

Optoelectronics

Emitters/Detectors

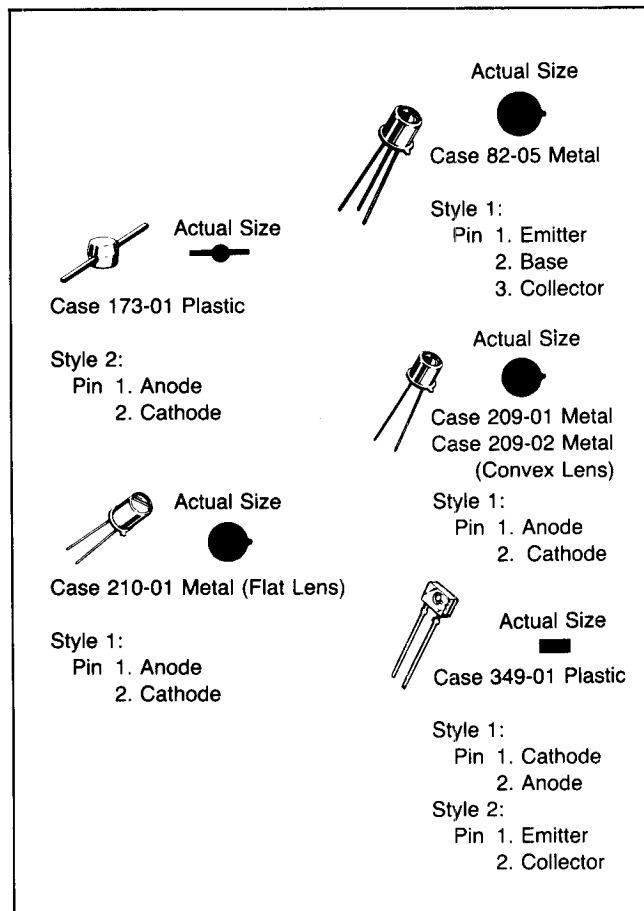
Infrared Emitting Diodes

Motorola's infrared emitting diodes are made by the liquid phase epitaxial process for long life and stability. They provide high power output and quick response at 930 nm with low input drive current.

Device	Power Output μW @ I _F Typ mA		Emission Angle Typ	Peak Emission Wavelength nm Typ	Forward Voltage @ I _F Max mA		Case
MLED15	1300	30	145°	930	1.5	30	173-01 Style 2
MLED71	2500	50	60°	940	1.8	50	349-01 Style 1
MLED930	650	100	30°	900	1.5	50	209-01 Style 1

Silicon Photodetectors

A variety of silicon photodetectors are available, varying from simple PIN diodes to complex, single chip 400 volt triac drivers. They are available in packages offering choices of viewing angle and size in either economical plastic cases or rugged, hermetic metal cans. They are spectrally matched for use with Motorola infrared emitting diodes.



Photodiodes

Device	Light Current			V(BR)R Volts Min	Dark Current		Response Time ns Typ	Case
	μA	@ V _R Volts	H mW/cm ²		nA Max	@ Volts		
MRD500	9.0	20	5.0	100	2.0	20	1.0	209-02 Convex Lens
MRD510	2.0	20	5.0	100	2.0	20	1.0	210-01 Flat Lens
MRD721	4.0	20	5.0	100	10	20	1.0	349-01 Style 1

Photodarlingtontons

Device	Light Current			V(BR)CEO Volts Min	t _r , t _f /t _{on} , t _{off} * Typ			I _L μA	Case
	mA Typ	@ V _{CC}	H mW/cm ²		μs	@ V _{CC}			
MRD370	10	5.0	0.5	40	15/40	5.0	1.0	82-05	
MRD360	20	5.0	0.5	40	15/65	5.0	1.0	Style 1	
MRD711(1)	25	5.0	0.5	60	125/150*	5.0*		349-01 Style 2	

(1) Photodarlington with integral base-emitter resistor.