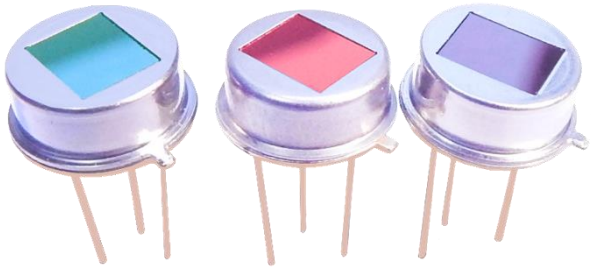
ezPyro™ TO I²C Pyroelectric Infrared Flame Sensor

Introduction



The ezPyro range of thin film digital pyroelectric sensors for flame detection combines high quality sensors with a high level of configurable electronic integration in an industry standard TO-39 package. High sensitivity combined with fast response times ensure rapid and accurate flame detection. The high dynamic range allows detection of small and large flames, nearby or over larger distances. These sensors integrate a digital, current mode read-out offering high responsivity over the full frequency range of flame flicker (3-30 Hz). Programmable gain and filtering offer maximum flexibility in system design. Industry standard I²C communication enables plug-and-play connectivity to microcontrollers and allows easy tuning and calibration. Pyreos sensors are very stable over time ensuring a long and maintenance-free operational lifespan. Various optical filter options are available. These sensors can also be daisy-chained to allow synchronized sampling across devices and offer various low power modes.

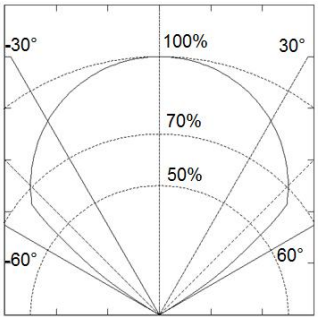
Sensor Characteristics	
Filter aperture	5.2 mm x 4.2 mm
Element size	1.0 mm x 1.0 mm
Sensor Package	TO-39
D* (typ.) [1]	Tbc
NEP (typ.) [1]	Tbc
Time Constant	~10ms (10-20 Hz peak)
Field of View	>100°

Electrical Characteristics	
Supply voltage	1.75 to 3.6 V
Supply current (typ.)	1 to 23 µA
Digital I/O	I²C (FM+ compatible)
ADC	15-23bit ΔΣ ADC @1ksp
Operating Temperature	-40 to +85 °C
Storage Temperature	-40 to +110 °C
Sensor read-out	Current mode
Configurable	Gain / digital filtering / sampling rate / power modes

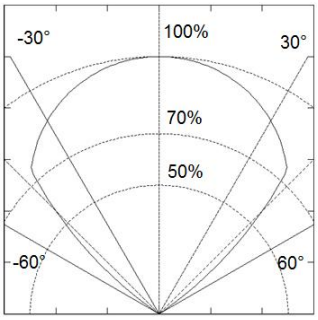
1) Measured without filter @ 500K, 10 Hz, room temperature

Field of View

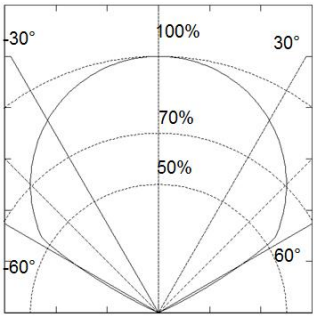
For V across horizontal window aperture



For V across vertical window aperture



For V across diagonal window aperture



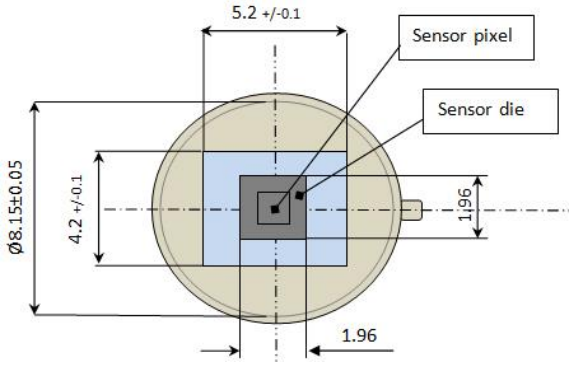
Note: Normalised polar plots show typical FoV along x,y axis and diagonal with 4.48µm/620nm filter applied, with infrared source being a blackbody radiator at 500 K temperature.

