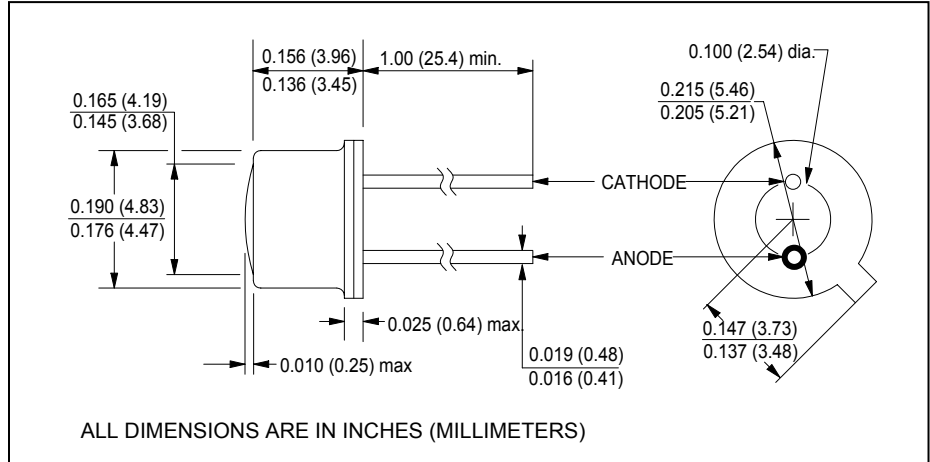


# CLD141, CLD141R

## Silicon Planar photodiodes



January, 2001



### features

- 70° acceptance angle
- 860nm peak response
- TO-46 hermetic package
- 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 +150°C
operating temperature.....	-55°C to +150°C
lead soldering temperature <sup>(1)</sup> .....	260°C
reverse voltage.....	30V
maximum continuous power dissipation <sup>(2)</sup> .....	200mW

### description

The CLD141 and CLD141R are 0.051" x 0.051" active area silicon photodiodes featuring high linearity, low dark current and fast response. The TO-46 header provides thermal environment for reliable operation over a wide temperature range. For additional information, call Clairex.

### notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum.
2. Derate linearly 1.28mW/°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 <sup>(3)</sup>	6.0	-	-	$\mu\text{A}$	$V_{BIAS} = 0\text{V}$
$I_D$	Dark current	CLD141	-	5.0	nA	$V_F = 100\text{mV}, E_e = 0$
		CLD141R	-	5.0	nA	$V_R = 15\text{mV}, E_e = 0$
$V_O$	Open circuit voltage <sup>(3)</sup>	-	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	$\mu\text{s}$	$R_L = 1\text{k}\Omega$
$\Theta_{HP}$	Total angle at half sensitivity points	-	70	-	deg.	

notes: 3. 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.

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