

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

L-53F3C	L-53F3BT
L-53SF4C	L-53SF4BT
L-53SF6C	L-53SF6BT
L-53SF7C	L-53SF7BT

Features

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

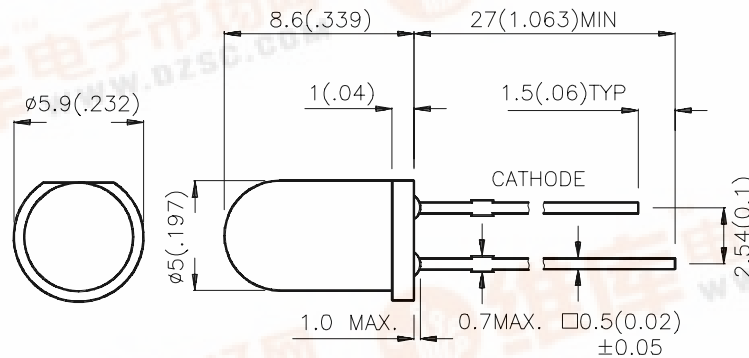
Description

F3 Made with Gallium Arsenide Infrared Emitting diodes.

SF4 and SF6 and SF7 Made with Gallium Aluminum

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 lead emerge package.
4. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Po (mW/sr) @20mA		Po (mW/sr) @50mA		Viewing Angle
			Min.	Typ.	Min.	Typ.	2θ1/2
L-53F3C	GaAs	WATER CLEAR	8	20	12	30	30°
L-53F3BT	GaAs	BLUE TRANS.	5	20	8	30	30°
L-53SF4C	GaAlAs	WATER CLEAR	8	20	12	30	30°
L-53SF4BT	GaAlAs	BLUE TRANS.	5	20	8	30	30°
L-53SF6C	GaAlAs	WATER CLEAR	10	40	50	100	30°
L-53SF6BT	GaAlAs	BLUE TRANS.	10	40	50	100	30°
L-53SF7C	GaAlAs	WATER CLEAR	10	40	50	100	30°
L-53SF7BT	GaAlAs	BLUE TRANS.	10	40	50	100	30°

Note:

1. θ1/2 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	F3 SF4 SF6 SF7	V _F	1.2 1.3 1.35 1.4	1.5 1.7 1.6 1.8	V	IF=20mA
Reverse Current	F3 SF4 SF6 SF7	I _r	-	10 10 10 10	uA	VR=5V
Junction Capacitance	F3 SF4 SF6 SF7	C	90 90 30 30	-	pF	V=0 f=1MHz
Peak Spectral Wavelength	F3 SF4 SF6 SF7	λ _P	940 880 860 850	-	nm	IF=20mA
Spectral Bandwidth	F3 SF4 SF6 SF7	Δλ	50 50 50 41	-	nm	IF=20mA

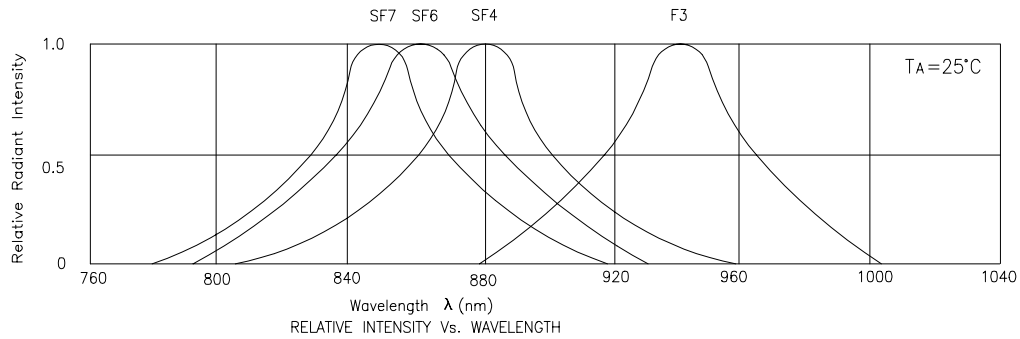
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Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

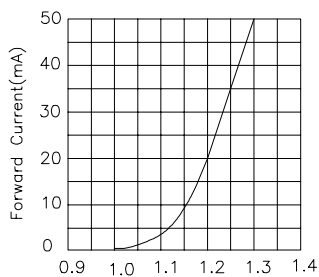
Item	Symbol	F3&SF4	SF6&SF7	Units
Power Dissipation	P_d	100	100	mW
Forward Current	I_f	50	50	mA
Peak Forward Current	I_p	1.2	1	A
Reverse Voltage	V_R	5	5	V
Operating Temperature	T_{opr}	-40~ +85	-40~ +85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40~ +85	-40~ +85	$^\circ\text{C}$

Notes:

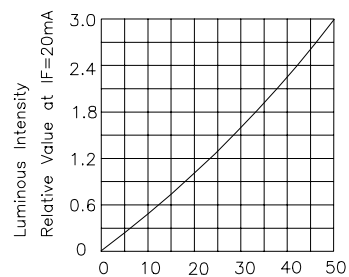
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



