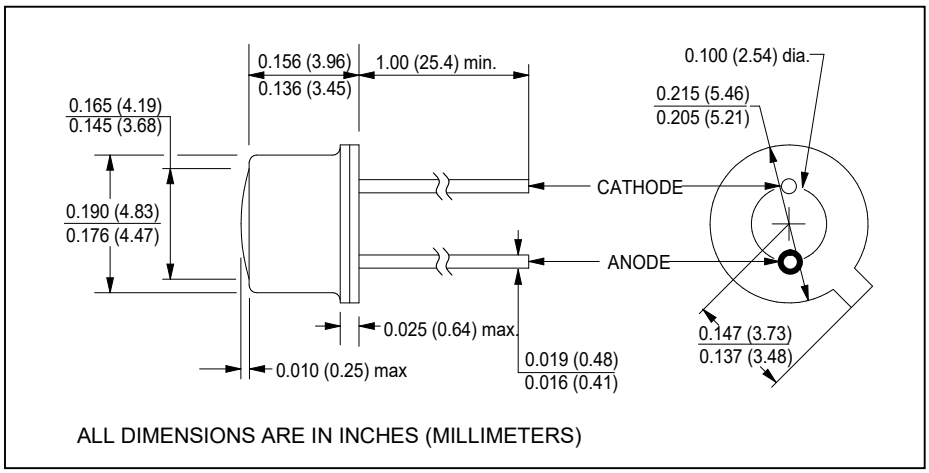
# CLD240W
## Silicon PIN Photodiode

CLAIREX® SEMICONDUCTOR

13-2401A




**features**

- 70° acceptance angle
- 400 nm to 1100 nm response
- TO-46 hermetic package
- 1.346 mm x 1.346 mm active area
- usable for visible through near-IR

**description**

The CLD240W is a 1.346 mm x 1.346 mm active area silicon PIN photodiode featuring high linearity, low dark current and fast response. For additional information, call Clairex.

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

storage temperature.....-55°C to +150°C
operating temperature.....-55°C to +150°C
lead soldering temperature[1] .....260°C
reverse voltage .....35 V
maximum continuous power dissipation[2].....200 mW

**notes:**

1. 0.06" (1.5 mm) from the header for 5 seconds maximum.
2. Derate linearly 1.28 mW/°C free air temperature to $T_A$ = +150°C.
3. $E_e$ = 1 mW/cm$^2$, λ = 850 nm.

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

| symbol | parameter | min | typ | max | units | test conditions |
|---|---|---|---|---|---|---|
| $I_{SC}$ | Short-circuit current[3] | 10 | 13 | - | µA | $V_{BIAS}$ = 0 V |
| $I_D$ | Dark current | - | - | 10 | nA | $V_R$ = 10 V, $E_e$ = 0 |
| $V_{BR}$ | Reverse breakdown | 35 | 50 | - | V | $I_R$ = 100 µA, $E_e$ = 0 |
| $\lambda_P$ | Peak sensing wavelength | - | 940 | - | nm | |
| $C_J$ | Junction capacitance | - | 14 | - | pF | $V_{BIAS}$ = 0 V, f = 1 MHz, $E_e$ = 0 |
| $t_r$, $t_f$ | Output rise and fall time[3] | - | 15 | 20 | ns | $R_L$ = 1 kΩ |
| $\Theta_{HP}$ | Total angle at half sensitivity points | - | 70 | - | deg. | |



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