

PYROELECTRIC DUAL ELEMENT DETECTORS FOR MOTION SENSING

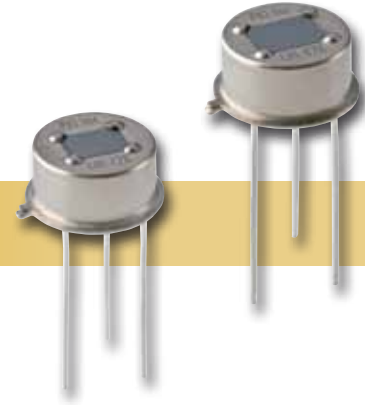
LHi 778, LHi 878, PYD 1388 – Low Cost Pyro

Applications

- Auto light switch
- Wall switch
- Auto lamps

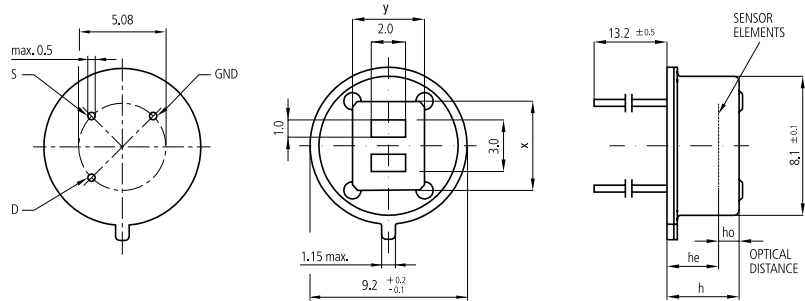
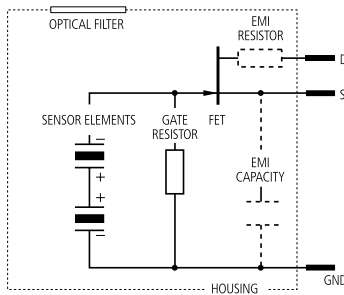
Features and Benefits

- TO-5 metal housing
- Different window sizes
- EMI protection for PYD1388



Product Description

This low cost Dual Element detector range offers standard TO-5 housings with different window sizes. The LHi 778 has a smaller window for minimal cost. The PYD1388 has an additional EMI protection option.



All dimensions in mm

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| Parameter | Symbol | LHI 778 | PYD 1388 | LHI 878 | Unit | Remark |
|---------------------------|-----------|------------|------------|------------|--|-----------------------|
| Responsivity, min. | R_{min} | 3.3 | 3.3 | 3.3 | kV/W | $f = 1 \text{ Hz}$ |
| Responsivity, typ. | R_{typ} | 4.2 | 4.2 | 4.2 | kV/W | $f = 1 \text{ Hz}$ |
| Match, max. | M_{max} | 10 | 10 | 10 | % | |
| Noise, max. | N_{max} | 50 | 50 | 50 | μV_{pp} | 0.4...10 Hz / 20°C |
| Noise, typ. | N_{typ} | 20 | 20 | 20 | μV_{pp} | 0.4...10 Hz / 20°C |
| Spec. detectivity | D^* | 20 | 20 | 20 | $10^7 \text{ cm}^* \sqrt{\text{Hz/W}}$ | 1 Hz / 1 Hz BW / 20°C |
| Field of view, horizontal | FoV | 71° | 95° | 95° | | Unobstructed |
| Field of view, vertical | FoV | 71° | 87° | 87° | | Unobstructed |
| Source voltage | | 0.2 - 1.55 | 0.2 - 1.55 | 0.2 - 1.55 | V | 47 kΩ / 20°C / 5 V |
| Operating voltage | | 2.0... 12 | 2.0... 12 | 2.0... 12 | V | 47 kΩ / 20°C |
| EMI performance | | * | ** | ** | | |
| WLI | | | ** | * | | Excelitas tester |
| Height | h | 4.2 | 4.2 | 4.2 | mm | |
| Optical element location | he/ho | 3.2/0.75 | 3.2/0.75 | 3.2/0.75 | mm | |
| Filter size | X/Y | 4/3 | 4.6/3.4 | 4.6/3.4 | mm | |

* Improved, ** Excellent