

MINIATURIZED DUAL ELEMENT PYRODETECTORS FOR MOTION SENSING



PYD 5731 – DigiPyro®

Applications

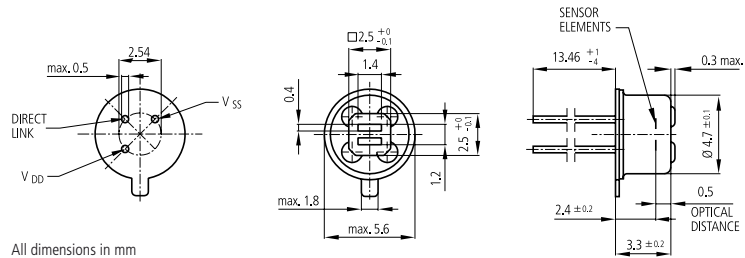
- Auto light switch
- Wall switch

Features and Benefits

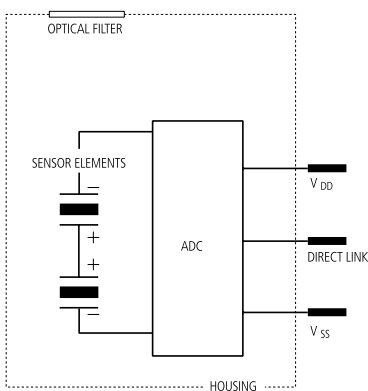
- TO-46 metal housing

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 DigPyro®. It features a miniaturized Dual Element pyro in TO-46 housing.



All dimensions in mm



PYD 5731 – DigiPyro®

| Main Parameter | Symbol | PYD 5731 | Unit | Remark |
|------------------------------|--------------------|---------------|------------------|----------------------------------|
| Responsivity, min. | R _{min} | 6.0 | kV/W | f = 1 Hz |
| Responsivity, typ. | R _{typ} | 9.0 | kV/W | f = 1 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 _{DDmax} | 15 | μA | V _{DD} = 3.3 V |
| Digital Data | | | | |
| Serial interface update time | t _{REP} | 13 | ms | |
| ADC resolution | | 14 | Bits | Max. count = 2 ¹⁴ - 1 |
| Output data format | | 2 x 14 | Bits | |
| ADC sensitivity | | 6 ... 7 | μV/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 | |