

CLR130, CLR131, CLR132

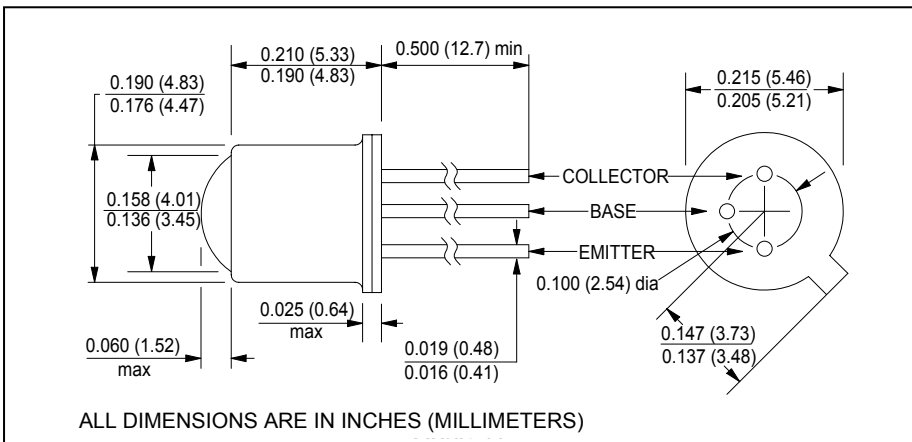
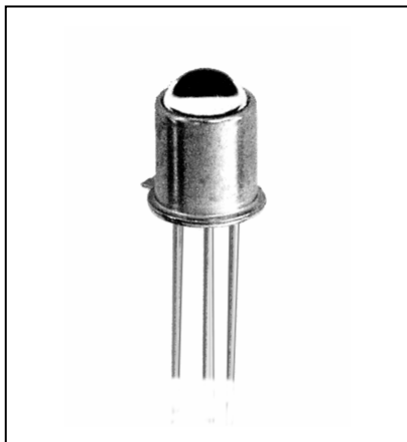
NPN Silicon Photodarlington

CLR130, CLR131, and CLR132 are exact replacements for obsolete part numbers CLR2169, CLR2170 and CLR2180.



Clairex
Technologies, Inc.

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features

- high sensitivity
- 18° acceptance angle
- custom aspheric lensed TO-18 package
- transistor base is bonded
- usable throughout visible and near infrared spectrum

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

storage temperature.....	-65°C to +150°C
operating temperature.....	-65°C to +125°C
lead soldering temperature ⁽¹⁾	260°C
collector-emitter voltage.....	30V
continuous collector current.....	50mA
maximum continuous power dissipation.....	250mW ⁽²⁾

description

The CLR130-CLR132 series are NPN silicon photodarlington mounted in TO-18 packages. Photodarlington allow high sensitivity at low irradiance levels. A custom double convex glass-to-metal sealed aspheric lens provides a narrow acceptance angle for excellent on-axis coupling. These devices are mechanically and spectrally matched to the CLE130-CLE133 series IREDs. For additional information, call Clairex.

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°C.

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

symbol	parameter	min	typ	max	units	test conditions	
I _L	Light current ⁽¹⁾	CLR130	0.5	-	-	mA	V _{CE} =5V, E _e =0.06mW/cm ²
		CLR131	2.0	-	-	mA	
		CLR132	4.0	-	-	mA	
I _{CEO}	Collector dark current	-	-	100	nA	V _{CE} =10V, E _e =0	
V _{(BR)CEO}	Collector-emitter breakdown	30	-	-	V	I _C =100μA	
t _r	Output time	-	100	-	μs	V _{CC} =5V, R _L =100Ω.	
t _f	Output fall time	-	150	-	μs	V _{CC} =5V, R _L =100Ω.	
θ _{HP}	Total angle at half sensitivity points	-	18	-	deg.		

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

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

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