Ordering Information

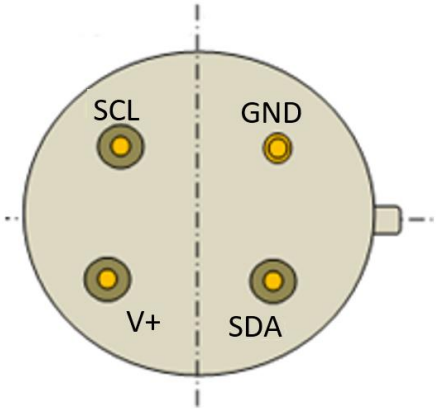
Please quote ezPyro TO Flame Sensor and your desired filter or specific part number ePR44xx2 as per filter table.

Contact: sales@pyreos.com

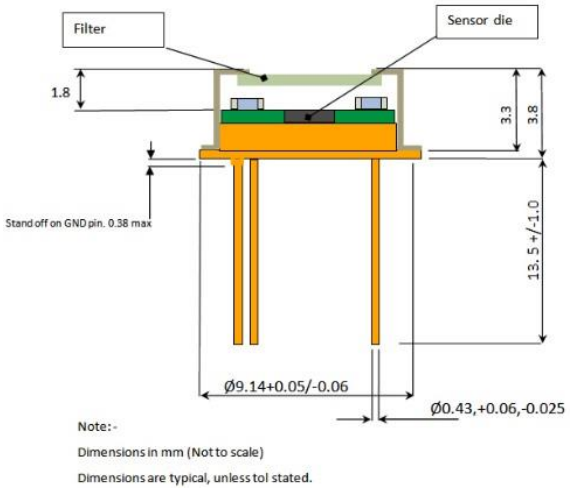
Mechanical Drawing



Top View



Bottom View



Package dimensions

Filter Information

Part number (marking)	ePR44212 (R44212)	ePR44252 (R44252)	ePR44282 (R44282)	ePR44112 (R44112)
Filter name	3.91 µm bandpass	4.48 µm bandpass	4.55 µm bandpass	5.0 µm cut on
Cut on wavelength typical (µm)	3.865	4.17	4.34	5.0
Cut off wavelength typical (µm)	3.955	4.79	4.76	-

Filters block up to 8 µm.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Infrared Detectors ***category:***

Click to view products by Pyreos ***manufacturer:***

Other Similar products are found below :

HOA6517-001 HOA6540-001 HOA6542-001 HOA6571-001 HOA6572-001 HOA6489-050 HOA6531-001 HOA6532-001 HOA6546-001 HOA6570-001 HOA6573-001 HOA6536-001 HOA6548-001 HOA6544-001 G-TPCO-035 ZTP-135L ZTP-135BS ZTP-101T ZTP-115M ZTP-115-Std ZTP-135 ZTP-135SR ZTP-148SR ZTP-148SRC1 USEQFCEA500100 USEQFCEA455100 USEQFCEA391100 USEQFCEA448100 USEQFCSA448100 USEQFCSA500100 USEQFCSA435100 USEQFCSA550100 USEQFCSA455100 USEQFCSA391100 USEQFCSA338100 U054 IML-0687 IRA-S200ST01A01 IRA-S220ST01A01 IRA-S400ST01A01 EPR44112 EPR44212 ePR44282 EPY12111 EPY12121 EPY12221 EPY12251 EPY12261 EPY21114 EPY22111