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.

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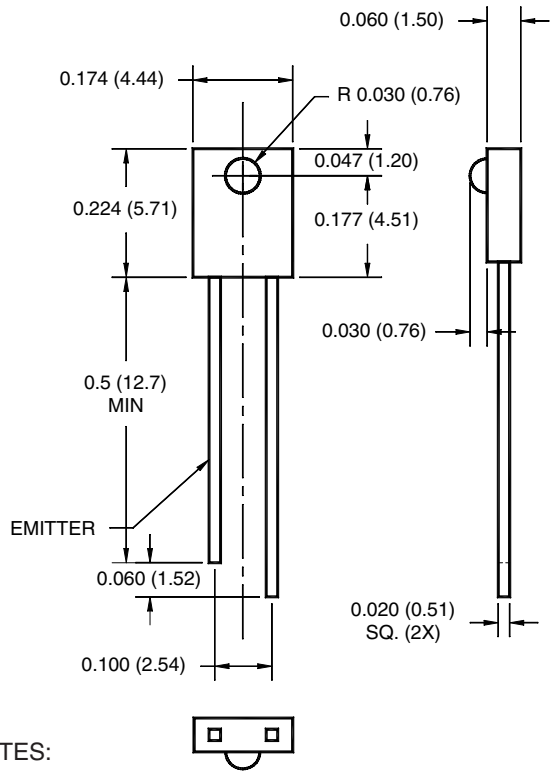
FAIRCHILD
SEMICONDUCTOR®

PLASTIC INFRARED LIGHT EMITTING DIODE

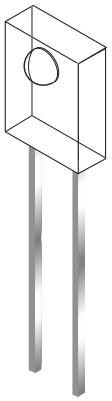
QEE213

PACKAGE DIMENSIONS

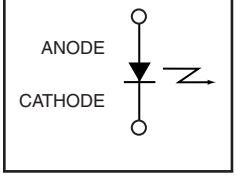


NOTES:

1. Dimensions for all drawings are in inches (millimeters).
2. Tolerance of ± .010 (.25) on all non nominal dimensions unless otherwise specified.



SCHEMATIC



DESCRIPTION

The QEE213 is a 940nm GaAs LED encapsulated in a medium angle, thin plastic sidelooker package.

FEATURES

- Wavelength = 940 nm, GaAs
- Package Type: Sidelooker
- Medium Beam Angle, 50°
- Clear Plastic Package
- Matched Photosensors: QSE213 and QSE243

PLASTIC INFRARED LIGHT EMITTING DIODE

QEE213

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to + 100	°C
Storage Temperature	T_{STG}	-40 to + 100	°C
Soldering Temperature (Iron)(2,3,4)	T_{SOL-I}	240 for 5 sec	°C
Soldering Temperature (Flow)(2,3)	T_{SOL-F}	260 for 10 sec	°C
Continuous Forward Current	I_F	100	mA
Reverse Voltage	V_R	5	V
Peak Forward Current(5)	I_{FP}	1	A
Power Dissipation(1)	P_D	100	mW

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Units
Peak Emission Wavelength	I_F = 100 mA	λ_P	—	940	—	nm
Emission Angle	I_F = 100 mA	U	—	±25	—	Deg.
Forward Voltage	I_F = 100 mA, tp = 20 ms	V_F	—	—	1.5	V
Reverse Current	V_R = 5 V	I_R	—	—	10	µA
Radiant Intensity	I_F = 100 mA, tp = 20 ms	I_e	2	—	—	mW/sr
Rise Time	I_F = 100 mA	t_r	—	1	—	µs
Fall Time	tp = 100 µs, T = 10 mS	t_f	—	1	—	

NOTES

1. Derate power dissipation linearly 2.67 mW/°C above 25°C.
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron 1/16" (1.6 mm) minimum from housing.
5. Pulse conditions: tp = 100 µs, T = 10 ms.

PLASTIC INFRARED LIGHT EMITTING DIODE

QEE213

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

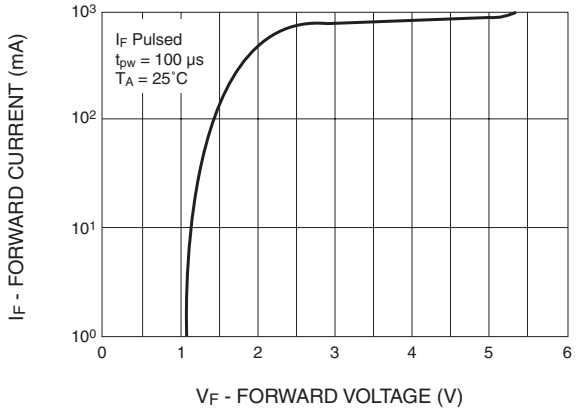


Fig. 2 Forward Voltage vs. Ambient Temperature

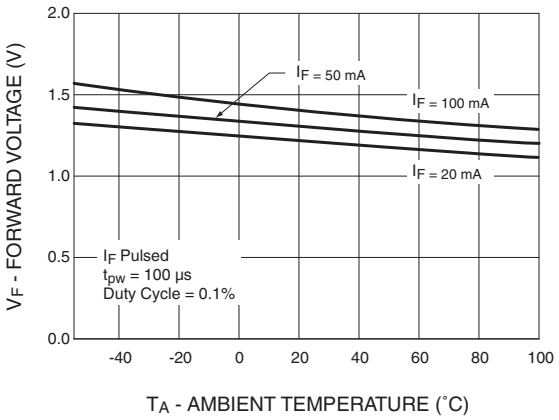


Fig. 3 Normalized Radiant Intensity vs. Forward Current

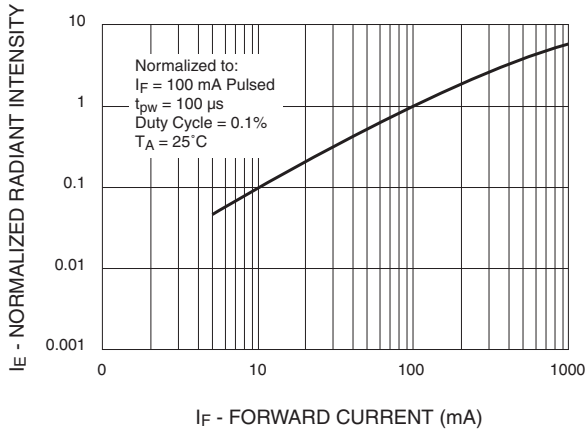
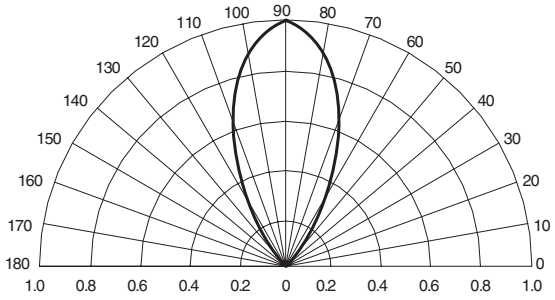


Fig. 4 Radiation Diagram



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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.