

# CLR130W, CLR131W, CLR132W

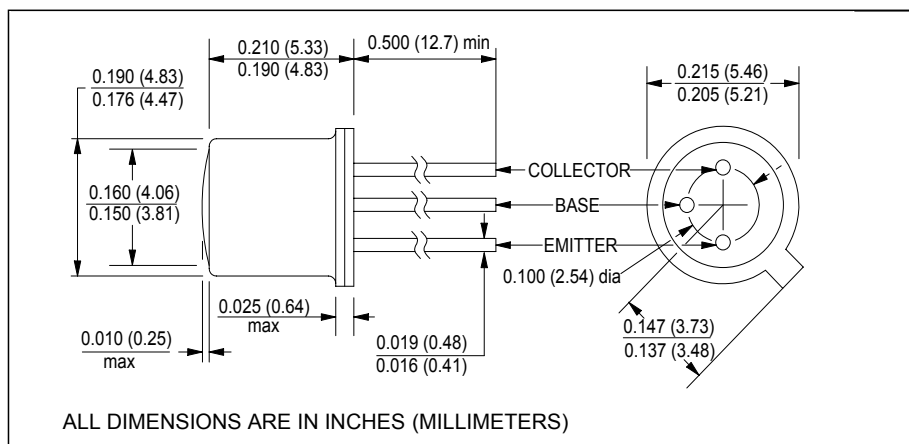
## NPN Silicon Photodarlington

CLR130W, CLR131W, and CLR132W are exact replacements for obsolete part numbers CLR2049, CLR2050 and CLR2060.



**Clairex**  
Technologies, Inc.

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### features

- high sensitivity
- $\pm 35^\circ$  acceptance angle
- TO-18 hermetically sealed package
- transistor base is bonded
- RoHS compliant

### description

The CLR130W-CLR132W series are NPN silicon photodarlington mounted in TO-18 flat window packages. The wide acceptance angle provided by the flat window enables even reception over a relatively large area. Photodarlington allow high sensitivity at low irradiance levels. These devices are mechanically and spectrally matched to the CLE130-CLE133 series IREDs. For additional information, call Clairex.

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

storage temperature .....	-65°C to +150°C
operating temperature .....	-65°C to +125°C
lead soldering temperature <sup>(1)</sup> .....	260°C
collector-emitter voltage .....	15V
continuous collector current .....	50mA
continuous power dissipation <sup>(2)</sup> .....	250mW

### notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum
2. Derate linearly 2.0mW/°C from 25°C free air temperature to  $T_A = +125^\circ\text{C}$ .

### electrical characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions	
$I_L$	Light current <sup>(1)</sup>	CLR130W	0.2	-	-	mA	$V_{CE}=5V, E_e=0.06\text{mW/cm}^2$
		CLR131W	0.6	-	-	mA	
		CLR132W	1.4	-	-	mA	
$I_{CEO}$	Collector dark current	-	-	100	nA	$V_{CE}=10V, E_e=0$	
$V_{(BR)CEO}$	Collector-emitter breakdown	15	-	-	V	$I_C=100\mu\text{A}$	
$t_r$	Output rise time	-	100	-	$\mu\text{s}$	$V_{CE}=5V, R_L=100\Omega$ .	
$t_f$	Output fall time	-	150	-	$\mu\text{s}$	$V_{CE}=5V, R_L=100\Omega$ .	
$\theta_{HP}$	Total angle at half sensitivity points	-	70	-	deg.		

note: 1. Radiation source for all light current testing is a 940nm IRED.

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

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