CLD240 Series

UPGRADED SERIES

Silicon PIN Photodiodes

CLD240 replaces CLD142 and CLD142R
CLD240E replaces CLD140
CLD240W replaces CLD141 and CLD141R

Clairex® Technologies, Inc.

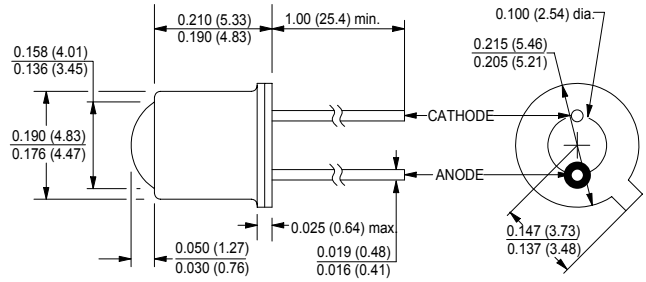
May, 2005

features

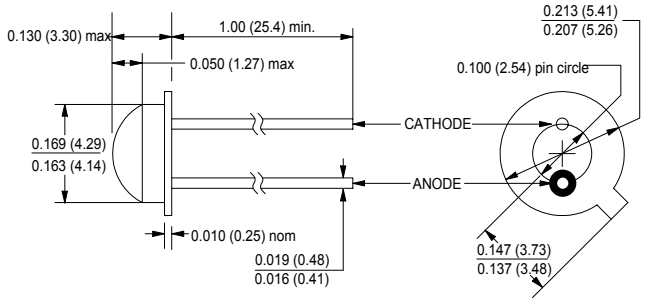
- TO-46 header with three lens options
- cathode connected to case
- large photosensitive area
- usable for visible through near-IR

description

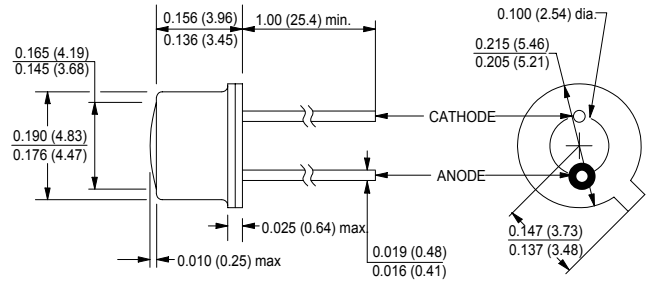
The CLD240 series are new, direct replacements for the older CLD140 series and feature larger (0.060" x 0.060") active area silicon PIN photodiode chips. Also featured are faster switching and lower junction capacitance. Three different lensing options are offered which satisfy the majority of application requirements. Contact Clairex for other packaging options.



CLD240



CLD240E



CLD240W

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

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

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CLD240 Series

Silicon PIN Photodiodes

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

storage and operating temperature

CLD240 and CLD240W .....-65°C to +150°C

CLD240E.....-40°C to +125°C

lead soldering temperature[1].....260°C

reverse voltage.....60V

note:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.

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

symbol	parameter	min	typ	max	units	test conditions
CLD240 Series						
I_D	Dark current	-	-	10	nA	V_R = 20V, E_e = 0
		-	-	10	nA	V_F = 100mV, E_e = 0
C_J	Junction capacitance	-	14	-	pF	V_{BIAS} = 0V, f = 1MHz, E_e = 0
V_{BR}	Breakdown voltage	60	-	-	V	I_R = 30µA, E_e = 0
t_r, t_f	Output rise and fall time	-	15	20	ns	R_L = 1KΩ
CLD240						
I_{SC}	Short-circuit current[2]	30	40	-	µA	V_{BIAS} = 0V
θ_{HP}	Total angle at half sensitivity points	-	14	-	deg.	
CLD240E						
I_{SC}	Short-circuit current[2]	10	13	-	µA	V_{BIAS} = 0V
θ_{HP}	Total angle at half sensitivity points	-	80	-	deg.	
CLD240W						
I_{SC}	Short-circuit current[2]	10	13	-	µA	V_{BIAS} = 0V
θ_{HP}	Total angle at half sensitivity points	-	70	-	deg.	

note: 2. E_e = 1mW/cm^2, λ = 850nm.

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