

# Digital Pyrodetector

## For Battery Operated Applications



### PYD 1688, PYD 1698 – Low Power *DigiPyro*®

#### Target Applications

- Intrusion Alarm, wireless
- Battery operated Motion Detection

#### Features and Benefits

- Wake up/ Sleep Mode
- Low power consumption
- Band pass included
- Pulse count option

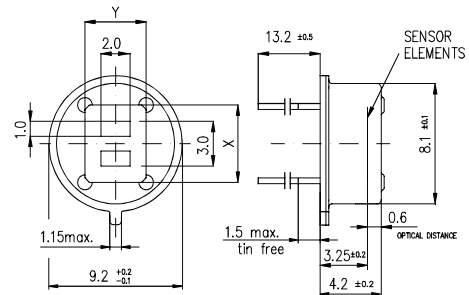
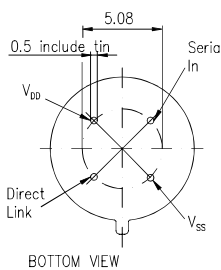
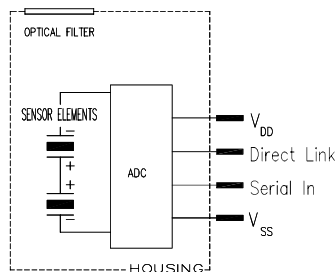
#### Product Description

The LowPower DigiPyro® is our latest introduction addressing the requirements of further reduced power consumption. With its further reduced current requirement at 3V supply the PYD 16 series offers new programmable features: The Wake-up/Sleep mode enables to save unit power, making it ideal for battery operated motion detection applications.

Continuous motion sensing, signal processing and event/motion detection is handled by the LowPower DigiPyro while the hosting microcontroller can be set into a power saving mode. Only upon detection of a motion per its programmed settings, the LowPower DigiPyro signals the microcontroller to wake up.

Further options are selectable pulse count and electrical band pass.

The PYD 1688 /PYD 1698 include Dual Element Pyroelectric Detector design and the digital signal processor, all built into a TO-5 housing..



#### PYD 1688 and PYD 1698

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remarks
Responsivity		3,3	4,0		kV/W	f = 1 Hz
Match			10		%	
Noise			20	78	µV <sub>pp</sub>	
Field of View, vertical		PYD 1688: 95°	PYD 1698: 110°			unobstructed
Field of View, horizontal		PYD 1688: 90°	PYD 1698: 110°			unobstructed
<b>Mechanical Data</b>						
Window size x		PYD 1688: 4,6	PYD 1698: 5,2		mm	
Window size y		PYD 1688: 3,4	PYD 1698: 4,2		mm	
<b>Operation Data</b>						
Operating Voltage	V <sub>DD</sub>	2,5	3,3	3,6	V	
Supply Current	I <sub>DD</sub>		3		µA	V <sub>DD</sub> = 3,3V, no load
<b>ADC Data</b>						
ADC Resolution			14		Bits	Max Count = 2 <sup>14</sup> - 1
PIR ADC Sensitivity			6,5			µV/Count
Output Range				2 <sup>14</sup> - 511	Counts	
LPF cutoff frequency	f <sub>1</sub>		7		Hz	
HPF cutoff frequency	f <sub>2</sub>		0,44		Hz	