Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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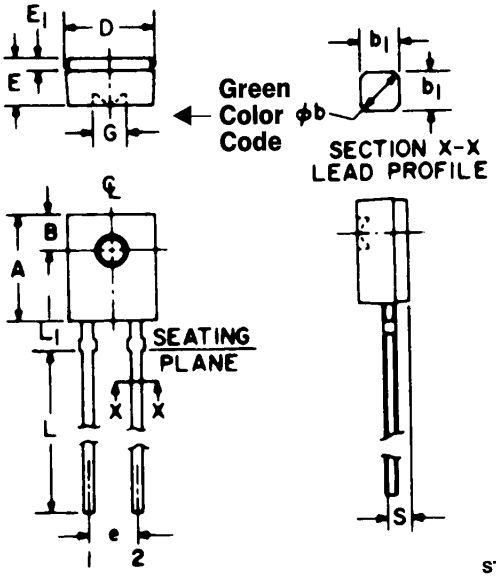
FAIRCHILD
SEMICONDUCTOR™

AlGaAs INFRARED EMITTING DIODE

F5G1

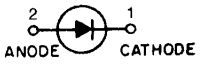
PACKAGE DIMENSIONS



ST1334

SYMBOL	MILLIMETERS		INCHES		NOTES
	MIN.	MAX.	MIN.	MAX.	
A	5.59	5.80	.220	.228	
B	1.78	NOM.	.070	NOM.	2
Ⓜb	.60	.75	.024	.030	1
b_1	.51	NOM.	.020	NOM.	1
D	4.45	4.70	.175	.185	
E	2.41	2.67	.095	.105	
E_1	.58	.69	.023	.027	
e	2.41	2.67	.095	.105	3
G	1.98	NOM.	.078	NOM.	
L	12.7	—	.500	—	
L_1	1.40	1.65	.055	.065	
S	.83	.94	.033	.037	3

PACKAGE OUTLINE



ST1604

NOTES:
1. TWO LEADS. LEAD CROSS SECTION DIMENSIONS UNCONTROLLED WITHIN 1.27 mm (.050") OF SEATING PLANE.
2. CENTERLINE OF ACTIVE ELEMENT LOCATED WITHIN .25 mm (.010") OF TRUE POSITION.
3. AS MEASURED AT THE SEATING PLANE.
4. INCH DIMENSIONS DERIVED FROM MILLIMETERS.

DESCRIPTION

The F5G1 is an 880nm LED encapsulated in a clear, wide angle, sidelooker package.

FEATURES

- Good optical to mechanical alignment
- Mechanically and wavelength matched to the L14Q series phototransistor
- Plastic package with a color stripe for easy recognition from phototransistor
- High irradiance level

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AlGaAs INFRARED EMITTING DIODE

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C Unless Otherwise Specified)

Storage Temperature ..... −55°C to +100°C
Operating Temperature ..... −55°C to +100°C
Soldering:
Lead Temperature (Iron) ..... 240°C for 5 sec.[2,3,4,5]
Lead Temperature (Flow) ..... 260°C for 10 sec.[2,3,5]
Continuous Forward Current ..... 50 mA
Forward Current (pw, 1μS; ≤ 33 Hz) ..... 2 A
Reverse Voltage ..... 6 Volts
Power Dissipation ..... 100 mW[1]

ELECTRICAL CHARACTERISTICS (T_A = 25°C Unless Otherwise Specified)
(All measurements made under pulse conditions.)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Forward Voltage	V_F	—		1.7	V	I_F = 20 mA
Reverse Breakdown Voltage	V_R	6.0		—	V	I_R = 10 μA
Reverse Leakage Current	I_R	—		10	μA	V_R = 5 V
Peak Emission Wavelength	λ_P		880		nm	I_F = 100 mA
Emission Angle at ½ Power	θ		±35		Degrees	
Radiant Intensity	Ie	0.6		—	mW/sr	I_F = 20 mA[6]

NOTES

1. *Derate power dissipation linearly 1.33 mW/°C above 25°C ambient.*
2. *RMA flux is recommended.*
3. *Methanol or Isopranol alcohols are recommended as cleaning agents.*
4. *Soldering iron tip 1/16" (1.6 mm) minimum from housing.*
5. *As long as leads are not under any stress or spring tension.*
6. *Ie measured with a 0.45 cm aperture placed 1.6 cm from the tip of the lens on the lens centerline perpendicular to the plane of the leads.*

