

MINIATURIZED DUAL ELEMENT PYRODETECTORS FOR MOTION SENSING



PYD 5731 – DigiPyro®

Applications

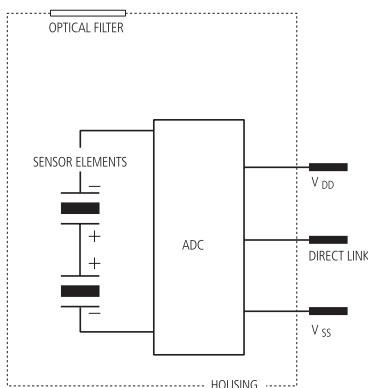
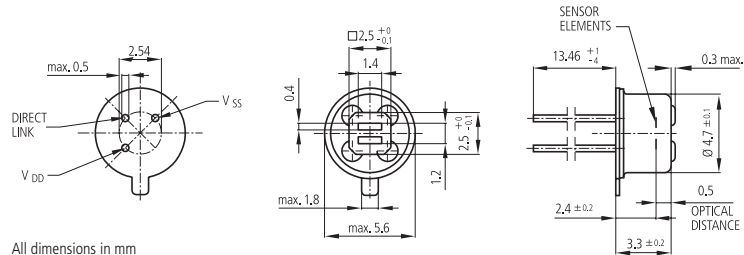
- Auto light switch
- Wall switch

Features and Benefits

- TO-46 metal housing

Product Description

With the PYD 5731 Excelitas extends the emerging DigiPyro® family to bring all-digital processing to miniaturized detector designs. The PYD 5731 offers the same direct link interface as the regular PYD 1998 DigiPyro®. It features a miniaturized Dual Element pyro in TO-46 housing.



PYD 5731 – DigiPyro®

Main Parameter	Symbol	PYD 5731	Unit	Remark
Responsivity, min.	R_{min}	6.0	kV/W	$f = 1 \text{ Hz}$
Responsivity, typ.	R_{typ}	9.0	kV/W	$f = 1 \text{ Hz}$
Match, max.	M_{max}	10	%	
Noise	N	180	μV_{pp}	
Field of view, horizontal	FoV	99°		Unobstructed
Field of view, vertical	FoV	88°		Unobstructed
Operating voltage	V_{DD}	2.7 ... 3.6	V	
Supply current	I_{DD}/I_{DDmax}	10/15	μA	$V_{DD} = 3.3 \text{ V}$
Digital Data				
Serial interface update time	t_{REP}	2/13	ms	speed/interrupt
ADC resolution		14	Bits	Max. count = $2^{14}-1$
Output data format		2 x 14	Bits	
ADC sensitivity		6 ... 7	$\mu\text{V}/\text{count}$	
ADC output offset		7000 ... 9200	Counts	
ADC output offset	typ.	8192	Counts	
Temperature Reference				
Gain (temperature)		80	Counts/K	-20° C to +80° C
Linearity		-5 ... +5	%	-20° C to +80° C
Filter				
Digital filter cut off		10	Hz	