



**ELECTRONICS, INC.**  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089

## NTE3123 Phototransistor Silicon NPN, Intermediate Acceptance, High Sensitivity, Darlington

**Features:**

- Epoxy Resin Package
- Compact
- Intermediate Acceptance:  $\Delta\theta = \pm 40^\circ$  Typ
- Visible Light Cut-Off

**Applications:**

- VCRs
- Optoelectronic Switches

**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 surface of resin edge, 3sec .....	+260°C

**Electrical Characteristics:**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Current	$I_C$	$V_{CE} = 2V, E_v = 2lx$ , Note 1	0.2	0.4	0.8	mA
Collector Dark Current	$I_{CBO}$	$V_{CE} = 10V, E_e = 0$	–	–	$10^{-6}$	A
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 0.8mA, E_e = 1mW/cm^2$ , Note 1	–	–	1.0	V
Peak Emission Wavelength	$\lambda_P$		–	860	–	nm
Response Time (Rise)	$t_r$	$V_{CE} = 2V, I_C = 5mA, R_L = 100\Omega$	–	400	2000	$\mu s$
Response Time (Fall)	$t_f$		–	300	1500	$\mu s$
Half Intensity Angle	$\Delta\theta$		–	$\pm 40$	–	deg.

Note 1.  $E_e, E_v$ : Illuminance, irradiance by CIE standard light source A (tungsten lamp).

