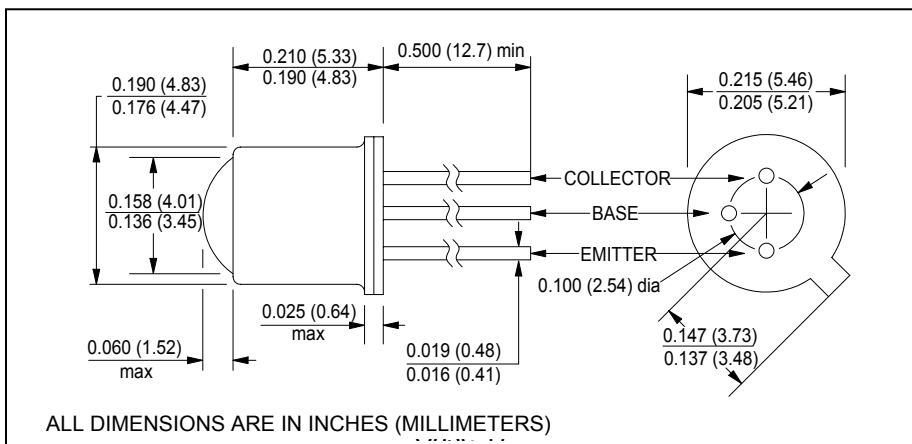
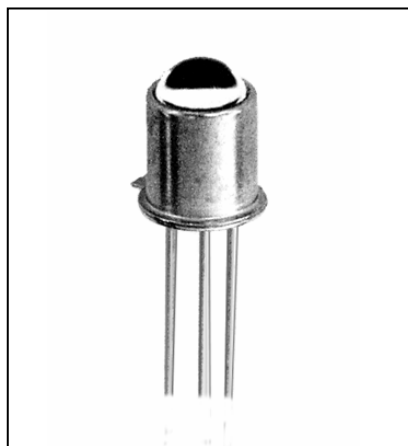


CLT335

NPN Silicon Phototransistor



March, 2001



features

- 18° acceptance angle
- custom aspheric lensed TO-18 package
- transistor base is not bonded
- tested and characterized at 850nm

description

The CLT335 is a silicon NPN 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 CLT335 is mechanically and spectrally matched to Clairex's CLE335 LED. For additional information, call Clairex.

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

storage temperature	-65°C to $+150^\circ\text{C}$
operating temperature	-65°C to $+125^\circ\text{C}$
lead soldering temperature ⁽¹⁾	260°C
collector-emitter voltage	25V
continuous collector current	50mA
maximum continuous power dissipation	$250\text{mW}^{(2)}$

notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum
2. Derate linearly $2.25\text{mW}/^\circ\text{C}$ 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⁾	3.0	-	-	μA	$V_{CE}=5\text{V}$, $E_e=20\mu\text{W}/\text{cm}^2$
		-	5	-	mA	$V_{CE}=5\text{V}$, $E_e=1\text{mW}/\text{cm}^2$
I_{CEO}	Collector dark current	-	-	100	nA	$V_{CE}=10\text{V}$, $E_e=0$
$V_{(BR)CEO}$	Collector-emitter breakdown	25	-	-	V	$I_C=100\mu\text{A}$
t_r , t_f	Output rise and fall time ⁽²⁾	-	5	-	μs	$I_C=0.8\text{mA}$
θ_{HP}	Total angle at half sensitivity points	-	18	-	deg.	

- notes:**
1. Radiation source is an aluminum gallium arsenide IRED operating at a peak emission wavelength of 850nm.
 2. $V_{CC}=5\text{V}$, $R_L=1\text{k}\Omega$.

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

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