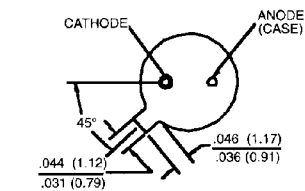
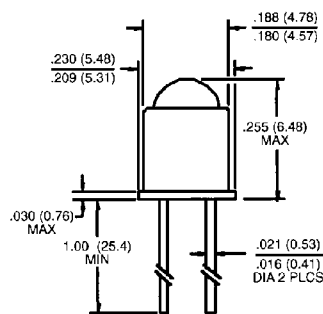




HERMETIC PAIR

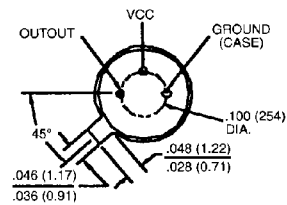
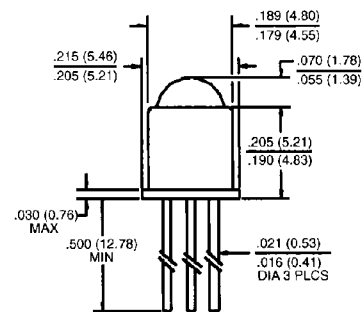
QPA8259

PACKAGE DIMENSIONS



ST1660

INFRARED LED



ST1661

PHOTOSENSOR

NOTES:

1. DIMENSIONS ARE IN INCHES [mm].
2. TOLERANCE IS $\pm .010$ [.25] UNLESS OTHERWISE SPECIFIED.

DESCRIPTION

The QPA8259 consists of an 880nm AlGaAs LED and an OPTOLOGIC™ silicon photosensor mounted in hermetically sealed packages.

FEATURE

- Narrow emission/reception angle
- Hermetically sealed packages



HERMETIC PAIR

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

Storage Temperature	-65°C to $+150^\circ\text{C}$
Operating Temperature	-65°C to $+125^\circ\text{C}$
Soldering:	
Lead Temperature (Iron)	240°C for 5 sec. ^(3,4,5)
Lead Temperature (Flow)	260°C for 10 sec. ^(3,4)

INPUT DIODE

Continuous Forward Current	60 mA
Reverse Voltage	3.0 Volts
Power Dissipation	170 mW ⁽¹⁾

OUTPUT OPTOLOGIC™

Output Current	50 mA
Operation Voltage Allowed Range	4.5 to 16 Volts
Output Voltage Allowed Range	4.5 to 16 Volts
Power Dissipation	250 mW ⁽²⁾

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
INPUT DIODE						
Forward Voltage	V_F	—		1.7	V	$I_F = 20\text{ mA}$
Reverse Leakage Current	I_R	—		10	μA	$V_R = 3\text{ V}$
OUTPUT OPTOLOGIC™						
Operating Supply Voltage	V_{CC}	4.5		16.0	V	
Supply Current	I_{CC}	—		12.0	mA	$E_e = 0$ or 0.3 mW/cm^2
Output Current High	I_{OH}	—		10	μA	$E_e = 0$, $V_{OH} = 30\text{ V}$
Low Level Output Voltage	V_{OL}	—		0.4	V	$E_e = .3\text{ mW/cm}^2$, $R_L = 270\Omega$
COUPLED						
Turn-On Threshold Current	$I_{F(+)}$	—		20.0	mA	$V_{CC} = 5\text{ V}$, $R_L = 270\Omega$, $D = .250$ ⁽⁶⁾
Turn-Off Threshold Current	$I_{F(-)}$	1.0		—	mA	$V_{CC} = 5\text{ V}$, $R_L = 270\Omega$, $D = .250$ ⁽⁶⁾
Hysteresis Ratio	$I_{F(+)} / I_{F(-)}$	1.1		2.0		$V_{CC} = 5\text{ V}$, $R_L = 270\Omega$, $D = .250$ ⁽⁶⁾

NOTES

1. Derate power dissipation linearly 1.70 mW/ $^\circ\text{C}$ above 25°C .
2. Derate power dissipation linearly 2.50 mW/ $^\circ\text{C}$ above 25°C .
3. RMA flux is recommended.
4. Methanol or Isopropyl alcohols are recommended as cleaning agents.
5. Soldering iron tip $\frac{1}{16}$ " (1.6 mm) from housing.
6. D is the distance from lens tip to lens tip.