

SENSORS

FEATURES

- Low cost
- Broad band response
- High sensitivity
- No cryogenics

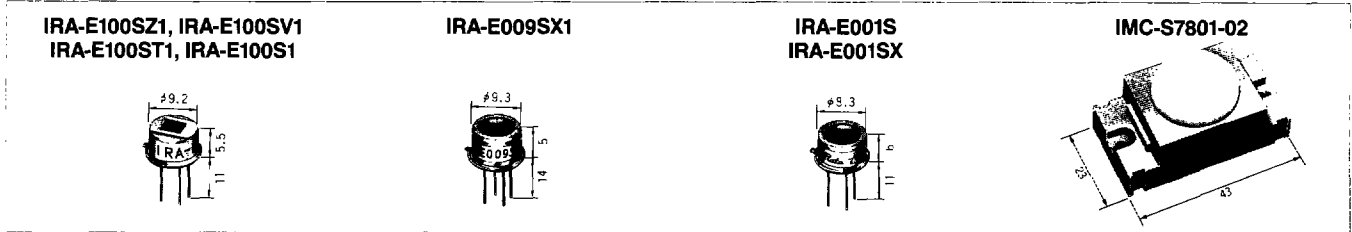
■ HIC® H8D1779 type preamplifier is available for dual elements.

APPLICATIONS

- Passive IR Intruder Alarm System
- Automatic Door
- Light Switch

- Physical Detectors
- Toy, etc.

DIMENSIONS: in. (mm)



RATINGS (25°C, TYPICAL TYPE)

Part Number	Responsivity (500°K, 1Hz, 1Hz)	Specific Detectivity (500°K, 1Hz, 1Hz)	Wave Length Range	Rise Time	Field of View	Filter	Electrode	Supply Voltage	Output Resistance	Operating Temp. Range	Storage Temp. Range
IRA-E100SZ1 (Dual Element)	1150V/W	1.2X10 ⁸ cmHz ^{1/2} /W	7 to 14μm	<25msec.	51°	Long Pass Silicon	(2X1) mm X2	3 to 15V	—	-25 to +55°C	-30 to +100°C
IRA-E100SV1 (Dual Element)	1860V/W	1.0X10 ⁸ cmHz ^{1/2} /W	1 to 20μm	<25msec.	38°	AR coat Silicon	(2X1) mm X2	3 to 15V	—	-25 to +55°C	-30 to +100°C
IRA-E009SX1 (Quad Element)	1080V/W	0.9X10 ⁸ cmHz ^{1/2} /W	7 to 14μm	<25msec.	θ1=47° θ2=32°	Long Pass Silicon	(1.75X1) mm X4	3 to 15V	—	-25 to +55°C	-30 to +100°C
IRA-E001S (Single Element)	870V/W	1.0X10 ⁸ cmHz ^{1/2} /W	1 to 20μm	<25msec.	70°	Silicon	φ 2mm	3 to 15V	10kΩ	-20 to +80°C	-30 to +100°C

*Please see the above Spectral Response.

IR Sensor Module	Detecting Distance	Detecting Range	Current Consumption	Supply Voltage	Operating Temp. Range	Storage Temp. Range
IMC-S7801-02	≥ 5m (at normal walk)	90°X52.5°	≥ 2.5mA	3 ~ 6V	-25 to +55°C	-30 to +80°C

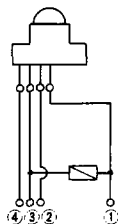
SPECIFICATIONS

Part Number	IRA-E100SZ1	IRA-E100ST1	IRA-E100SV1	IRA-E100S1	IRA-E009SX1	IRA-E001S	IRA-E001SX
Element	Dual	Dual	Dual	Dual	Quad	Single	Single
Filter	7 μm	5 μm	1 μm (AR coat)	1 μm	7 μm	1 μm	7 μm
Body	•	•	•	•	•	•	•
Thermal							

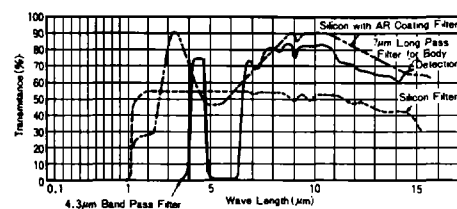
*The Pyroelectric infrared Sensors with the filters not mentioned in the above table are also manufacturable.

