:
1.I_p Condition : 1/10 Duty Cycle, 0.1ms Pluse width .



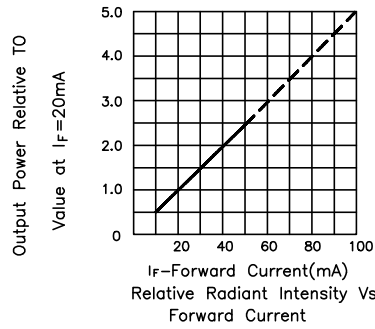
L-53F3C / L-53F3BT



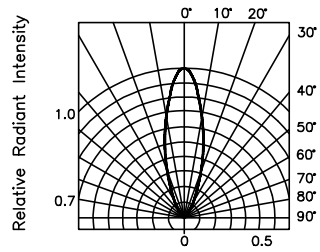
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

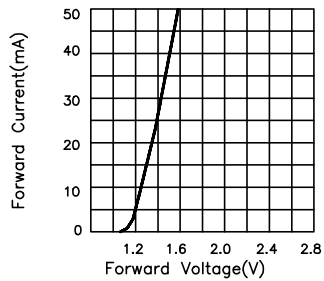


Relative Radiant Intensity Vs. Forward Current

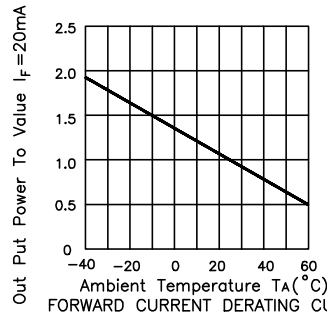


RADIATION DIAGRAM

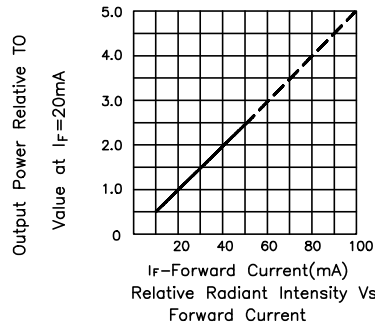
L-53SF4C / L-53SF4BT



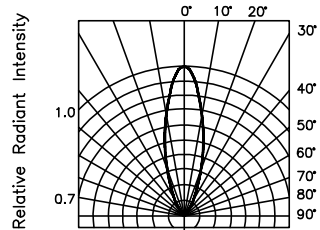
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



Relative Radiant Intensity Vs. Forward Current



RADIATION DIAGRAM