

NTE3122

Phototransistor

Silicon NPN, Narrow Acceptance, High Sensitivity, Darlington

Features:

- Epoxy Resin Package
- Narrow Acceptance: $\Delta\theta = \pm 13^\circ$ Typ
- High Sensitivity: $I_C = 1.5\text{mA Min @ } E_e = 0.1\text{mW/cm}^2$
- Visible Light Cut-Off

Applications:

- VCRs, Cassette Tape Recorders
- Floppy Disk Drives
- Optoelectronic Switches
- Automatic Stroboscopes

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector-Emitter Voltage, V_{CEO}	35V
Emitter-Collector Voltage, V_{ECO}	6V
Collector Current, I_C	50mA
Collector Power Dissipation, P_C	75mW
Operating Temperature Range, T_{opr}	-25° to $+85^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+85^\circ\text{C}$
Lead Temperature, T_L During Soldering, 1.4mm from bottom face of resin package, 5sec	$+260^\circ\text{C}$

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Current	I_C	$V_{CE} = 2\text{V}$, $E_e = 0.1\text{mW/cm}^2$, Note 1	1.5	—	4.0	mA
Collector Dark Current	I_{CBO}	$V_{CE} = 10\text{V}$, $E_e = 0$	—	—	10^{-6}	A
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1.5\text{mA}$, $E_e = 1\text{mW/cm}^2$, Note 1	—	0.7	1.0	V
Peak Emission Wavelength	λ_P		—	860	—	nm
Response Time (Rise)	t_r	$V_{CE} = 2\text{V}$, $I_C = 10\text{mA}$, $R_L = 100\Omega$	—	80	—	μs
Response Time (Fall)	t_f		—	70	—	μs

Note 1. E_e : Irradiance by CIE standard light source A (tungsten lamp).

