

Smart Detectors

All Electronics for Motion Detection Included



PYD 1096 – Dual-Element, Smart DigiPyro®
PYQ 1046 – Quad-Element, Smart DigiPyro®

Target Applications

- Simple motion Switches
- Auto Light Switch
- Wall Switch

Features and Benefits

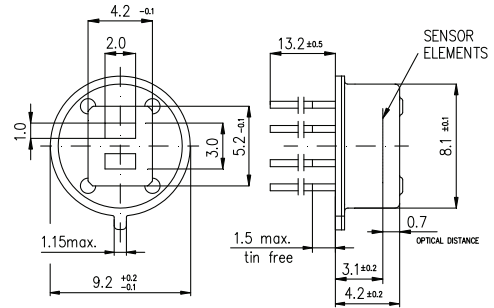
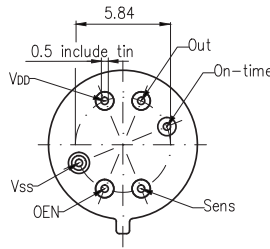
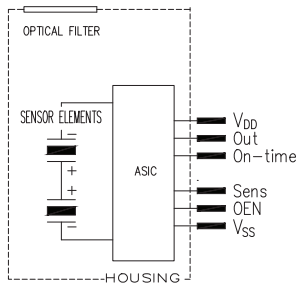
- TO-5 metal housing
- All electronics included
- Dual Element: PYD 1096
- Quad Element: PYQ 1046

Product Description

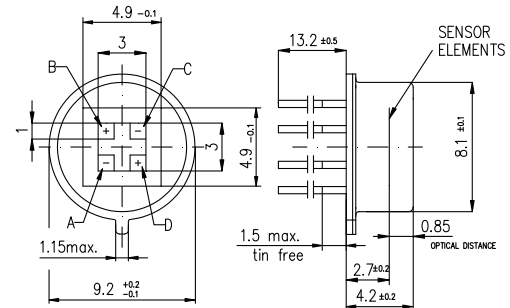
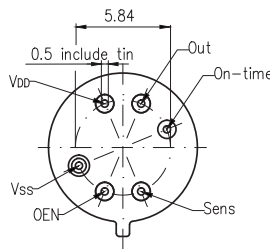
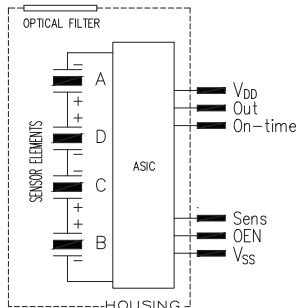
The Smart DigiPyro® family provides for a complete motion detector solution, with all electronic circuitry built-into the Detector housing. Only power supply and power-switching components need to be added to make the entire motion switch, a timer is included. The series has versions which can include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

Both PYD 1096 and PYQ 1046 offer the complete setting feature of Time, Sensitivity and Light level. For the light level input, a Photocell is to be connected externally, please refer to the application notes on this product.

PYD 1096

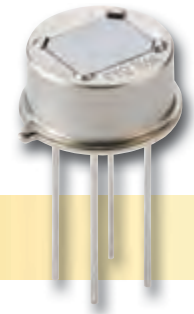


PYQ 1046



PYD 1096 and PYQ 1046

Parameter	Symbol	PYD 1096	PYQ 1046	Unit	Remarks
Responsivity, min.	R_{min}	3,3	5,4	kV/W	f = 1Hz
Responsivity, typ.	R	4,0	6,5	kV/W	f = 1Hz
Match, max.	M_{max}	10	10	%	
Field of View, horizontal	FoV	100°	95°		unobstructed
Field of View, vertical		100°	95°		unobstructed
Operating Voltage	V_{DD}	2,7...3,3	2,7...3,3	V	
Supply Current	I_{DDmax}	15	15	µA	$V_{DD} < V_R$, Outputs unloaded
Sensitivity Threshold		120...530	120...530	µV _{pp}	
Noise, max.		50	100	µV _{pp}	0,4...10Hz/20°C
On-Time		2...4194	2...4194	s	
OEN (ambient light control)		Low<0.2* V_{DD} ; High>0.8 V_{DD}	Low<0.2* V_{DD} ; High>0.8 V_{DD}	V	
Output Driving Current		1	1	µA	
Filter, Signal Processing					
Digital Filter, cut on		0,4	0,4	Hz	
Digital Filter, cut off		7	7	Hz	



