

# PYROELECTRIC INFRARED SENSOR

**Murata**

## Pyroelectric Infrared Sensor IRA E500/E600 Series

### Precisely Detects Infrared Rays from the Human Body

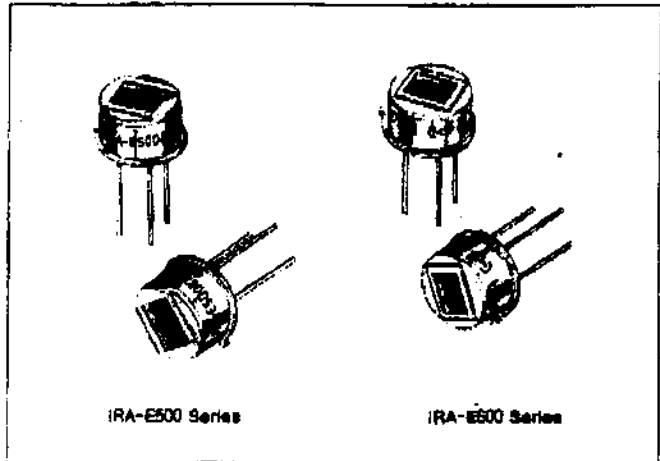
This latest line of pyroelectric infrared sensors, the IRA-E500/E600 series, exhibit high sensitivity and reliable performance made possible by Murata's ceramic technology and HIC<sup>2</sup> technique expertise developed over many years. The IRA-E600 series is available in two types and realizes cost benefits and high sensitivity. The IRA-E500 series is available in two types with improved immunity to RFI and light.

#### FEATURES

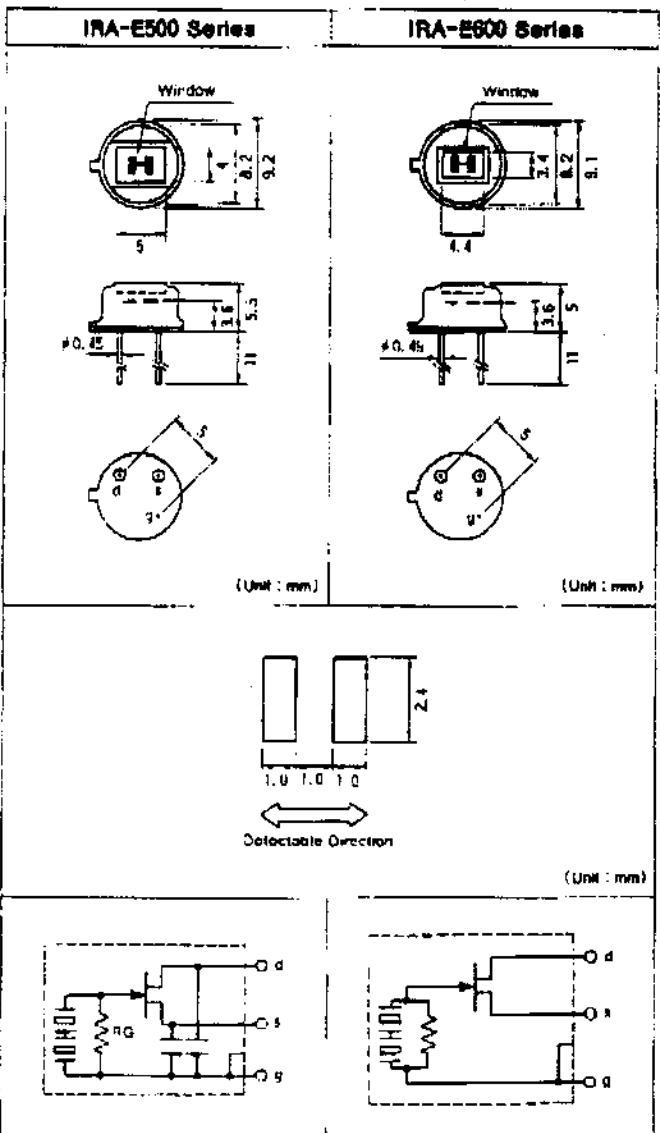
1. All sensor types have dual sensing patterns.
2. They are specially designed to prevent malfunction due to the external light.
3. The E500 series has enhanced immunity to radio frequency interference.
4. Three types of optical filters are available for varying applications.

