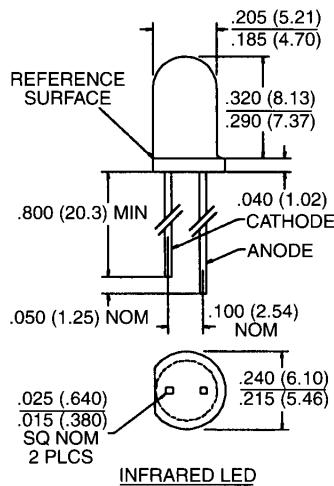
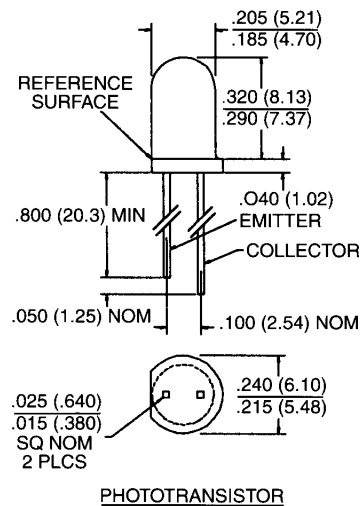


PACKAGE DIMENSIONS



ST2169



ST2169

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

DESCRIPTION

The QPD1223 consists of an 880 nm AlGaAs LED and a silicon phototransistor mounted in plastic T-1³/₄ packages.

FEATURE

- Steel lead frames for improved reliability in solder mounting.
- Good optical-to-mechanical alignment.
- Narrow emission/reception angle.
- Black plastic body allows easy recognition of sensor.

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ 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	100 mA
Reverse Voltage	5.0 Volts
Power Dissipation	200 mW ⁽¹⁾
OUTPUT TRANSISTOR	
Collector-Emitter Voltage	30 Volts
Emitter-Collector Voltage	5.0 Volts
Power Dissipation	100 mW ⁽¹⁾

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified) (All measurements made under pulse conditions.)						
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
INPUT DIODE						
Forward Voltage	V_f	—		1.70	V	$I_f = 20\text{ mA}$
Reverse Leakage Current	I_R	—		100	μA	$V_R = 5.0\text{ V}$
OUTPUT TRANSISTOR						
Collector-Emitter Breakdown	BV_{CE0}	30		—	V	$I_f = 1.0\text{ mA}$, $E_e = 0$
Collector-Emitter Leakage	I_{CE0}	—		100	nA	$V_{CE} = 10.0\text{ V}$, $E_e = 0$
COUPLED						
On-State Collector Current						
QPD1223	$I_{C(ON)}$	10.0		—	mA	$I_f = 20\text{ mA}$, $V_{CC} = 5.0\text{ V}$, $D = .250^{(4)}$

NOTES
<ol style="list-style-type: none"> 1. Derate power dissipation linearly 2.67 mW/°C above 25°C for LED and 1.33 mW/°C for sensor. 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 T-1^{3/4} PAIR

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