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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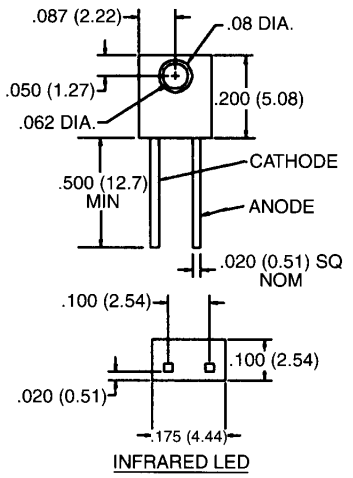
FAIRCHILD
SEMICONDUCTOR™

PLASTIC SIDELOOKER PAIR

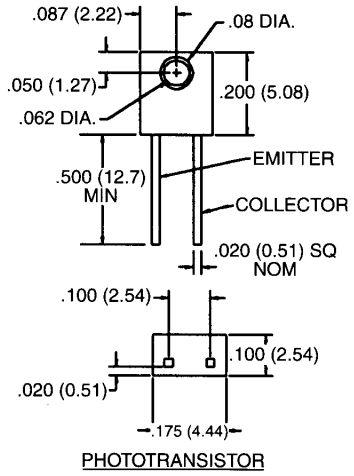
QPE1113

PACKAGE DIMENSIONS



INFRARED LED

ST2171



PHOTOTRANSISTOR

ST2171

NOTES:
1. DIMENSIONS ARE IN INCHES (mm).
2. TOLERANCE IS ±.010 (.25) UNLESS OTHERWISE SPECIFIED.

DESCRIPTION

The QPE1113 consists of a 940nm GaAs LED and a silicon phototransistor mounted in plastic sidelooker packages.

FEATURE

- Steel lead frames for improved reliability in solder mounting.
- Excellent optical-to-mechanical alignment.
- Wide emission/reception angle.
- Black plastic body allows easy recognition of sensor and filters ambient visible light.

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PLASTIC SIDELOOKER PAIR

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

Storage Temperature ..... −40°C to + 100°C
Operating Temperature ..... −40°C to + 100°C
Soldering:
Lead Temperature (Iron) ..... 240°C for 5 sec. [2,3,5]
Lead Temperature (Flow) ..... 260°C for 10 sec. [2,5]

INPUT DIODE
Continuous Forward Current ..... 60 mA
Reverse Voltage ..... 5.0 Volts
Power Dissipation ..... 100 mW[1]

OUTPUT TRANSISTOR
Collector-Emitter Voltage ..... 30 Volts
Emitter-Collector Voltage ..... 5.0 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
INPUT DIODE						
Forward Voltage	V_F	—		1.50	V	I_F =20 mA
Reverse Leakage Current	I_R	—		100	μA	V_R =5.0 V
OUTPUT TRANSISTOR						
Collector-Emitter Breakdown	BV_{CEO}	30		—	V	I_C = 1.0 mA, Ee = 0
Collector-Emitter Leakage	I_{CEO}	—		100	nA	V_{CE} = 10.0 V, Ee = 0
COUPLED						
On-State Collector Current						
QPE1113	$I_{C(ON)}$	0.30		—	mA	I_F = 20mA, V_{CC} = 5.0V, D=.155"[4,5]

NOTES

1. *Derate power dissipation linearly 133 mW/°C above 25°C.*
2. *RMA flux is recommended.*
3. *Soldering iron tip 1/16" (1.6mm) minimum from case.*
4. *D is the distance from lens tip to lens tip.*
5. *As long as leads are not under any stress or spring tension.*

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PLASTIC SIDELOOKER PAIR

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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.