

Clairex CLD160 Photodiode Datasheet

<http://www.manuallib.com/clairex/cld160-photodiode-datasheet.html>

The CLD156 and CLD156R are 0.122" x 0.222" active area silicon photodiodes featuring high linearity and low dark current. 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.

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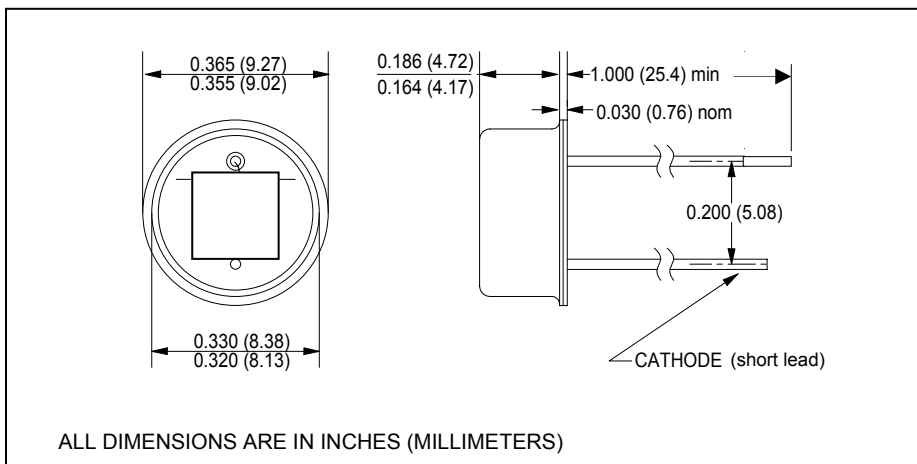
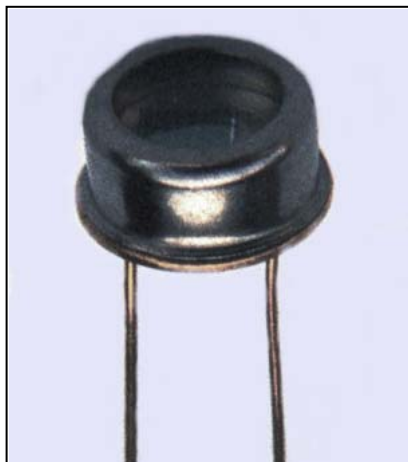
<http://www.manuallib.com>

CLD160

Large Active Area Silicon Planar photodiode



July, 2001



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 ($T_A = 25^\circ\text{C}$ 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 $T_A = +150^\circ\text{C}$.

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

symbol	parameter	min	typ	max	units	test conditions
I_{SC}	Short-circuit current ⁽³⁾	-	50	-	μA	$V_{BIAS} = 0\text{V}$, $E_e = 5\text{mW}/\text{cm}^2$
I_D	Dark current	-	-	5.0	nA	$V_R = 15\text{V}$, $E_e = 0$
V_O	Open circuit voltage ⁽³⁾	-	0.35	-	V	$E_e = 5\text{mW}/\text{cm}^2$
V_{BR}	Reverse breakdown	25	-	-	V	$I_R = 100\mu\text{A}$
C_J	Junction capacitance	-	-	200	pF	$V_{BIAS} = 0\text{V}$, $f = 1\text{MHz}$
t_r, t_f	Output rise and fall time ⁽⁴⁾	-	-	12	μs	$R_L = 1\text{k}\Omega$
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 $E_e = 20\text{mW}/\text{cm}^2$.

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

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