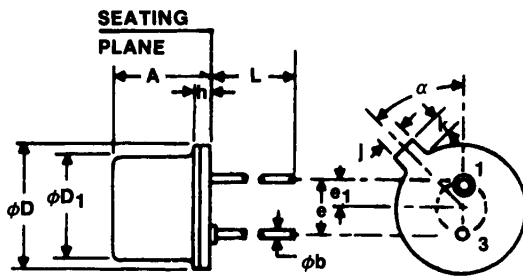


**LED55BF/CF, LED56F**

**PACKAGE DIMENSIONS**



ST1331

SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN.	MAX.	MIN.	MAX.	
A		.155		3.93	
⊕b	.016	.021	.407	.533	
⊕D	.209	.230	5.31	5.84	
⊕D.	.180	.188	4.57	4.77	
e	.100 NOM.		2.54 NOM.		2
e.	.050 NOM.		1.27 NOM.		2
h		.030		.76	
j	.031	.044	.79	1.11	
k	.036	.046	.92	1.16	1
L	1.00		25.4		
α	45°	45°	45°	45°	3

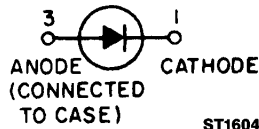
**DESCRIPTION**

The LED55BF/CF and LED56F are 940nm LEDs in a wide angle, TO-46 package.

**FEATURES**

- Good optical to mechanical alignment
- Mechanically and wavelength matched to the TO-18 series phototransistor
- Hermetically sealed package
- High irradiance level

**PACKAGE OUTLINE**



NOTES:

1. MEASURED FROM MAXIMUM DIAMETER OF DEVICE.
2. LEADS HAVING MAX. DIAMETER .021" (.533mm) MEASURED IN GAUGING PLANE .054" + .001" - .000 (1.37 + .025 - .000mm) BELOW THE REFERENCE PLANE OF THE DEVICE SHALL BE WITHIN .007" (.778mm) THEIR TRUE POSITION RELATIVE TO A MAXIMUM WIDTH TAB.
3. FROM CENTERLINE TAB.



## GaAs INFRARED EMITTING DIODE

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C Unless Otherwise Specified)

Storage Temperature	-65°C to +150°C
Operating Temperature	-65°C to +125°C
Soldering:	
Lead Temperature (Iron)	240°C for 5 sec. <sup>(3,4,5,6)</sup>
Lead Temperature (Flow)	260°C for 10 sec. <sup>(3,4,6)</sup>
Continuous Forward Current	100 mA
Forward Current (pw, 1 μS; 200 Hz)	10 A
Reverse Voltage	3 Volts
Power Dissipation (T <sub>A</sub> = 25°C)	170 mW <sup>(1)</sup>
Power Dissipation (T <sub>C</sub> = 25°C)	1.3 W <sup>(2)</sup>

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C Unless Otherwise Specified)

(All measurements made under pulse conditions.)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Forward Voltage	V <sub>f</sub>	—		1.7	V	I <sub>f</sub> = 100 mA
Reverse Leakage Current	I <sub>r</sub>	—		10	μA	V <sub>r</sub> = 3 V
Peak Emission Wavelength	λ <sub>p</sub>		940		nm	I <sub>f</sub> = 100 mA
Emission Angle at ½ Power	θ		±40		Degrees	
Total Power LED55BF	P <sub>o</sub>	3.5		—	mW	I <sub>f</sub> = 100 mA <sup>(7)</sup>
Total Power LED55CF	P <sub>o</sub>	5.4		—	mW	I <sub>f</sub> = 100 mA <sup>(7)</sup>
Total Power LED56F	P <sub>o</sub>	1.5		—	mW	I <sub>f</sub> = 100 mA <sup>(7)</sup>
Rise Time 0-90% of output	t <sub>r</sub>		1.0		μS	
Fall Time 100-10% of output	t <sub>f</sub>		1.0		μS	

### NOTES

- Derate power dissipation linearly 1.70 mW/°C above 25°C ambient.
- Derate power dissipation linearly 13.0 mW/°C above 25°C case.
- RMA flux is recommended.
- Methanol or Isopropanol alcohols are recommended as cleaning agents.
- Soldering iron tip 1/16" (1.6 mm) minimum from housing.
- As long as leads are not under any stress or spring tension.
- Total power output, P<sub>o</sub>, is the total power radiated by the device into a solid angle of 2π steradians.

