

TO46 Series

Silicon PIN Photodiodes

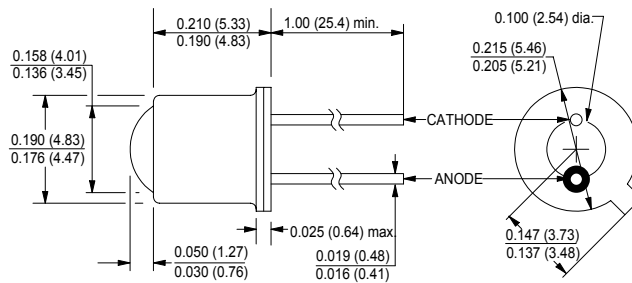
May, 2005

features

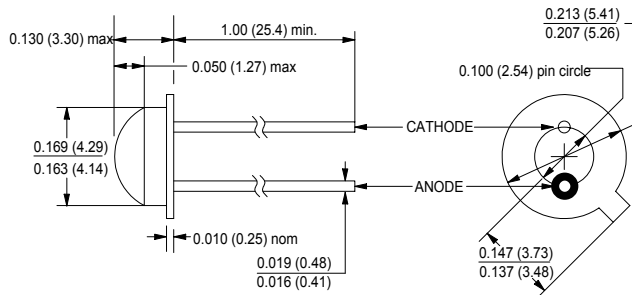
- TO-46 header with three lens options
- cathode connected to case
- large photosensitive area
- usable for visible through near-IR

description

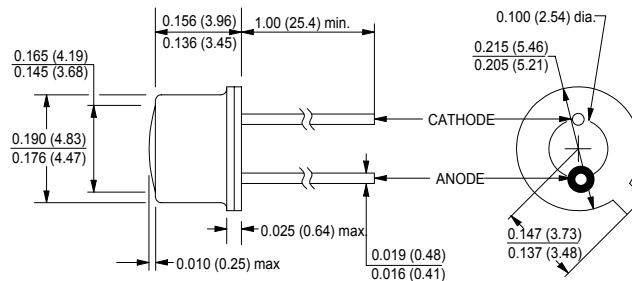
Larger (0.060" x 0.060") active area silicon PIN photodiode chips. Also featured are faster switching and lower junction capacitance. Three different lensing options are offered which satisfy the majority of application requirements.



TO46



TO46E



TO46W

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

TO46 Series Silicon PIN Photodiodes

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

storage and operating temperature

TO46 and TO46W -65°C to $+150^\circ\text{C}$

TO46E -40°C to $+125^\circ\text{C}$

lead soldering temperature⁽¹⁾ 260°C

reverse voltage 60V

note:

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

electrical characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
symbol	parameter	min	typ	max	units	test conditions
TO46 Series						
I_D	Dark current	-	-	10	nA	$V_R = 20\text{V}, E_e = 0$
		-	-	10	nA	$V_F = 100\text{mV}, E_e = 0$
C_J	Junction capacitance	-	14	-	pF	$V_{BIAS} = 0\text{V}, f = 1\text{MHz}, E_e = 0$
V_{BR}	Breakdown voltage	60	-	-	V	$I_R = 30\mu\text{A}, E_e = 0$
t_r, t_f	Output rise and fall time	-	15	20	ns	$R_L = 1\text{K}\Omega$
TO46						
I_{SC}	Short-circuit current ⁽²⁾	30	40	-	μA	$V_{BIAS} = 0\text{V}$
θ_{HP}	Total angle at half sensitivity points	-	14	-	deg.	
TO46E						
I_{SC}	Short-circuit current ⁽²⁾	10	13	-	μA	$V_{BIAS} = 0\text{V}$
θ_{HP}	Total angle at half sensitivity points	-	80	-	deg.	
TO46W						
I_{SC}	Short-circuit current ⁽²⁾	10	13	-	μA	$V_{BIAS} = 0\text{V}$
θ_{HP}	Total angle at half sensitivity points	-	70	-	deg.	

note: 2. $E_e = 1\text{mW}/\text{cm}^2, \lambda = 850\text{nm}$.