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

NTE3105
Opto Interrupter Module
Photo Reflector, NPN Transistor Output

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

Emitter

Continuous Reverse Voltage, V_R 3V
Continuous Forward Current, I_F 50mA
Power Dissipation, P_D 75mW
Derate Above 25°C . . . . . 1mW/°C

Detector

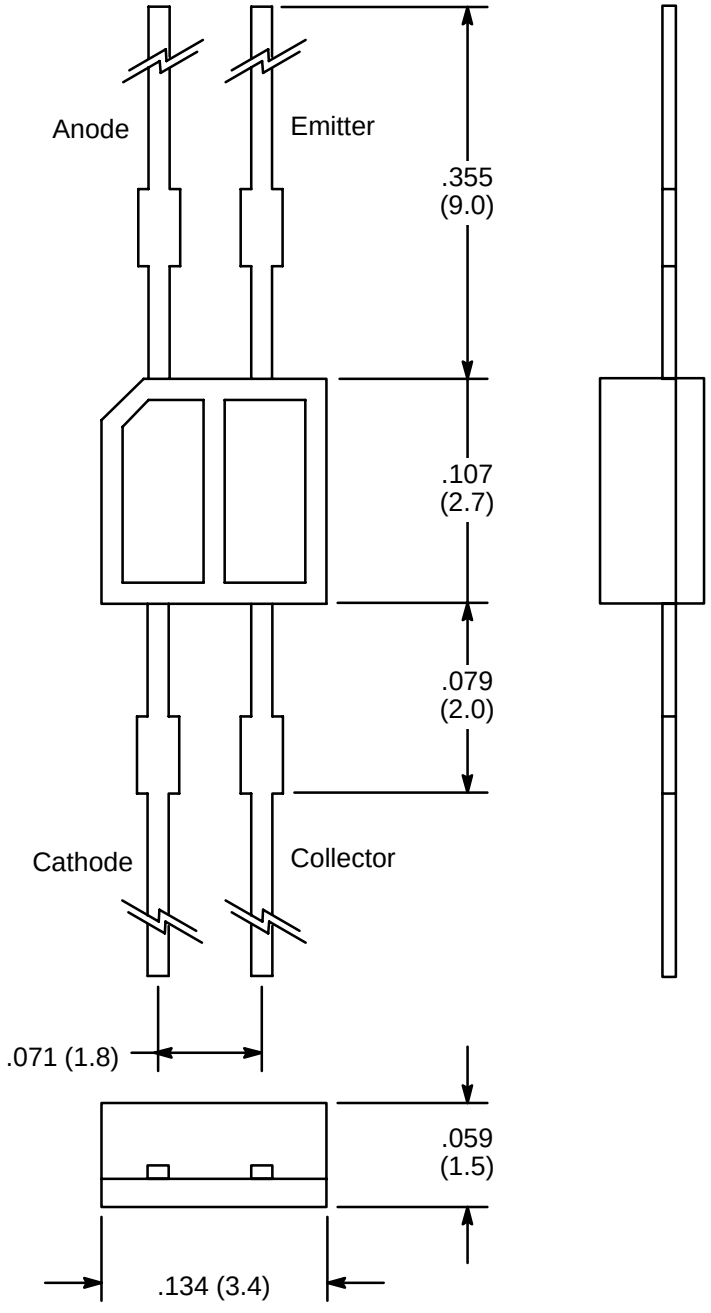
Collector–Emitter Voltage, V_{CEO} 30V
Emitter–Collector Voltage, V_{ECO} 5V
Collector Current, I_C 20mA
Collector Power Dissipation, P_C 50mW
Derate Above 25°C . . . . . 0.67mW/°C

Coupled

Operating Temperature Range, T_{opr} . . . . . –20° to +85°C
Storage Temperature Range, T_{stg} . . . . . –30° to +100°C

Electro–Optical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Emitter						
Forward Voltage	V_F	I_F = 50mA	–	1.3	1.5	V
Reverse Current	I_R	V_R = 3V	–	0.01	10	µA
Capacitance	C_t	V_R = 0, f = 1MHz	–	30	–	pF
Detector						
Dark Current	I_{CEO}	V_{CE} = 10V	–	–	200	nA
Coupled						
Output Current	I_O	I_F = 10mA, V_{CC} = 5V, R_L = 100Ω, d = 1mm	90	–	880	µA
Collector Dark Current	I_D	I_F = 10mA, V_{CC} = 5V, R_L = 100Ω	–	–	200	nA
Rise Time	t_r	V_{CC} = 5V, I_C = 0.1mA, R_L = 100Ω	–	20	–	µs
Fall Time	t_f		–	20	–	µs
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_F = 20mA, I_C = 0.1mA	–	–	0.4	V


Anode
Emitter
.355
(9.0)
.107
(2.7)
.079
(2.0)
Cathode
Collector
.071 (1.8)
.059
(1.5)
.134 (3.4)