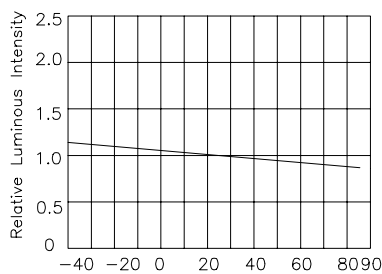
L-53F3C, L-53F3BT



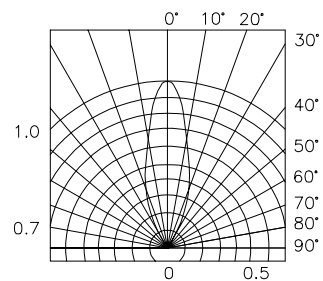
FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



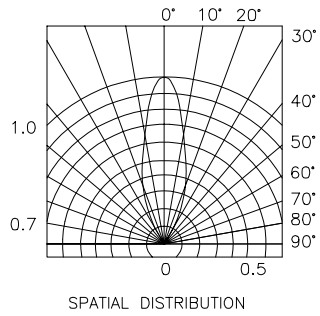
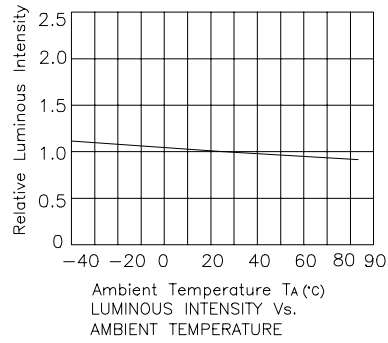
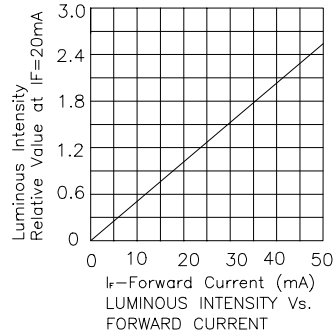
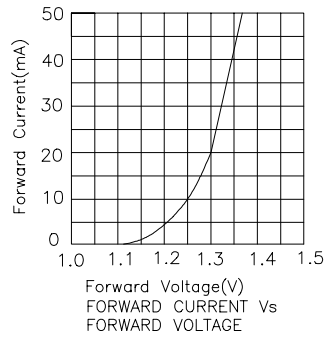
LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



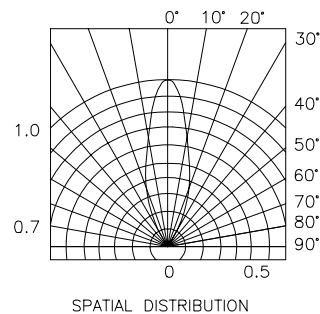
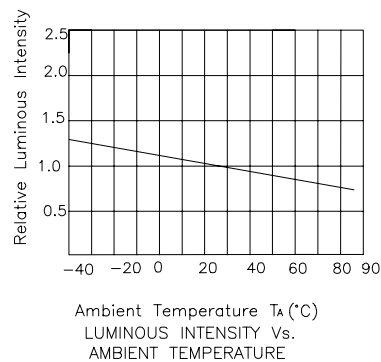
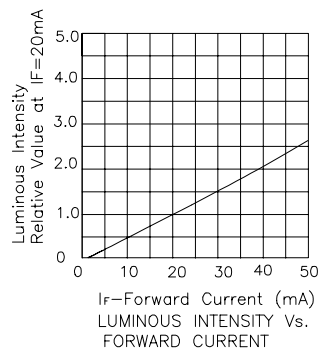
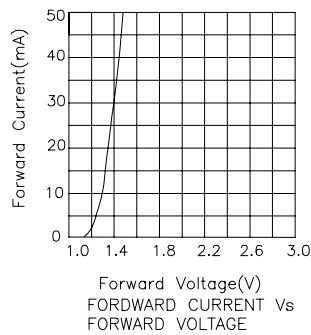
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L-53SF4C, L-53SF4BT

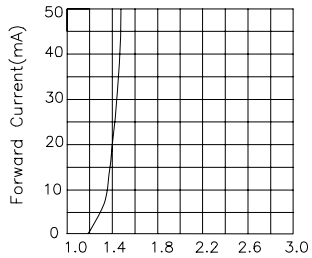


L-53SF6C, L-53SF6BT

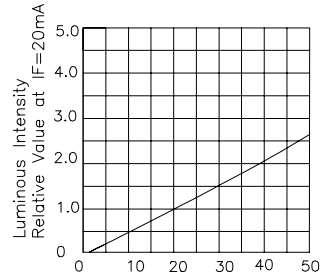


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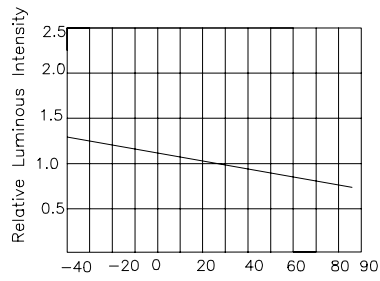
L-53SF7C, L-53SF7BT



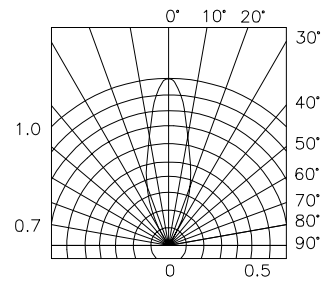
Forward Voltage(V)
 FORWARD CURRENT Vs
 FORWARD VOLTAGE



IF-Forward Current (mA)
 LUMINOUS INTENSITY Vs.
 FORWARD CURRENT



Ambient Temperature TA(°C)
 LUMINOUS INTENSITY Vs.
 AMBIENT TEMPERATURE



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