

INFRARED EMITTING DIODES

NTE Type Number	Description	Diagram Number	Typical Total External Radiated Power (mW)	Maximum Forward Voltage (Volts)	Reverse Voltage (Volts)	DC Forward Current (mA)	Power Dissipation (mW)	Typical Peak Emission Wavelength (nm)	Typical Response Time (ns)
			P _O	V _F	V _R	I _F	P _D	λ _p	t _{on} , t _{off}
3017	High Speed for Remote Control	141	15	1.28	6	100	175	900	500
3027	PN Gallium Arsenide	144	1	1.5	5	100	150	950	400
3028	PN Gallium Arsenide	145	650μW	1.5	3	150	250	900	50
3029A	PN Gallium Arsenide	504a	150μW	1.5	6	100	100	940	1μs
3099	Bi-Directional	460	2	1.5	6	50	75	950	—
30001	Bi-Directional	460	2	1.5	6	50	75	950	—

INFRARED DETECTOR DIODES

NTE Type Number	Description	Diagram Number	Reverse Voltage (Volts)	Maximum Dark Current (nA)	Minimum Light Current (μA)	Power Dissipation (mW)	Rise Time (ns)	Typical Detection Angle (°)	Typical Peak Emission Wavelength (nm)
			V _R	I _D	I _L	P _D	t _r		λ _p
3033	Infrared Pin Photodiode	437	30	50	35	100	50	65	900

PHOTOTRANSISTOR DETECTORS

NTE Type Number	Description	Diagram Number	Collector to Base Voltage (Volts)	Maximum Collector Current (mA)	Maximum Collector Dark Current at 25°C (nA)	Minimum Light Current (mA)	Maximum Power Dissipation at 25°C (mW)	Typical Response Time (μs)	Package
			V _{CB}	I _C	I _D	I _L	P _D		
3031	NPN, Si, Visible and IR	148	30 (V _{CEO})	40	100 @ 10V V _{CE}	1	150	6	TO46 Flat Lens
3032	NPN, Si, Visible and IR	149	80	40	20 @ 5V V _{CE}	12	200	2	TO46 Dome Lens
3034A	NPN, Si, Photo/Light Detector	504b	30 (V _{CEO})	—	100 @ 10V V _{CE}	100μA @ 5V	150	—	—
3035A	NPN, Si, Photo Darlington	504b	60 (V _{CEO})	—	100 @ 10V V _{CE}	5 @ 5V	150	—	—
3036	NPN, Si, Darlington Visible & Near IR	151	50	250	100	12	250	151	TO18 Dome Lens
3037	NPN, Si, Visible and IR	151	50	50	200 @ 30V V _{CE}	10 @ 3V	150	2	TO18 Dome Lens
3038	NPN, Si, Visible	174	25	20	500 @ 10V V _{CE}	5 @ 3V	50	1.5	—
3120	NPN, Si, Phototransistor	505	20 (V _{CEO})	30	1μA @ 10V V _{CE}	1 Typ	100	10 Max	—
3122	NPN, Si, Darlington, IR, Visible Cut-Off, Narrow Acceptance	589	35 (V _{CEO})	50	10μA @ 10V V _{CE}	1.5	75	80	—
3123	NPN, Si, Darlington, IR, Visible Cut-Off	590	35 (V _{CEO})	50	10μA @ 10V V _{CE}	0.2	75	400	—

PHOTON COUPLED INTERRUPTER MODULE

NTE Type No.	Output Transistor Configuration	Diag. No.	Maximum Emitter Specifications			Maximum Detector Specifications			Total Power Dissipation (mW)	Typical Switching Speeds	
			Reverse Breakdown Voltage (Volts)	Forward Current (mA)	Forward Voltage Drop (Volts)	Collector Emitter Voltage (Volts)	Collector Current (mA)	Collector Dark Current (nA)		Turn-On Time (μs)	Turn-Off Time (μs)
			V _{(BR)R}	I _F	V _F @ I _F	V _{CEO}	I _C	I _{CEO}		P _D	t _{on}
3100	NPN Transistor	399	6	60	1.7	55	100	100	250	8	50
3101	NPN Darlington	399	6	60	1.7	55	100	100	250	7	45
3102	NPN Transistor	400	6	60	1.7	55	100	100	250	8	50
3103	NPN Darlington	400	6	60	1.7	55	100	100	250	7	45
3104	NPN Transistor	569	3	50	1.2	30	20	200	75	15	15
3105	NPN Transistor	568	3	50	1.3	30	20	200	75	20	20

Note: All units feature 1mm aperture. All NTE Photon Coupled Interrupter Modules are manufactured using a gallium arsenide emitting diode coupled to a silicon phototransistor or darlington. The gap in the housing provides a means of interrupting the signal with an opaque material thereby switching the output from an "ON" into an "OFF" state.

See Diagrams, beginning on Page 1-116

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