

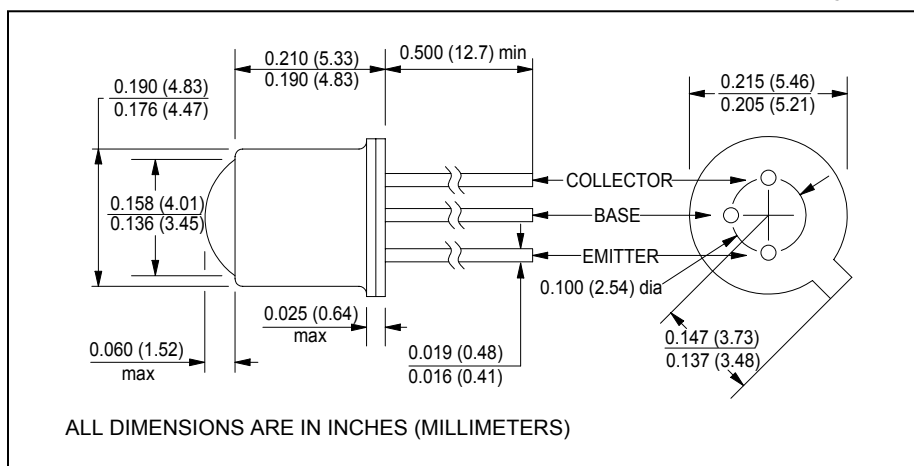
CLT130, CLT131, CLT132, CLT133

NPN Silicon Phototransistors

CLT130, CLT131, CLT132 and CLT133 are exact replacements for obsolete part numbers CLT2130, CLT2140, CLT2150 and CLT2160.



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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 ($T_A = 25^\circ\text{C}$ 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 CLT130-CLT133 series are NPN silicon phototransistors mounted in TO-18 packages which feature custom double convex glass-to-metal sealed aspheric lenses. Narrow acceptance angle enables 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 $T_A = +125^\circ\text{C}$.

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

symbol	parameter	min	typ	max	units	test conditions
I_L	Light current ⁽¹⁾					
	CLT130	0.60	-	-	mA	$V_{CE}=5V, E_e=1.5\text{mW}/\text{cm}^2$
	CLT131	1.2	-	-	mA	$V_{CE}=5V, E_e=1.5\text{mW}/\text{cm}^2$
	CLT132	2.4	-	-	mA	$V_{CE}=5V, E_e=1.5\text{mW}/\text{cm}^2$
	CLT133	4.0	-	-	mA	$V_{CE}=5V, E_e=1.5\text{mW}/\text{cm}^2$
I_{CEO}	Collector dark current	-	-	25	nA	$V_{CE}=10V, E_e=0$
$V_{(BR)CEO}$	Collector-emitter breakdown	30	-	-	V	$I_C=100\mu\text{A}$
t_r, t_f	Output rise and fall time	-	3	-	μs	$V_{CC}=5V, R_L=100\Omega$
θ_{HP}	Total angle at half sensitivity points	-	18	-	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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