

SMART PYROELECTRIC DETECTORS FOR SIMPLE MOTION SENSING

PYROELECTRIC DETECTORS FOR MOTION SENSING ■



PYD 1096 – Dual Element “Smart DigiPyro®”

Applications

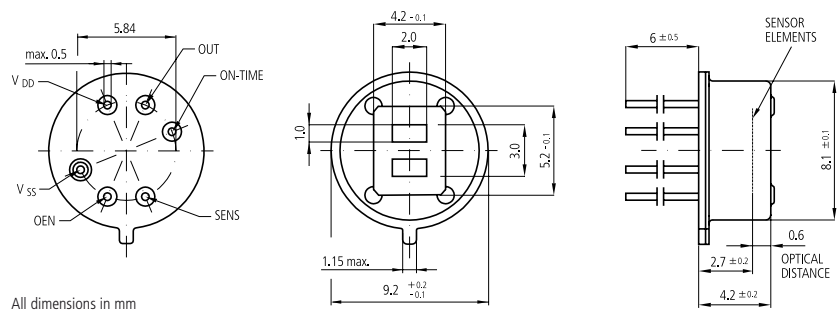
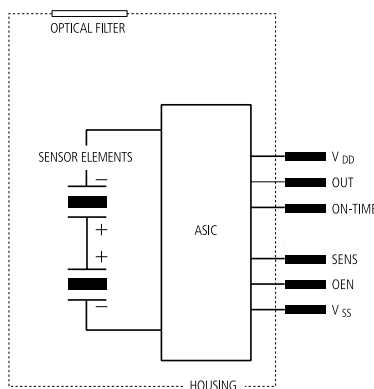
- Simple motion switches
- Auto light switch
- Wall switch

Features and Benefits

- TO-5 metal housing
- All electronics included

Product Description

The Smart DigiPyro® series offers a complete motion detector solution, with all electronic circuitry built into the detector housing. Only a power supply and power-switching components need to be added to make the entire motion switch, a timer is included. The series has versions which can include ambient light level and sensitivity adjustments.



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Parameter	Symbol	PYD 1096	Unit	Remark
Responsivity, min.	R_{min}	3.3	kV/W	$f = 1 \text{ Hz}$
Responsivity, typ.	R	4.0	kV/W	$f = 1 \text{ Hz}$
Match, max.	M_{max}	10	%	
Noise, max.		80	μV_{pp}	0.4 ... 10 Hz / 20° C
Field of view, horizontal	FoV	110°		Unobstructed
Field of view, vertical	FoV	110°		Unobstructed
Operating voltage	V_{DD}	2.7 ... 3.3	V	
Supply current	I_{DDmax}	150	μA	$V_{DD} = 3.3 \text{ V}$
Digital Data				
ADC sensitivity		6 ... 7	$\mu V/\text{count}$	
Sensitivity threshold		84 ... 672	μV_p	In steps of m 42 μV ; m(2, ..., 16)
On-time		2 ... 4096	s	
OEN (ambient light control)		$0.8 * V_{DD}$	V	
Output driving current		1	μA	
Filter, Signal Processing				
Digital filter, cut on		0.44	Hz	
Digital filter, cut off		7	Hz	