

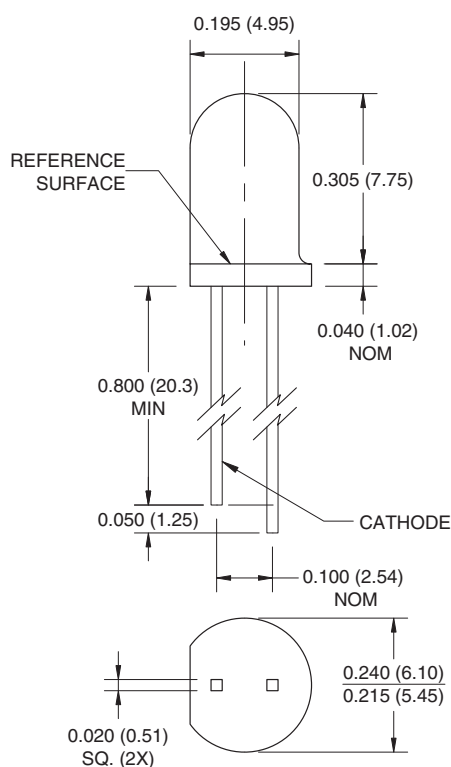
QSD2030F Plastic Silicon Photodiode

Features

- PIN Photodiode
- Package type: T-1 3/4 (5mm lens diameter)
- Wide Reception Angle, 40°

- Daylight Filter
- Package material and color: Black epoxy
- High Sensitivity
- Peak Sensitivity $\lambda = 880 \text{ nm}$

Package Dimensions

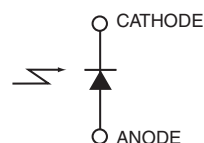


NOTES:

1. Dimensions for all drawings are in inches (mm).
2. Tolerance of $\pm .010$ (.25) on all non-nominal dimensions unless otherwise specified.



Schematic



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to +100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +100	$^\circ\text{C}$
Soldering Temperature (Iron) ^(2,3,4)	$T_{\text{SOL-I}}$	240 for 5 sec	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	$T_{\text{SOL-F}}$	260 for 10 sec	$^\circ\text{C}$
Reverse Breakdown Voltage	V_{BR}	50	V
Power Dissipation ⁽¹⁾	P_D	100	mW

Electrical/Optical Characteristics ($T_A = 25^\circ\text{C}$)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Units
Peak Sensitivity Wavelength		λ_{PS}	—	880	—	nm
Wavelength Sensitivity Range		λ_{SR}	700	—	1100	nm
Reception Angle		Θ	—	± 20	—	Deg.
Forward Voltage	$I_F = 80 \text{ mA}$	V_F	—	1.3	—	V
Reverse Dark Current	$V_R = 20 \text{ V}$, $E_e = 0$	I_D	—	—	5	nA
Reverse Light Current	$E_e = 0.5 \text{ mW/cm}^2$, $V_R = 5 \text{ V}$, $\lambda = 950 \text{ nm}$	I_L	15	25	—	μA
Capacitance	$V_R = 0$, $f = 1 \text{ MHz}$, $E_e = 0$	C	—	60	—	pF
Rise Time	$V_R = 5 \text{ V}$, $R_L = 50 \Omega$ $\lambda = 950 \text{ nm}$	t_r	—	5	—	ns
Fall Time		t_f	—	5	—	

Notes:

1. Derate power dissipation linearly 1.33 mW/ $^\circ\text{C}$ above 25°C .
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron 1/16" (1.6mm) minimum from housing.

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