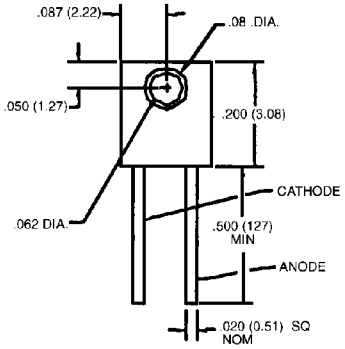
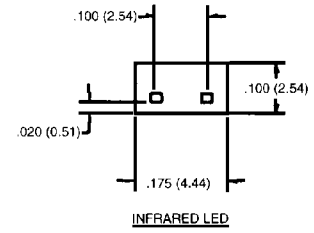
QT OPTOELECTRONICS

PLASTIC SIDELOOKER PAIR

QPE1259

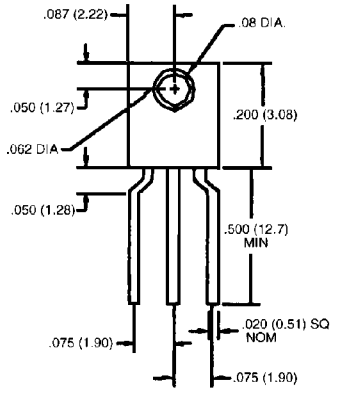
PACKAGE DIMENSIONS

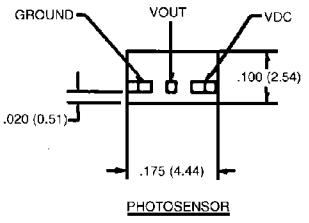




INFRARED LED

ST1662





PHOTOSENSOR

ST1663

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

DESCRIPTION

The QPE1259 consists of a gallium arsenide LED and an OPTOLOGIC™ silicon photosensor 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

OPTOELECTRONICS

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 +85°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 ..... 6.0 Volts
Power Dissipation ..... 100 mW[1]

OUTPUT OPTOLOGIC™
Output Current ..... 50 mA
Operation Voltage Allowed Range ..... 4.5 to 16 Volts
Output Voltage Allowed Range ..... 2.4 to 30 Volts
Power Dissipation ..... 200 mW[2]

ELECTRICAL CHARACTERISTICS (T_A = 25°C Unless Otherwise Specified)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
INPUT DIODE						
Forward Voltage	V_F	—		1.5	V	I_F = 20 mA
Reverse Leakage Current	I_R	—		10	μA	V_R = 3 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/cm²
Output Current High	I_{OH}	—		100	μA	E_e = 0, V_{OH} = 30 V
Low Level Output Voltage	V_{OL}	—		0.4	V	E_e = .3 mW/cm², R_L = 270Ω
COUPLED						
Turn-On Threshold Current	$I_{F(+)}$	—		20.0	mA	V_{CC} = 5 V, R_L = 270Ω, D = .155"[6]
Turn-Off Threshold Current	$I_{F(-)}$	1.0		—	mA	V_{CC} = 5 V, R_L = 270Ω, D = .155"[6]
Hysteresis Ratio	$I_{F(+)}/I_{F(-)}$	1.1		2.0		V_{CC} = 5 V, R_L = 270Ω, D = .155"[6]

NOTES

1. *Derate power dissipation linearly 1.67 mW/°C above 25°C.*
2. *Derate power dissipation linearly 3.33 mW/°C above 25°C.*
3. *RMA flux is recommended.*
4. *Methanol or Isopropyl alcohols are recommended as cleaning agents.*
5. *Soldering iron tip 1/16" (1.6 mm) from housing.*
6. *D is the distance from lens tip to lens tip.*