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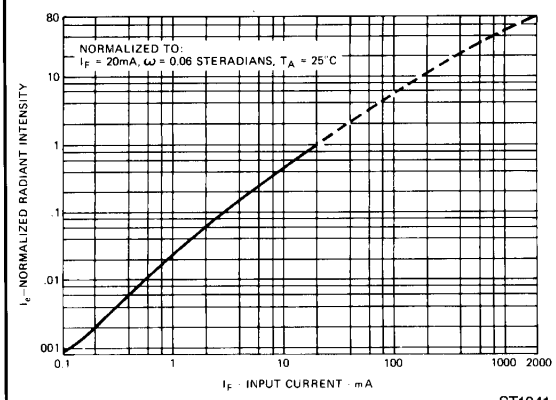
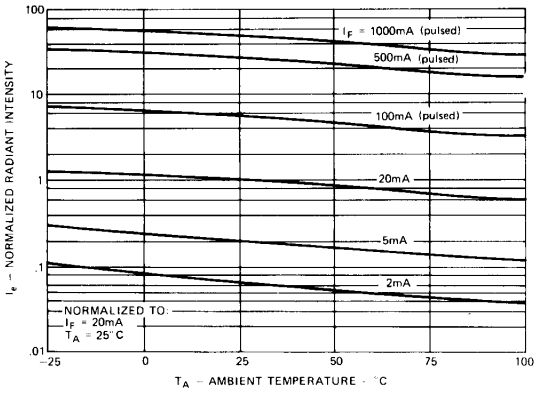
TYPICAL CHARACTERISTICS



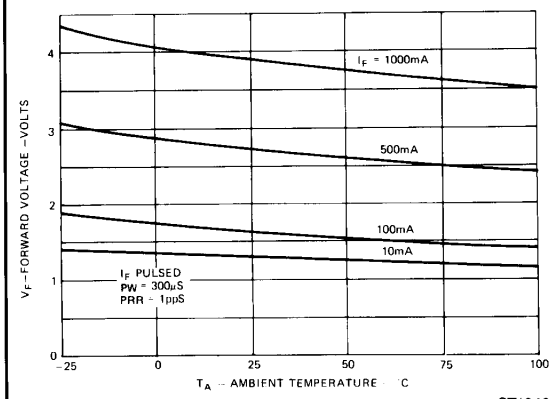
ST1041

Fig. 1. Radiant Intensity vs. Input Current



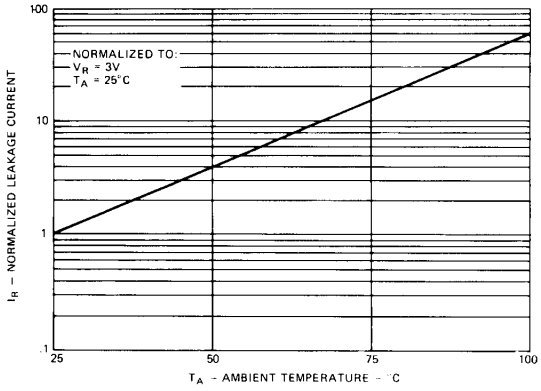
ST1046

Fig. 2. Radiant Intensity vs. Temperature



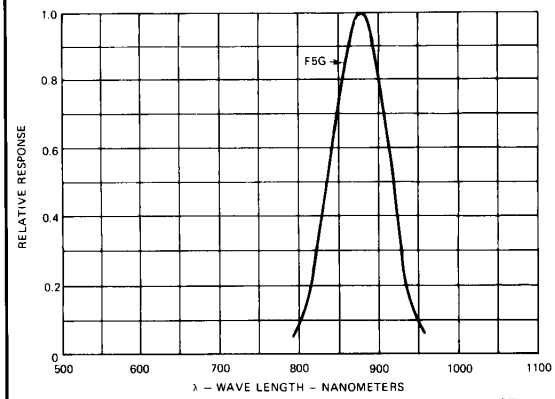
ST1042

Fig. 3. Forward Voltage vs. Temperature



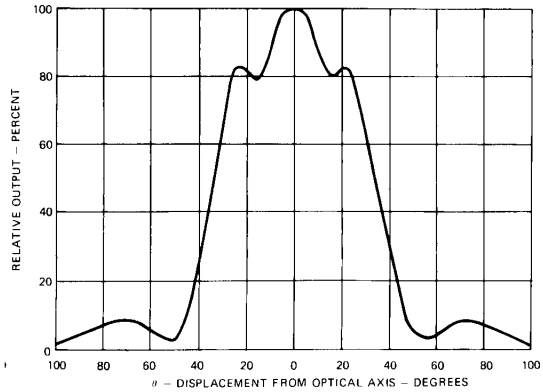
ST1045

Fig. 4. Leakage Current vs. Temperature



ST1043

Fig. 5. Spectral Response



ST1044

Fig. 6. Typical Radiation Pattern

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.