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IS900/-1/-2/-31/-32

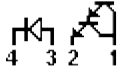
REFLECTIVE OBJECT SENSOR

Circuit

Photodarlington:



Photosensor:



Features

- Phototransistor Output.
- High Sensitivity.
- Low Cost Plastic Housing.
- Lensed For Dust Protection And Ambient Light Filtration.

Description

The IS900 series consists of a Gallium Arsenide infrared emitting diode and an NPN silicon photosensor mounted in a black plastic housing. A built-in light barrier prevents response to radiation from the LED when a reflective surface is not in the view of the sensor. Dash numbers 1 and 2 utilise an NPN phototransistor for the sensor. Dash numbers 31 and 32 utilise an NPN photodarlington. All electrical parameters are 100% tested by manufacturing. Specifications are guaranteed to a cumulative 0.65% AQL.

Absolute Maximum Ratings (Ta=25°C)

Storage Temperature:	-40°C to +100°C
Operating Temperature:	-40°C to +100°C
Lead Soldering:	240°C for 5s, 1.6mm from case

Input Diode

Forward DC Current:	60mA
Peak Forward Current:	3A (1μ pw, 300pps)
Reverse DC Voltage:	3V
Power Dissipation:	100mW

Output Sensor

Collector-Emitter Voltage:	Transistor 30V, Darlington 15V
Emitter-Collector Voltage:	5V
Collector DC Current:	30mA
Power Dissipation:	100mW

Electro-optical Characteristics: (Ta=25°C)

INPUT DIODE	PARAMETER	BOUND	CONDITIONS	-1, -2	-31, -32
V _F	Forward Voltage	Max	I _F =20mA	1.5 V	
I _R	Reverse Current	Max	V _R =3V	10 μA	
OUTPUT SENSOR					
BV _{CEO}	Collector-Emitter Breakdown Voltage	Min	I _{CE} =100μA	30 V	15 V
BV _{ECO}	Emitter-Collector Breakdown Voltage	Min	I _{EC} =100μA	5 V	
I _{CEO}	Collector Dark Current	Max	V _{CE} =5V, I _F =0, H=0	100 V	250 V
COMBINED	PARAMETER	BOUND	CONDITIONS	-1, -2	-31, -32
I _I	Photocurrent: *IS900-2	Min	I _F =20mA, V _{CE} =5V, d=0.050in	700 μA *	
V _{CE(SAT)}	Saturation Voltage	Max	I _F =50mA, I _C =60mA, d=0.05in, note 1	0.5 V	1 V
I _{CX}	Crosstalk	Max	I _F =20mA, V _{CE} =5V, no reflecting surface	0.2 μA	10 μA

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