

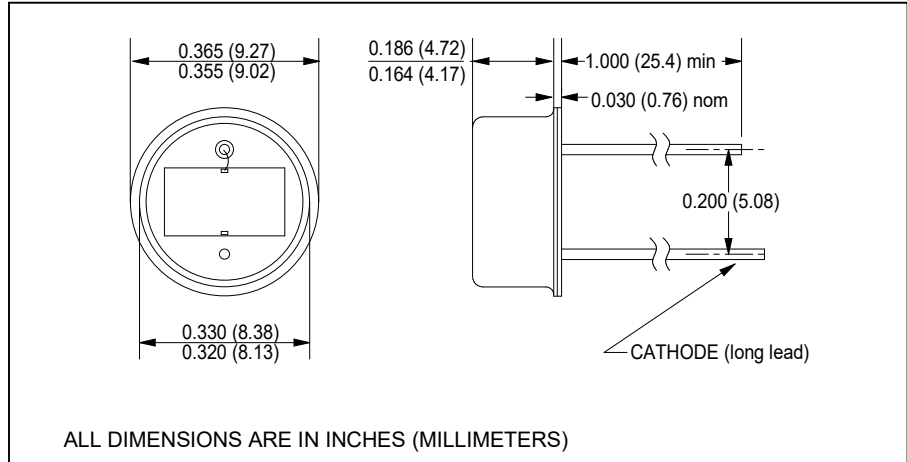
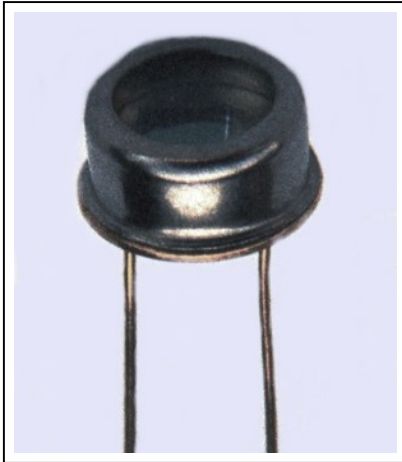
# CLD156

## Large Active Area Silicon Planar photodiode

This product is tested to satisfy the conditions of both the CLD156 and the CLD156R.

**CLAIREX**<sup>®</sup>  
SEMICONDUCTOR

13-1560A



### features

- 100° acceptance angle
- 860nm peak response
- TO-5 hermetic style 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<sub>A</sub> = 25°C unless otherwise stated)

storage temperature.....	-35°C to +150°C
operating temperature.....	-35°C to +150°C
lead soldering temperature <sup>(1)</sup> .....	260°
reverse voltage.....	30V
continuous power dissipation <sup>(2)</sup> .....	200mW

### notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 1.28mW/°C free air temperature to T<sub>A</sub> = +150°C.
3. Radiation source is a tungsten lamp at a color temperature of 2854K and E<sub>e</sub> = 5mW/cm<sup>2</sup> or equivalent.

electrical characteristics (T <sub>A</sub> = 25°C unless otherwise noted)						
symbol	parameter	min	typ	max	units	test conditions
I <sub>SC</sub>	Short-circuit current <sup>(3)</sup>	-	100	-	μA	V <sub>BIAS</sub> = 0V
I <sub>D</sub>	Dark current	CLD156	-	50	nA	V <sub>F</sub> = 100mV, E <sub>e</sub> = 0
		CLD156R	-	50	nA	V <sub>R</sub> = 15V, E <sub>e</sub> = 0
V <sub>O</sub>	Open circuit voltage <sup>(3)</sup>	-	0.35	-	V	E <sub>e</sub> = 5mW/cm <sup>2</sup>
C <sub>J</sub>	Junction capacitance	-	-	400	pF	V <sub>BIAS</sub> = 0V, f = 1MHz
t <sub>r</sub> , t <sub>f</sub>	Output rise and fall time	-	-	10	μs	R <sub>L</sub> = 1kΩ
Θ <sub>HP</sub>	Total angle at half sensitivity points	-	100	-	deg.	

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