IMC-S7801-02

- ① Output (Open Collector)
Load : 1 KΩ min.
- ② GND
- ③ Supply
- ④ Timer Setting



Spectral Response of Filter Materials




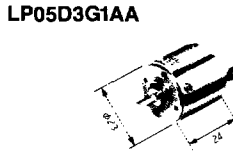
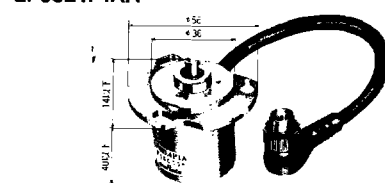


THIN FILM PLATINUM TEMPERATURE SENSOR

DIMENSIONS in. (mm)					SPECIFICATIONS			
TRRA	TRRB	TRFA	TRFB	TRFC	Part Number		Resistance (0°C)	Temperature Range
					TRFA101□	TRFB101□	TRFC101□	-50 to +600°C
					TRFA501□	TRFB501□	500Ω	
					TRFA102□	TRFB102□	1KΩ	
					TRRA101□	TRRB101□	100Ω	
					TRRA501□	TRRB501□	500Ω	
					TRRA102□	TRRB102□	1KΩ	
*□ : Letter donating the class is entered into the box. (A to D)								
Class	Resistance Tolerance (0°C)		Temperature Coefficient of Resistance (0 to 100°C)					
*A	±0.06%		3850±5ppm/°C					
*B	±0.12%		3850±13ppm/°C					
C	±0.24%		3850±13ppm/°C					
D	±0.60%		3850±65ppm/°C					

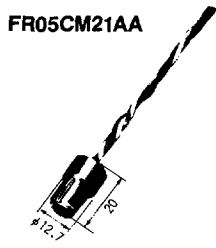
*DIN 43760. IEC 751

NON-CONTACT POTENTIOMETER



LP06M2F1HA LP06M3R1HA LP06M4R1HA	Part Number	LP06M2F1HA	LP06M3RH1A LP06M4R1HA	LP05D3G1AA	*LP08L4P1AA
	Maximum Rated Voltage (V)	6	6	5	8+5%
	Effective Electrical Travel (*)	±50	±50	±30	±9
	Output Sensitivity (mV/deg.)	22(Vin=6V)	22(Vin=6V)	12(Vin=5V)	107 (With Amp.)
	Independent Linearity (%)	±1.5 max.	±1.5 max.	±1.5 max.	±1 max.
	Temperature Characteristic of Output Voltage (%/°C)	-0.4 to -0.15	-0.4 to -0.15	±0.12	±0.04
	Maximum Rotation Torque (gm·cm)	0.5 max.	5 max.	5max.	18 max.
	Operating Temperature Range (°C)	-10 to 80	-10 to 80	-10 to 80	+5 to 60

*Booked quantity production.

ROTARY SENSOR

	Part Number	FR05CM21AA	FR05CM42AA
	Max. Applied Volt. (V)	8	6.5
	Normally Applied Volt. (V)	to 5	to 5
	Output Volt. (V)	Gap = 0.2mm 0.5p-p	Gap = 0.15mm 0.45p-p
	Response Freq. (MHz)	0 to 1	0 to 1
	Resistance between Input Terminal (Ω) Gap = ∞	0.7 to 1.5	0.2 to 1.0
	Operating Temp. Range (°C)	-10 to +70	-10 to +80
	Sensing Module (Magnetic Gear)	0.3 to 1.0	0.4
	Phase Difference	1 Phase	2 Phase (90°)
	*M = $\frac{D}{Z}$ M : Module D : Diameter of pitch circle Z : Numbers of tooth		
	Part Number	FR12AM21AA	
	Max. Applied Volt. (V)	16	
	Normally Applied Volt. (V)	12±2	
	Load Current (mA)	≤ 50	
Output	Output System	Open Collector	
	Applied Current (mA)	≤ 30	
	Applied Voltage (V)	≤ 24	
	Output Volt. (V)	High Level	≥ 11
		Low Level	≤ 0.5
	Response Freq. (KHz)	0 to 20	
	Sensing Module (Magnetic Gear)	≥ 1	
	Sensing Gap (mm)	≤ 1	
	Operating Temp. Range (°C)	0 to 70	

CURRENCY RECOGNITION SENSOR

BS05C1HFAA BS05C1HGCA	BS05N1HGAA	Part Number	BS05C1HFAA	BS05C1HGCA	BS05N1HGAA	BS051KFAA
		Max. Applied Volt. (V)	5	5	5	5
		*1Output Volt. (mV)	≥ 400	≥ 240	≥ 240	0.3 to 0.8
		Track Width (mm)	3	3	3	10
		Operating Temp. Range (°C)	-20 to 60	-20 to 60	-20 to 60	-20 to 60

*According to our measuring method.