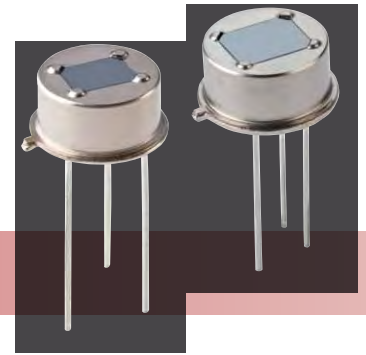


SENSORCN TECH LIMITED

Digital, Dual-Element Pyros

For Motion Sensing



PYD 1788, PYD 1798 – DigiPyro®

Applications

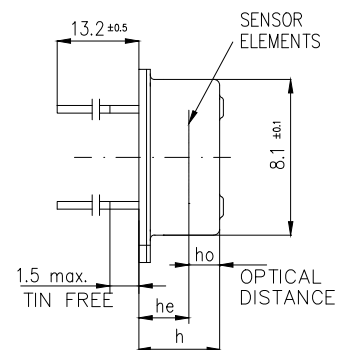
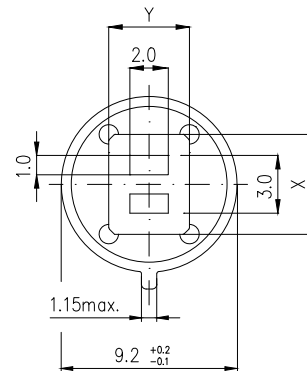
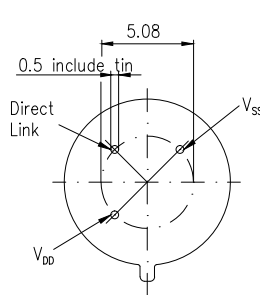
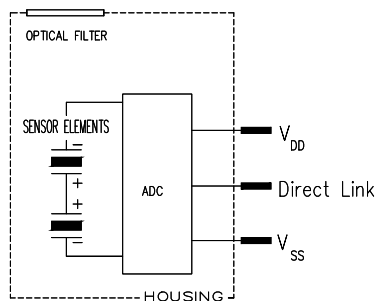
- Passive Intrusion Alarms
- Automatic Light Switching
- Automatic Lamps

Features and Benefits

- TO-5 metal housing
- Digital “Direct Link”
- Different window sizes
- Excellent EMI protection

Product Description

The DigiPyro® detector range in TO-5 housings includes several Dual-Element models with different window sizes. The element configurations are identical, along with their internal electronic circuits. The PYD 1788 is a lower-cost version with standard window, while the PYD 1798 model offers better White Light Immunity (WLI) performance and Field of View. Both the PYD 1788 and PYD 1798 models include a built-in temperature reference. The Output signals are communicated in one digital bit stream of 2x14 bit, output via a single wire “Direct Link” connection to a suitable host microprocessor.



PYD 1798 and PYD 1788						
Parameter	Symbol	PYD 1798	PYD 1788	Unit	Remarks	
Responsivity, min.	R_{min}	3.3	3.3	kV/W	f = 1 Hz	
Responsivity, typ.	R	4	4	kV/W	f = 1 Hz	
Match, max.	M_{max}	10	10	%		
Noise	N, N_{max}	78/20	78/20	μV_{pp}		
Field of View, vertical	FoV	110°	95°		unobstructed	
Field of View, horizontal	FoV	110°	90°		unobstructed	
WLI		***	**		PKI tester	
Height	h	4.2	4.2	mm		
Optical Element Location	he/ho	3,1 / 0,7	3,1 / 0,7	mm		
Filter Size	X / Y	5,2 / 4,2	4,6 / 3,4	mm		
Digital Data						
Operating Voltage	V_{DD}	2,7...3,6	2,7...3,6	V		
Supply Current	I_{DD}	10	10	μA	$V_{DD}=3,3V$	
	I_{DDmax}	15	15	μA	$V_{DD}=3,3V$	
Serial Interface Update Time	t_{REP}	2 / 13	2 / 13	ms	speed / interrupt	
ADC Resolution		14	14	Bits		
Output Data Format		2 x 14	2 x 14	Bits	MSB first	
ADC Sensitivity		6...7	6...7	$\mu V/count$		
ADC Output Offset		7000...9200	7000...9200	counts		
ADC Output Offset, typ.		8192	8192	counts		