ELECTRONICS, INC.
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NTE30051 & NTE30052
Infrared Phototransistor

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

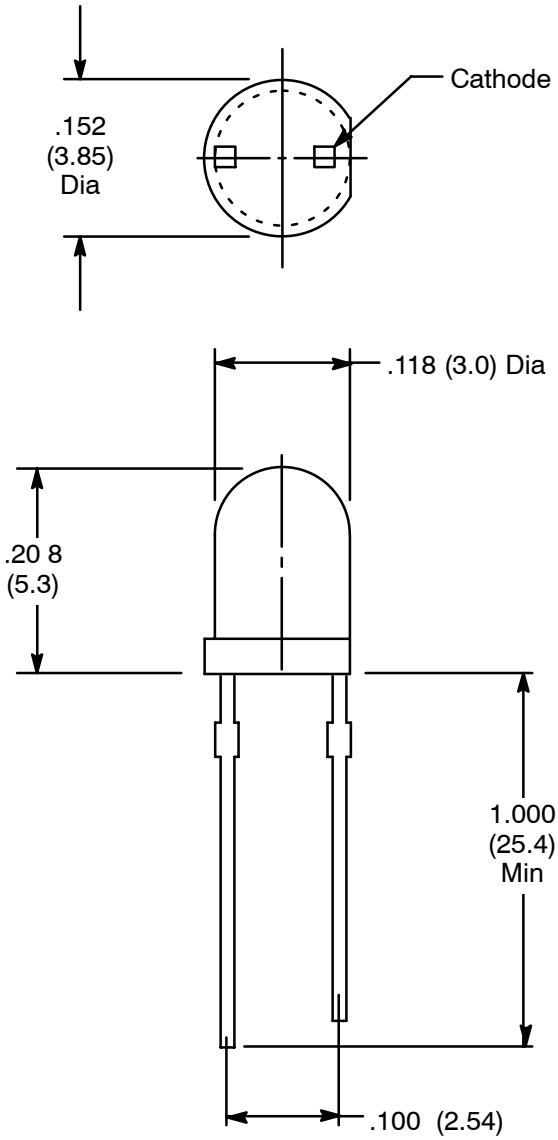
Sensitive Area, AA 0.19mm
Power Dissipation, P_D 150mW
Collector–Emitter Voltage, V_{CEO} 30V
Emitter–Collector Voltage, V_{ECO} 5V
Operating Temperature Range, T_{opr} . . . . . –25° to +85°C
Storage Temperature Range, T_{stg} . . . . . –40° to +100°C
Lead Temperature (During Soldering, .062 (1.6mm)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

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

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

0.20 (5.20)

NTE30051



NTE30052