

Optoelectronic Devices

Order code	Manufacturer code	Description
58-0100	L-34 F3C	L-34F3C INFRA RED SOURCE (RC)

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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 3mm Infra Red Emitting Diode – L-34 Series

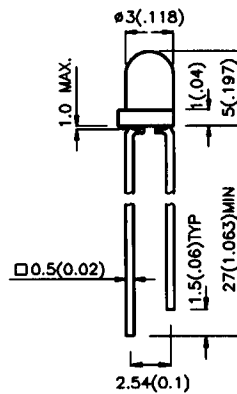
Features

- MECHANICALLY AND SPECTRALLY MATCHED TO THE L-32P3C PHOTOTRANSISTOR.
- BOTH WATER CLEAR LENS AND BLUE TRANSPARENT LENS AVAILABLE HIGH POWER OUTPUT.

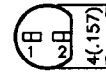
Description

F3 Made with Gallium Arsenide Infrared Emitting diodes.
 SF4 Made with Gallium Aluminum Arsenide Emitting diodes.

Package Dimensions



- 1 ANODE
 2 CATHODE



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-34F3C	Water Clear	2	20	5	40	30°
L-34F3BT	Blue Transparent	2	8	8	40	30°
L-34SF4C	Water Clear	2	20	5	40	30°
L-34SF4BT	Blue Transparent	2	8	8	40	30°

Note:

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

Kingbright Code	Description
L-34 F3C	WATER CLEAR INFRA RED EMITTER

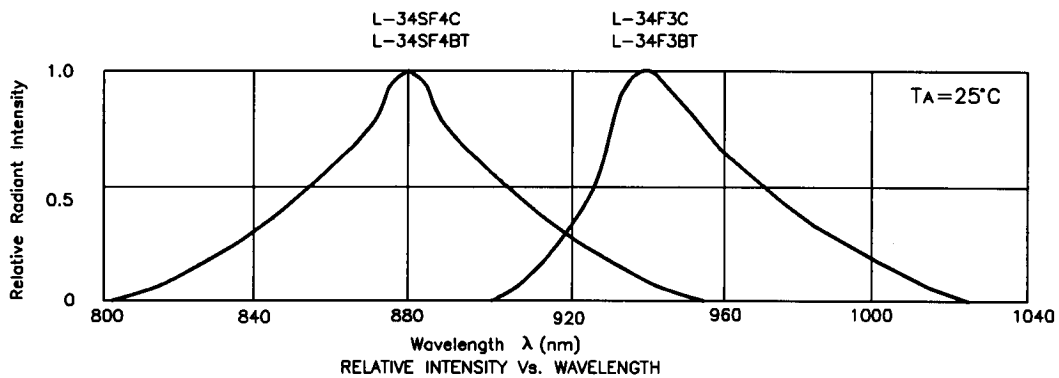
Electrical / Optical Characteristics at $T_A=25^\circ\text{C}$

Item	P/N	Symbol	Typ.	Max.	Unit	Condition
Forward Voltage	L-34F3C	VF	1.2	1.5	V	IF=20mA
	L-34F3BT		1.2	1.5		
	L-34SF4C		1.4	1.7		
	L-34SF4BT		1.4	1.7		
Reverse Current	L-34F3C	IR	-	10	uA	VR=5V
	L-34F3BT		-	10		
	L-34SF4C		-	10		
	L-34SF4BT		-	10		
Junction Capacitance	L-34F3C	Co	90	-	pF	V=0 f=1MHz
	L-34F3BT		90	-		
	L-34SF4C		90	-		
	L-34SF4BT		90	-		
Peak Spectral Wavelength	L-34F3C	λ_P	940	-	nm	IF=20mA
	L-34F3BT		940	-		
	L-34SF4C		880	-		
	L-34SF4BT		880	-		
Spectral Bandwidth	L-34F3C	$\Delta\lambda$	50	-	nm	IF=20mA
	L-34F3BT		50	-		
	L-34SF4C		50	-		
	L-34SF4BT		50	-		

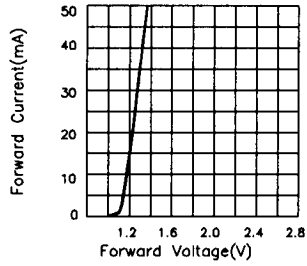
Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

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	$^\circ\text{C}$
Storage Temperature	Tstg	-45~ +80	$^\circ\text{C}$

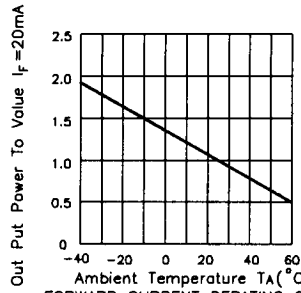
Notes:
1. Ip Condition : 1/10 Duty Cycle, 0.1ms Pluse Width.



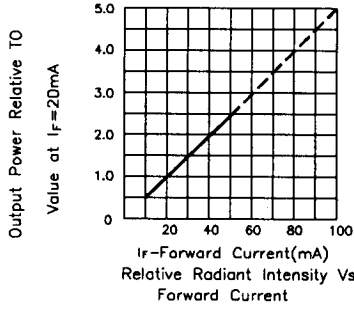
L-34F3C / L-34F3BT



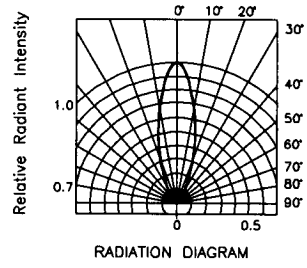
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

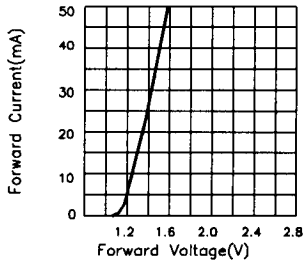


Relative Radiant Intensity Vs. Forward Current

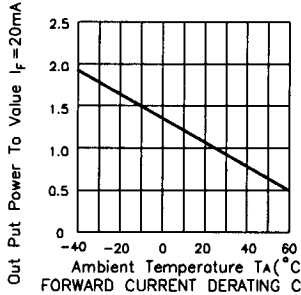


RADIATION DIAGRAM

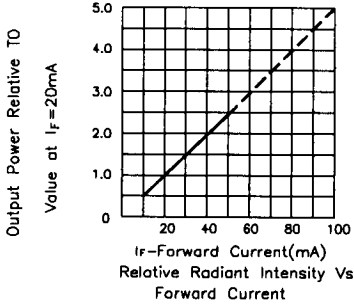
L-34SF4C / L-34SF4BT



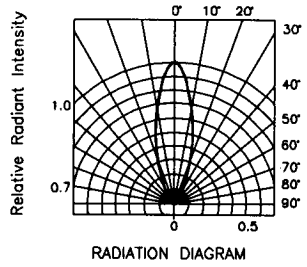
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



Relative Radiant Intensity Vs. Forward Current



RADIATION DIAGRAM