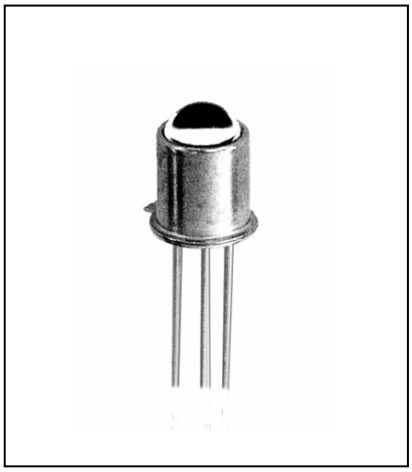
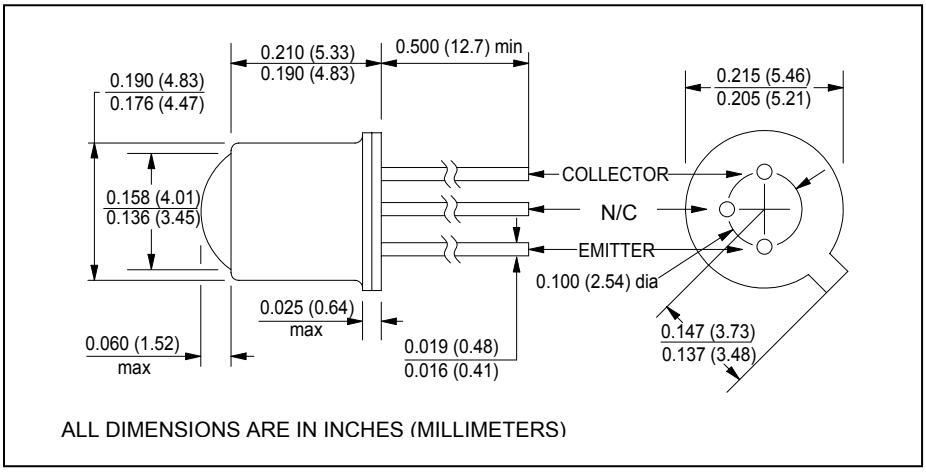
CLT135

NPN Silicon Phototransistor

Clairex® Technologies, Inc.

July, 2001





features

- high sensitivity
- ± 9° acceptance angle
- custom aspheric lensed TO-18 package
- transistor base is not bonded
- tested and characterized at 940nm
- usable throughout visible and near infrared spectrum
- RoHS compliant

description

The CLT135 is an NPN silicon phototransistor mounted in a TO-18 package which features a custom double convex glass-to-metal sealed aspheric lens. Narrow acceptance angle enables excellent on-axis coupling. The CLT135 is spectrally and mechanically matched to the CLE135 IRED. For additional information. call Clairex.

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
continuous power dissipation[2]	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°C.

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

symbol	parameter	min	typ	max	units	test conditions
I_L	Light current[3]	1.0	2.5	-	mA	V_{CE} = 5V, E_e = 0.5mW/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 = 100μA
t_r, t_f	Output rise and fall time	-	3.0	-	μs	I_C = 1.0mA, V_{CE}=5V, R_L=100Ω.
θ_{HP}	Total angle at half sensitivity points		18	-	deg.	

notes: 3. Radiation source is an aluminum gallium arsenide IRED operating at a peak emission wavelength of 940nm

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