Smart Detectors

Complete Motion Detection... To Make it Simple

PYD 1098 – Dual-Element, Smart DigiPyro®
PYQ 1048 – Four-Element, Smart DigiPyro®

Applications

- Simple Motion Switches
- Auto Light Switch
- Wall Switch

Features and Benefits

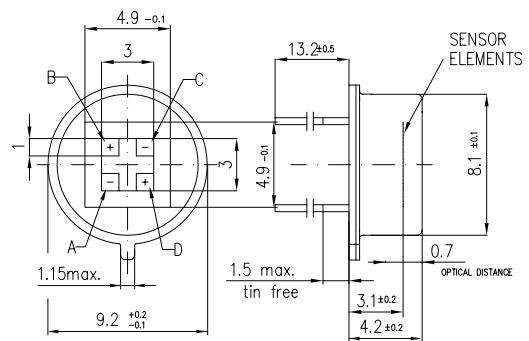
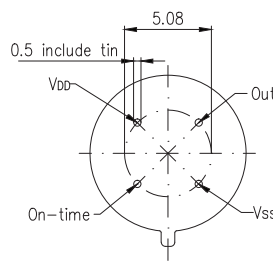
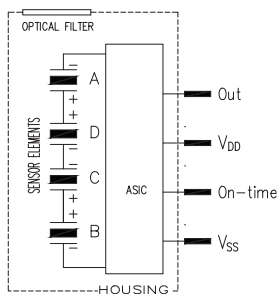
- TO-5 metal housing
- All electronics included
- Dual-Element: PYD 1098
- Quad-Element: PYQ 1048

Product Description

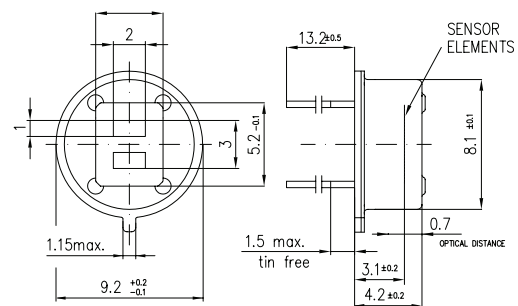
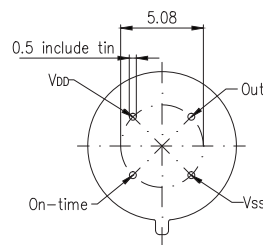
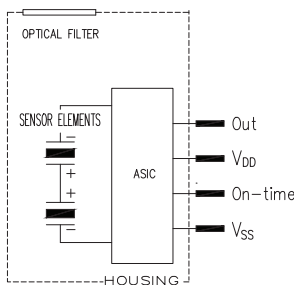
The Smart DigiPyro® family provides for a complete motion detector solution, with all electronic circuitry built-into the Detector housing. Only power supply and power-switching components need to be added to make the entire motion switch, a timer is included. The series has versions which can include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

Two versions are offered: PYD 1098 Dual Element configuration and for higher spatial resolution the Quad Element with 4 square elements. Parameters as sensitivity and Light level are internally set to default values and disabled.

PYQ 1048



PYD 1098



PYQ 1048 and PYD 1098

Parameter	Symbol	PYQ 1048	PYD 1098	Unit	Remarks
Responsivity, min.	R_{min}	5,4	3,3	kV/W	$f = 1\text{Hz}$
Responsivity, typ.	R	6,5	4,0	kV/W	$f = 1\text{Hz}$
Match, max.	M_{max}	10	10	%	
Field of View, horizontal	FoV	105°	100°		unobstructed
Field of View, vertical		105°	100°		unobstructed
Operating Voltage	V_{DD}	2,7...3,3	2,7...3,3	V	
Supply Current	I_{DDmax}	15	15	μA	$V_{DD} < V_R$, Outputs unloaded
Sensitivity Threshold		120	120	μV_p	
Noise, max.		100	50	μV_{pp}	0,4...10Hz/20°C
On-Time		2...4194	2...4194	s	
OEN (ambient light control)		n. a.	n. a.	V	
Output Driving Current		1	1	μA	
Filter, Signal Processing					
Digital Filter, cut on		0,4	0,4	Hz	
Digital Filter, cut off		7	7	Hz	