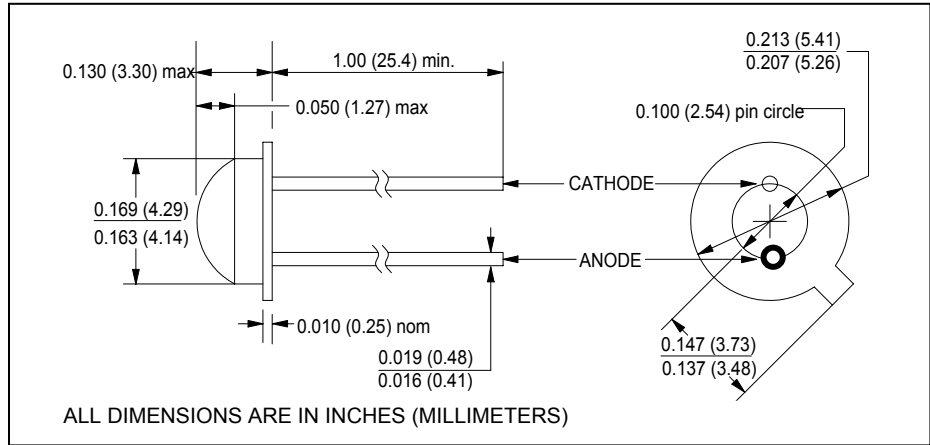


CLD140

Silicon Planar photodiode



January, 2001



features

- 140° acceptance angle
- 860nm peak response
- epoxy dome lens
- large photosensitive area
- usable for visible through near-IR

absolute maximum ratings ($T_A = 25^\circ\text{C}$ unless otherwise stated)

storage temperature	-55°C to +100°C
operating temperature	-55°C to +100°C
lead soldering temperature ⁽¹⁾	260°C
reverse voltage	30V
maximum continuous power dissipation	200mW ⁽²⁾

description

The CLD140 is a 0.051" x 0.051" active area silicon photodiode. The TO-46 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.

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 2.66mW/°C free air temperature to $T_A = +100^\circ\text{C}$.

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⁾	6.0	-	-	μA	$V_{BIAS} = 0\text{V}$
I_D	Dark current	-	-	5.0	nA	$V_F = 100\text{mV}$, $E_e = 0$
V_O	Open circuit voltage ⁽¹⁾	-	0.35	-	V	
C_J	Junction capacitance	-	-	40	pF	$V_{BIAS} = 0\text{V}$, $f = 1\text{MHz}$
t_r , t_f	Output rise and fall time	-	-	3.0	μs	$R_L = 1\text{k}\Omega$
Θ_{HP}	Total angle at half sensitivity points	-	140	-	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.