

PYD 1688 Low Power DigiPyro® Digital Pyrodetector for Battery Operated Appliances



Key Features

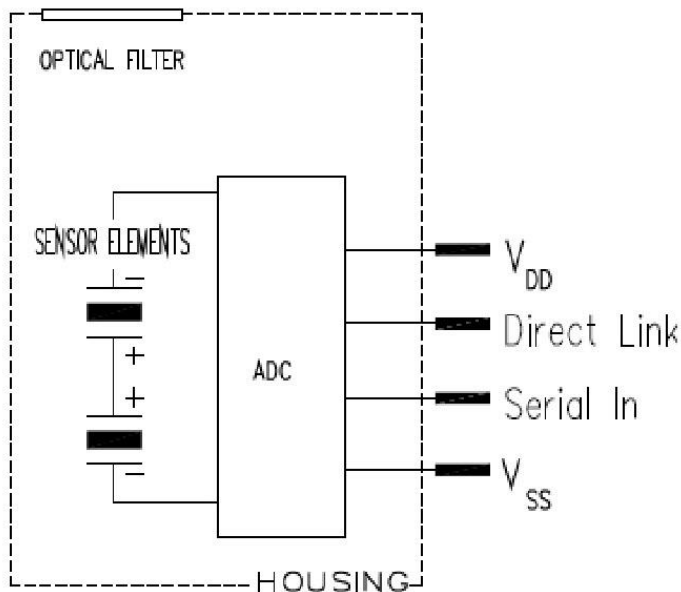
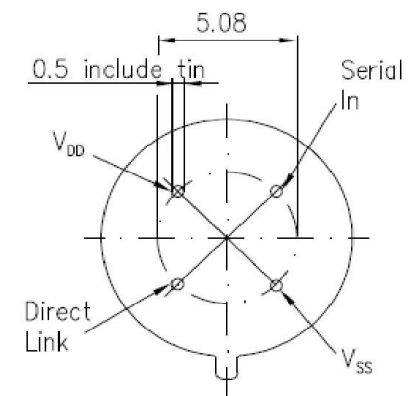
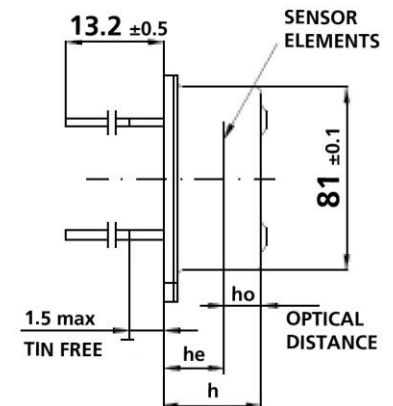
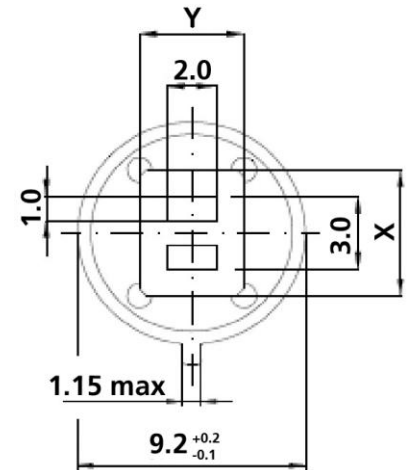
- Sleep mode operation
- Low power consumption
- Part of industry-leading DigiPyro family

Applications

- Wireless intrusion alarm
- Battery operated motion detection
- Residential and commercial uses

Excelitas Technologies' Low Power DigiPyro® PYD 1688 is the latest addition to our industry-leading family of digital pyrodetectors. This new digital pyrodetector operates on reduced power consumption and features sleep mode operation, making it ideal for a variety of wireless and battery-operated motion detection applications.

The new DigiPyro PYD 1688 was developed for use in both residential and commercial products. It runs on a 3V power supply and features a special sleep mode operation, which helps extend battery life when a device is not in use. This results in greater efficiency in motion sensing, home automation, intrusion alarm and wireless presence detection applications.



EXCELITAS®
TECHNOLOGIES

PYD 1688 Low Power DigiPyro®

Digital Pyrodetector for Battery Operated Appliances

Temperature sensing ranges:						
Parameter	Symbol	Minimum	Typical	Maximum	Unit	Remarks
Operating Voltage	VDD	2.5	3.3	3.6	V	
Supply Current	IDD		3		µA	VDD=3V, no load
SERIN:						
Input Low Voltage	VSIL			0.2VDD	V	
Input High Voltage	VSIH	0.8VDD			V	
Input Current	ISI	-1		1	µA	VSS < VIN < VDD
Data Clock Low Time	tSL	200		2000	ns	
Data Clock High Time	tSH	200		2000	ns	
Data In Hold Time	tSHD	6			µs	
Data Load Time	tSLT	550			µs	
DIRECT LINK:						
Input Low Voltage	VDIL			0.2VDD	V	
Input High Voltage	VDIH	0.8VDD			V	
Input Current	IDI	-1		1	µA	
Data Setup Time	tDS	110		250	µs	
Data Clock Low Time1	tDL	200		2000	ns	
Data Clock High Time1	tDH	200		2000	ns	
Sample Time	tSMPL	2.0		14.6	ms	(3 ... 512) / fCLK
Bit Time1	tBIT			23	µs	
ADC Data						
ADC Resolution ²			14		Bits	Max Count – 214-1
PIR ADC Sensitivity		6,5				µV/Count
Sensitivity of TAMB ²		80				Counts/K
Counts at 300k (27°C)	5500	6400	7400			Counts
Sensitivity of VDD measurement						µV/Count
Output Range		2 ¹³		2 ¹⁴ -511		Counts
LPF Cutoff Frequency	f1		7		Hz	
HPF Cutoff Frequency	f2		0.44		Hz	
Internal Clock Frequency	fCLK		32		kHz	

About Excelitas Technologies

Excelitas Technologies is a global technology leader focused on delivering innovative, customized solutions to meet the lighting, detection and other high-performance technology needs of OEM customers. Excelitas has a long and rich history of serving our OEM customer base with optoelectronic sensors and modules for more than 45 years beginning with PerkinElmer, EG&G, and RCA. The constant throughout has been our innovation and commitment to delivering the highest quality solutions to our customers worldwide. From aerospace and defense to analytical instrumentation, clinical diagnostics, medical, industrial, and safety and security applications, Excelitas Technologies is committed to enabling our customers' success in their specialty end-markets. Excelitas Technologies has approximately 3,000 employees in North America, Europe and Asia, serving customers across the world.

Excelitas Technologies
22001 Dumberry Road
Vaudreuil-Dorion, Quebec
Canada J7V 8P7
Telephone: (+1) 450.424.3300
Toll-free: (+1) 800.775.6786
Fax: (+1) 450.424.3345
detection.na@excelitas.com

**Excelitas Technologies
GmbH & Co. KG**
Wenzel-Jaksch-Str. 31
D-65199 Wiesbaden
Germany
Telephone: (+49) 611 492 430
Fax: (+49) 611 492 165
detection.europe@excelitas.com

Excelitas Technologies Singapore, Pte. Ltd.
1 Fusionopolis Walk, #11-02
Solaris South Tower
Singapore 138628
Telephone: (+65) 6775 2022 (Main)
Telephone: (+65) 6770 4366 (Cust. Svc.)
Fax: (+65) 6778 1752
detection.asia@excelitas.com



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