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## 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, $T_{opr}$ .....	$-25^\circ$ to $+85^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-40^\circ$ to $+85^\circ\text{C}$
Lead Temperature, $T_L$ During Soldering, 1.4mm from bottom face of resin package, 5sec .....	+260°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	$\lambda_P$		-	860	-	nm
Response Time (Rise)	$t_r$	$V_{CE} = 2\text{V}$ , $I_C = 10\text{mA}$ , $R_L = 100\Omega$	-	80	-	$\mu\text{s}$
Response Time (Fall)	$t_f$		-	70	-	$\mu\text{s}$

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