#### PART NUMBER & APPLICATION

Part Number	Field of View	Optical Filter	Application
IRA-E500SZ0	51°×51°	7 μm	Security
IRA-E500ST0		5 μm	Security Lighting appliances
IRA-E600ST0	Household appliances		
IRA-E600S0	40°×40°		Household appliances Toys



#### DIMENSIONS & CIRCUIT DIAGRAMS



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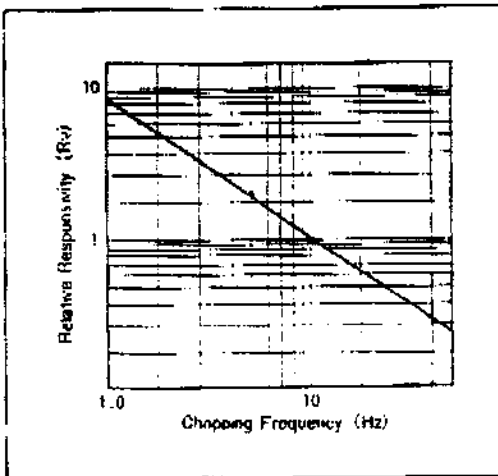
*mmRata*

## Pyroelectric Infrared Sensor IRA E500/E600 Series

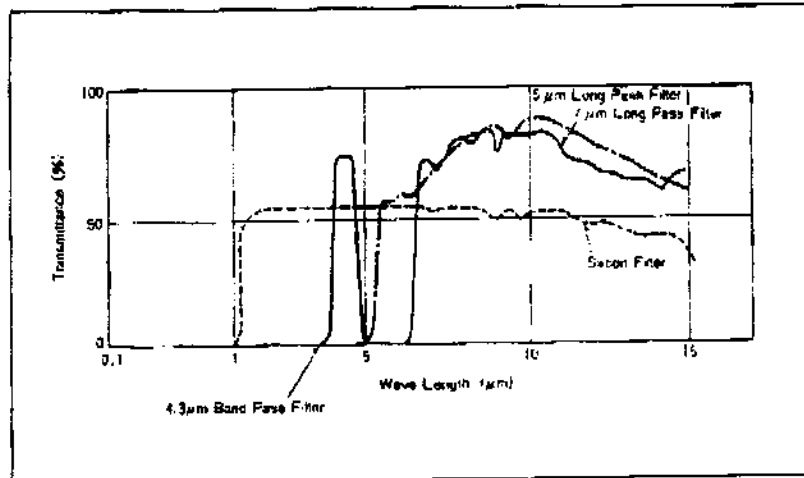
### RATING (25°C)

Part Number	IRA-E500SZ0	IRA-E500STD	IRA-E600STD	IRA-E600S0
Sensitivity (500°K, 1Hz, 1Hz)	3.2mVpp	3.9mVpp		3.2mVpp
Wave Length Range	7~14 μm	5~14 μm		1~20 μm
Field of View	$\theta_1 = \theta_2 = 51^\circ$		$\theta_1 = \theta_2 = 40^\circ$	
Optical Filter	7 μm long pass silicon	5 μm long pass silicon		silicon
Electrode	(2.4X1.0mm) X2			
Supply Voltage	3~15V			
Operating Temp. Range	-25~+55°C			
Storage Temp. Range	-30~+100°C			

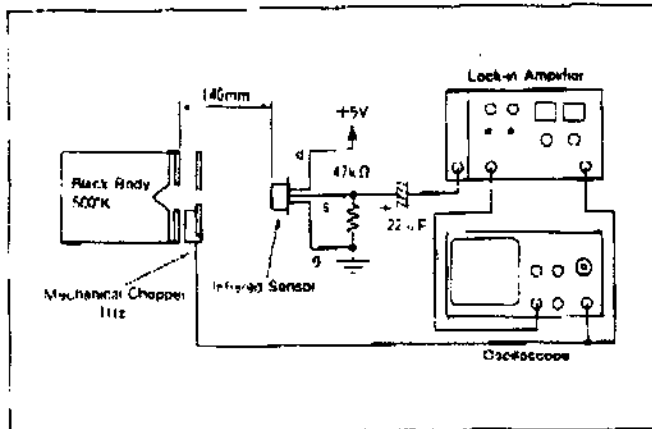
### FREQUENCY CHARACTERISTICS



### SPECTRAL RESPONSE OF WINDOW MATERIALS



### TEST CIRCUIT



### FIELD OF VIEW

