



**ELECTRONICS, INC.**  
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## NTE3120 Silicon NPN Phototransistor Detector

**Features:**

- High Sensitivity
- GaAs LED–Wide Spectral Range, with GaAs LED.
- Low Dark Current
- Side–View Plastic Package

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

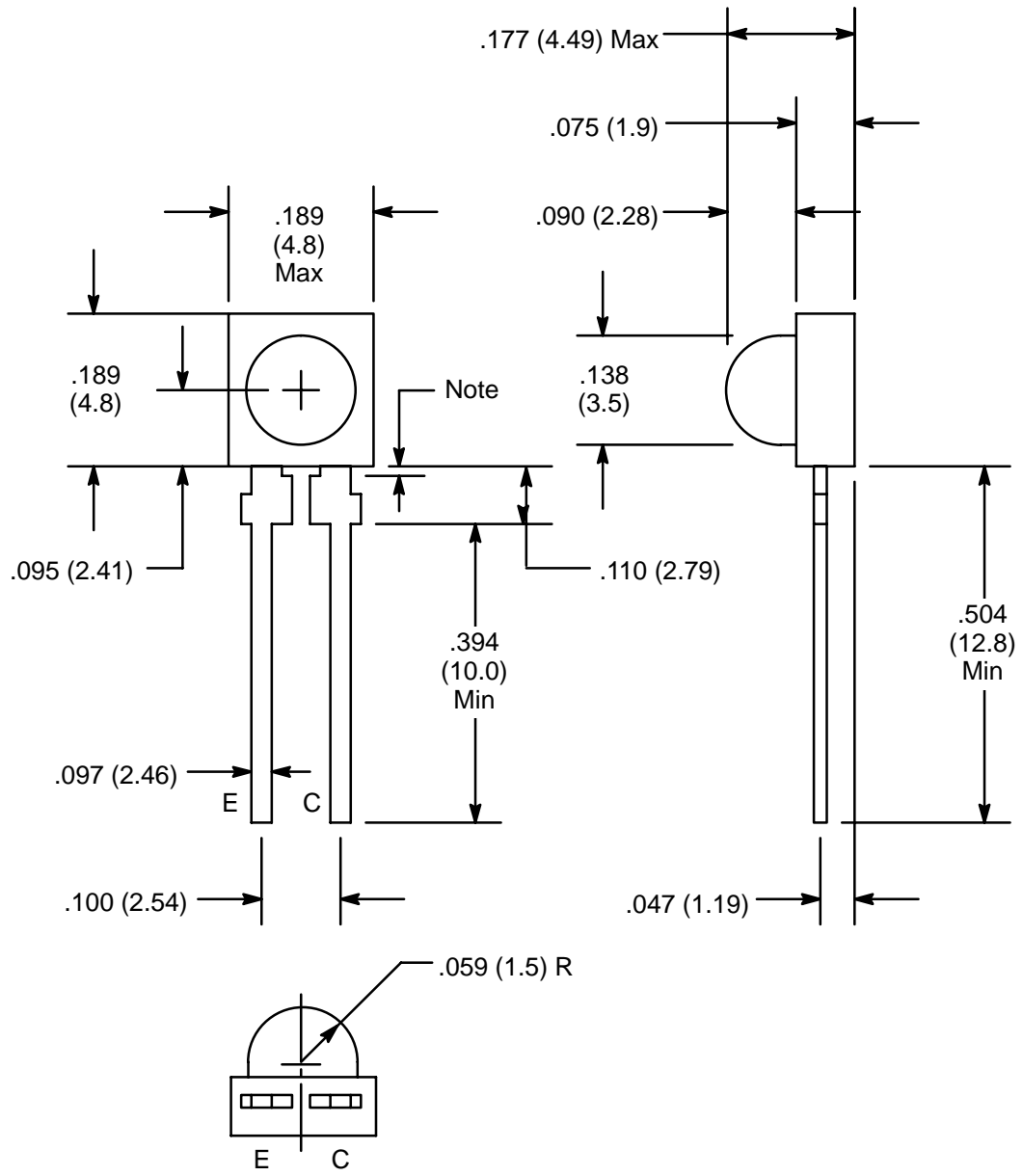
Collector–Emitter Voltage, $V_{CE0}$ .....	20V
Emitter–Collector Voltage, $V_{ECO}$ .....	5V
Collector Current, $I_C$ .....	20mA
Collector Dissipation $P_C$ .....	100mW
Operating Temperature Range, $T_{opr}$ .....	$-25^\circ$ to $+85^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-30^\circ$ to $+100^\circ\text{C}$

**Electro–Optical Characteristics:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Dark Current	$I_{CEO}$	$V_{CE} = 10V$	–	0.01	1.0	$\mu\text{A}$
Photo Current	$I_{CE(L)}$	$V_{CE} = 10V, L = 500 \text{ 1x, Note 1}$	1	3	–	mA
Peak Sensitivity Wavelength	$\lambda_P$	$V_{CE} = 10V$	–	800	–	nm
Acceptance Half Angle	$\theta$	Note 2	–	35	–	deg
Rise Time	$t_r$	$V_{CC} = 10V, I_{CE(L)} = 5mA, R_L = 100\Omega$	–	4	10	$\mu\text{s}$
Fall Time	$t_f$		–	4	10	$\mu\text{s}$
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_{CE(L)} = 1mA, L = 1000 \text{ 1x, Note 1}$	–	0.2	0.5	V

Note 1. Source: Tungsten 2856 °K.

Note 2. The angle when the light current is halved.



**Note:** Not Soldered