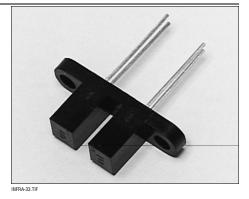
HOA086X/087X

Transmissive Sensor

FEATURES

- · Phototransistor output
- · Accurate position sensing
- · Four mounting configurations
- 0.125 in.(3.18 mm) slot width
- Choice of detector aperture
- · Choice of opaque or IR transmissive housings



DESCRIPTION

The HOA086X/087X series consists of an infrared emitting diode facing an NPN silicon phototransistor encased in a black thermoplastic housing. The phototransistor switching takes place whenever an opaque object passes through the slot between emitter and detector. This series allows the user to choose from available options: (1) mounting tab configurations, (2) lead spacing, (3) electro-optical characteristics, (4) detector aperture size, and (5) housing materials.



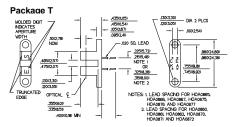
The HOA086X series utilizes an IR transmissive polysulfone housing which features smooth optical faces without external aperture openings; this feature is desirable when aperture blockage from airborne contaminants is a possibility. The HOA087X series employs an opaque polysulfone housing with aperture openings for use in applications in which maximum rejection of ambient light is important and in situations where maximum position resolution is desired. The HOA086X/087X series employs plastic molded components. For additional component information see SEP8506 and SDP8406.

Housing material is polysulfone. Housings are soluble in chlorinated hydrocarbons and ketones. Recommended cleaning agents are methanol and isopropanol.

To specify the complete product characteristics, see the PART NUMBER GUIDE.

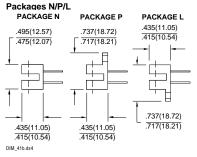
OUTLINE DIMENSIONS in inches (mm) Tolerance 3 plc decimals

±0.010(0.25) 2 plc decimals ±0.020(0.51)



DIM 041a cdr

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Honeywell reserves the right to make changes in order to improve design and supply the best products possible.

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HOA086X/087X

Transmissive Sensor

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)								
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS		
IR EMITTER								
Forward Voltage	VF			1.6	V	l _F =20 mA		
Reverse Leakage Current	IR			10	μA	V _R =3 V		
DETECTOR								
Collector-Emitter Breakdown Voltage	V(BR)CEO	30			V	Ic=100 μA		
Emitter-Collector Breakdown Voltage	V(BR)ECO	5.0			V	I _E =100 μΑ		
Collector Dark Current	ICEO			100	nA	Vce=10 V, IF=0		
COUPLED CHARACTERISTICS								
On-State Collector Current	C(ON)				mA			
Parameter A		0.5				Vce=10, I _F =20 mA		
(HOA0860/0865/0870/0875)								
Parameter B		1.0				V _{CE} =5 V, I _F =10 mA		
(HOA0861/0866/0871/0876)								
Parameter C		1.8				Vce=0.6, IF=20 mA		
(HOA0862/0867/0872/0877)								
Collector-Emitter Saturation Voltage	VCE(SAT)				V			
Parameter A				0.4		Ic=0.4 mA, I _F =20 mA		
(HOA0860/0865/0870/0875)								
Parameter B				0.4		Ic=0.8 mA, I _F =10 mA		
(HOA0860/0866/0871/0876)								
Parameter C				0.6		lc=1.8 mA, l _F =20 mA		
(HOA0862/0867/0872/0877)								
Rise And Fall Time	t _r , t _f		15		μs	Vcc=5 V, lc=1 mA R _L =1000 Ω		

ABSOLUTE MAXIMUM RATINGS

(25°C Free-Air Temperature unless otherwise	noted)
Operating Temperature Range	-40°C to 85°C
Storage Temperature Range	-40°C to 85°C
Soldering Temperature (5 sec)	240°C
IR EMITTER	
Power Dissipation	100 mW (1)
Reverse Voltage	3 V
Continuous Forward Current	50 mA
DETECTOR	
Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Power Dissipation	100 mW (1)
Collector DC Current	30 mA

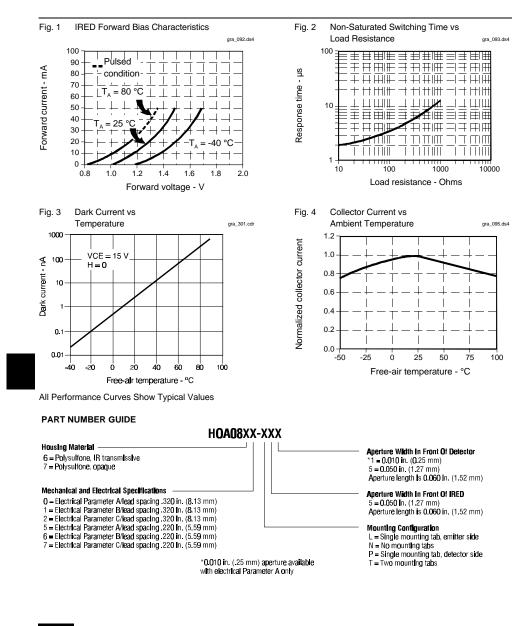
Honeywell reserves the right to make changes in order to improve design and supply the best products possible. Cathode Emitter

SCHEMATIC Anode Collector

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HOA086X/087X

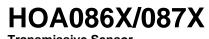
Transmissive Sensor



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Transmissive Sensor

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