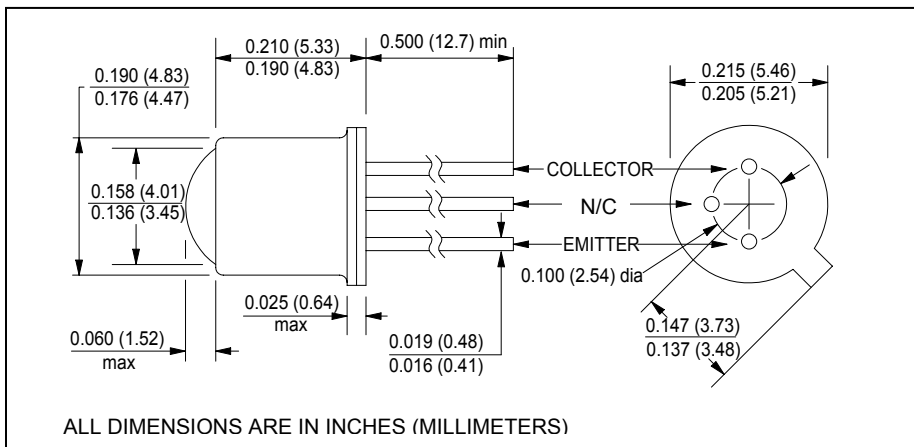


# CLT435

## NPN Silicon Phototransistor



March, 2001



### features

- $\pm 9^\circ$  acceptance angle
- custom aspheric lensed TO-18 package
- transistor base is not bonded
- tested and characterized at 660nm
- RoHS compliant

### description

The CLT435 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 CLT435 is mechanically and spectrally matched to Clairex's CLE435 LED. 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	30V
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>(3)</sup>	0.5	1.0	-	mA	$V_{CE} = 5V, E_e = 0.5\text{mW/cm}^2$
$I_{CEO}$	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	-	5.0	-	$\mu\text{s}$	$I_C = 1\text{mA}, V_{CE}=5V, R_L=1\text{k}\Omega$ .
$\theta_{HP}$	Total angle at half sensitivity points	-	18	-	deg.	

notes: 3. Radiation source is a gallium arsenide phosphide LED operating at a peak emission wavelength of 660nm.