

Digital Pyrodetector

For Ceiling Mount Applications

PYQ 1748 - low cost (1+1) Output Quad *DigiPyro*®

Target Applications

- Intrusion Alarm
- Ceiling Mount Motion Detection

Features and Benefits

- 4 Sensing Elements
- Single Output
- Low Cost

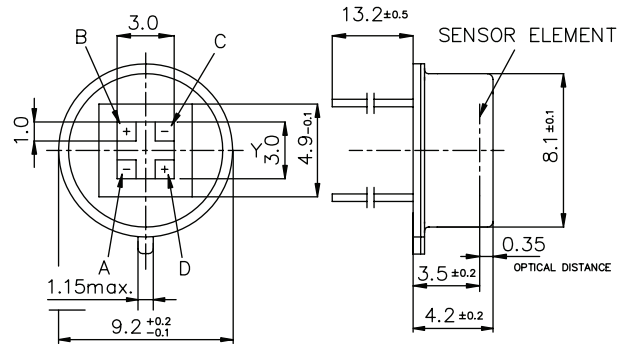
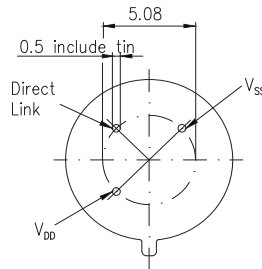
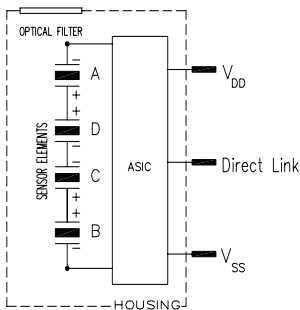
Product Description

The PYQ 1748 includes a Quad design pyroelectric element, A/D converter and the digital signal processor, built into a TO-5 housing.

All four sensing elements are electrically connected in series and transmitted in digital signal format to one output.

Geometrically the polarity of the elements has been arranged across and therefor represent the best configuration for ceiling mount applications.

The PYQ 1748 signal transmission provides 2x14 bit and is identical to PYD 1788 and includes the signal from the sensing elements plus internal temperature reference as second batch of bit information.



PYQ 1748

Main Parameter	Symbol	Min.	Typ.	Max.	Unit	Remarks
Responsivity	R	5,4	6,5		kV/W	f = 1 Hz
Match	M		5	10	%	
Noise	N		30	140	μV _{pp}	
Field of View, vertical	FoV _v		95°			unobstructed
Field of View, horizontal	FoV _h		95°			unobstructed
Operation Data						
Operating Voltage	V _{DD}	2,7	3,3	3,6	V	
Supply Current	I _{DD}		10	15	μA	V _{DD} = 3,3V, no load
ADC Data						
ADC Resolution,	Channel 1+1		14		Bits	For each channel, MSB first
PIR ADC Sensitivity		6,0	6,5	7,1	μV/Count	
ADC Output Offset		6500	8192	9800	Counts	
Sample Time	t _{SMP}	2			ms	