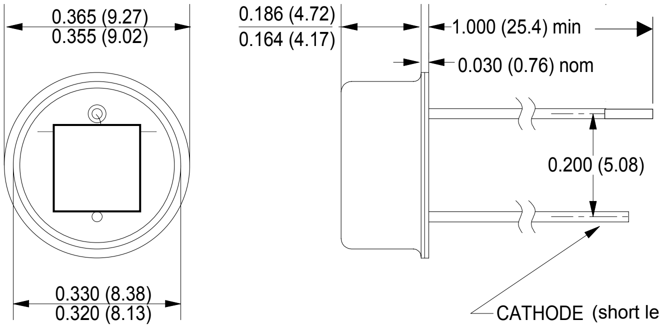
CLD160

Large Active Area
Silicon Planar photodiode

Clairex®
Technologies, Inc.

July, 2001



ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

features

- 100° acceptance angle
- 860nm peak response
- hermetically sealed TO-5 package
- usable for visible through near-IR
- RoHS compliant

description

The CLD160 is a 0.122" x 0.122" active area silicon photodiode mounted in a flat window TO-5 package. Wide acceptance angle permits use in IR air communications ambient light detection, safety and monitoring, security systems, etc. For additional information, call Clairex.

absolute maximum ratings (T_A = 25°C unless otherwise stated)

storage temperature....................-65°C to +150°C
operating temperature....................-65°C to +150°C
lead soldering temperature(1) ....260°C
reverse voltage 30V
continuous power dissipation(2) 250mW

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 1.60mW/°C free air temperature to T_A = +150°C.

---

electrical characteristics (T_A = 25°C unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
I_{SC}	Short-circuit current(3)	-	50	-	µA	V_{BIAS} = 0V, E_e=5mW/cm^2
I_D	Dark current	-	-	5.0	nA	V_R = 15V, E_e = 0
V_O	Open circuit voltage(3)	-	0.35	-	V	E_e = 5mW/cm^2
V_{BR}	Reverse breakdown	25	-	-	V	I_R = 100µA
C_J	Junction capacitance	-	-	200	pF	V_{BIAS}=0V, f = 1MHz
t_r, t_f	Output rise and fall time(4)	-	-	12	µs	R_L = 1kΩ
Θ_{HP}	Total angle at half sensitivity points	-	100	-	deg.	

notes: 3. Radiation source is a frosted tungsten lamp with color temperature of 2854K or equivalent.
4. Radiation source is an AlGaAs IRED operating at a peak emission wavelength of 880nm and E_e = 20mW/cm^2.

Revised 3/15/06