



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE30051 & NTE30052 Infrared Phototransistor

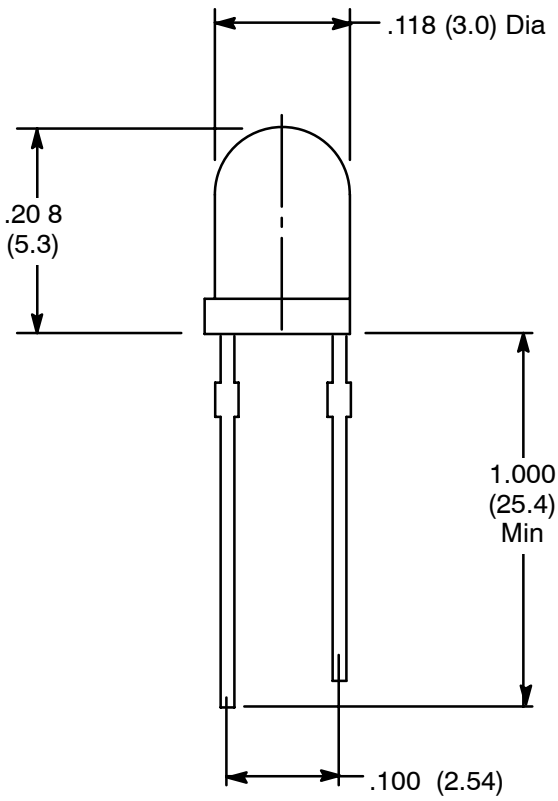
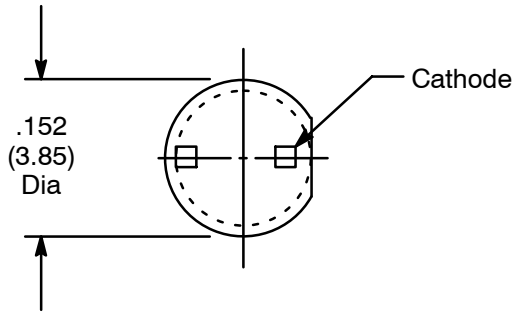
Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

| | |
|---|-------------------------------------|
| Sensitive Area, AA | 0.19mm |
| Power Dissipation, P_D | 150mW |
| Collector–Emitter Voltage, V_{CEO} | 30V |
| Emitter–Collector Voltage, V_{ECO} | 5V |
| Operating Temperature Range, T_{opr} | -25° to $+85^\circ\text{C}$ |
| Storage Temperature Range, T_{stg} | -40° to $+100^\circ\text{C}$ |
| Lead Temperature (During Soldering, .062 (1.6mm) from case bottom, 5sec max), T_L | |
| NTE30051 | +240°C |
| NTE30052 | +260°C |

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--|-------------|--|-----|-----|------|--------|
| Angle of Half Sensitive NTE30051 | 2θ1/2 | $I_C = 1\text{mA}, E_e = 0\text{mW}/\text{cm}^2$ | – | 20 | – | Degree |
| NTE30052 | | | – | 38 | – | Degree |
| Collector–Emitter Voltage | V_{CEO} | $I_C = 1\text{mA}, E_e = 0\text{mW}/\text{cm}^2$ | 30 | – | – | V |
| Emitter–Collector Voltage | V_{ECO} | $I_C = 100\mu\text{A}, E_e = 0\text{mW}/\text{cm}^2$ | – | 5 | – | V |
| Collector–Emitter Saturation Voltage | V_{CES} | $I_C = 0.5\text{mA}, I_b = 100\mu\text{A}$ | – | – | 0.4 | V |
| Collector Current (Saturation) NTE30051 | I_C | $V_{CE} = 5\text{V}, E_e = 0.5\text{mW}/\text{cm}^2$ | 0.2 | 1.5 | – | mA |
| NTE30052 | | | 0.8 | 3.0 | 12 | mA |
| Collector Dark Current | I_{CEO} | $V_{CE} = 20\text{V}, E_e = 0\text{mW}/\text{cm}^2$ | – | – | 100 | nA |
| Rise Time | t_r | $V_{CE} = 5\text{V}, I_C = 1\text{mA}, R_L = 1000\Omega$ | – | 15 | – | μs |
| Fall Time | t_f | $V_{CE} = 5\text{V}, I_C = 1\text{mA}, R_L = 1000\Omega$ | – | 15 | – | μs |
| Peak Wavelength | λ_p | | – | 900 | – | nm |
| Sensitivity Wavelength | λ | | 500 | – | 1100 | nm |

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