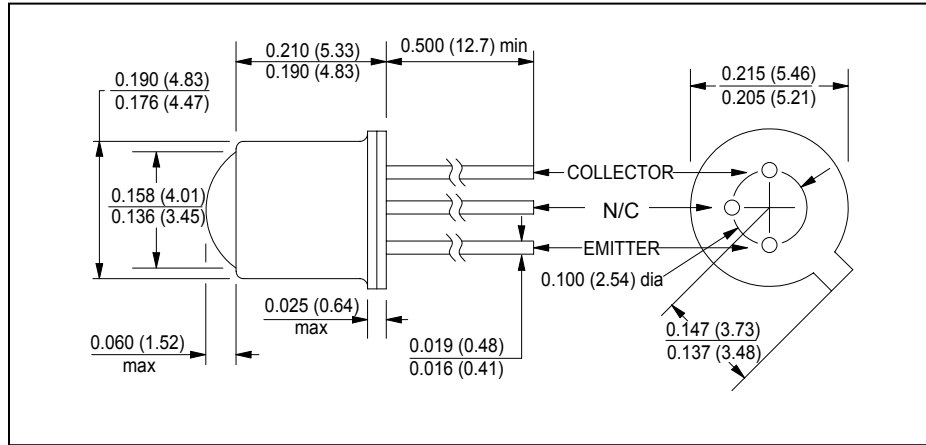
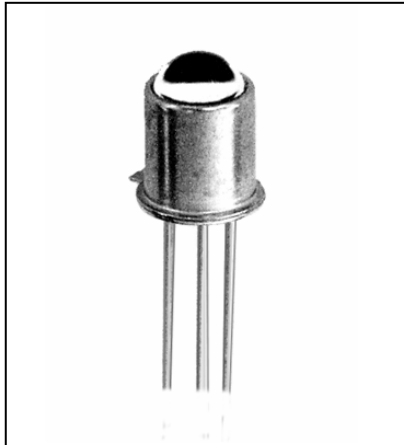




MCDT-335

NPN Silicon Phototransistor



Features

- ±9° acceptance angle
- custom aspheric lensed TO-18 package
- transistor base is not bonded
- tested and characterized at 850nm
- RoHS compliant

Description

The MCDT-335 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 MCDT-335 is mechanically and spectrally matched to MCDE-335 LED.

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
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 $T_A = +125^\circ\text{C}$.

electrical characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
symbol	parameter	min	typ	max	units	test conditions
I_L	Light current ⁽³⁾	1.0	2.5	-	mA	$V_{CE}=5V, E_e=0.5\text{mW}/\text{cm}^2$
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	-	5.0	-	μs	$I_C = 1\text{mA}, V_{CE}=5V, R_L=1\text{k}\Omega$.
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 850nm.