

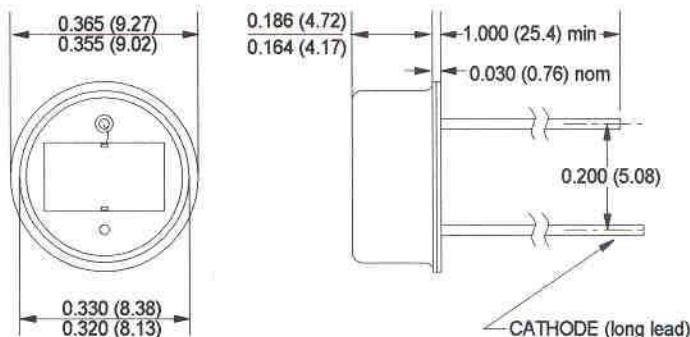
CLD156, CLD156R

Large Active Area

Silicon Planar photodiodes



May, 2001



ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

features

- 100° acceptance angle
- 860nm peak response
- TO-5 hermetic package
- usable for visible through near-IR

description

The CLD156 and CLD156R are 0.122" x 0.222" active area silicon photodiodes featuring high linearity, low dark current and fast response. The TO-5 header provides thermal environment for reliable operation over a wide temperature range. 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 ($T_A = 25^\circ\text{C}$ unless otherwise stated)

storage temperature	-35°C to +150°C
operating temperature	-35°C to +150°C
lead soldering temperature ⁽¹⁾	260°
maximum continuous power dissipation	200mW ⁽²⁾

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 1.6mW/°C free air temperature to $T_A = +150^\circ\text{C}$.

electrical characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
I_{SC}	Short-circuit current ⁽¹⁾	100	-	-	μA	$V_{BIAS} = 0\text{V}$
I_D	Dark current	-	-	100	nA	$V_F = 100\text{mV}$, $E_e = 0$
		-	-	50	nA	$V_R = 15\text{V}$, $E_e = 0$
V_O	Open circuit voltage ⁽¹⁾	-	0.35	-	V	$E_e = 5\text{mW}/\text{cm}^2$
C_J	Junction capacitance	-	-	400	pF	$V_{BIAS} = 0\text{V}$, $f = 1\text{MHz}$
t_r , t_f	Output rise and fall time	-	-	10	μs	$R_L = 1\text{k}\Omega$
Θ_{HP}	Total angle at half sensitivity points	-	100	-	deg.	

notes: 1. Radiation source is a tungsten lamp at a color temperature of 2854K and $E_e = 5\text{mW}/\text{cm}^2$ or equivalent.

Clairex reserves the right to make changes at any time to improve design and to provide the best possible product.