

# AFBR-S6PY3151

Contact Sales

Thin film analog pyroelectric dual-channel high sensitivity sensor with a 3.91  $\mu\text{m}$  / 90 nm filter and a 3.30  $\mu\text{m}$  / 160 nm filter for CH4 detection

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Overview

## Overview

Broadcom's thin film pyroelectric infrared (IR) sensors for gas detection and other substance concentration measurements offer exceptionally high responsivity, low microphonics and class-leading thermal and electrical stability.

The analog dual detector **AFBR-S6PY3151** has a reference channel with a 3.70  $\mu\text{m}$  / 110 nm filter and one channel with a 4.26  $\mu\text{m}$  / 180 nm filter. The main use of this high sensitivity device is CO2 detection.

This high-performance current mode sensor achieves a signal-to-noise of  $\sim 10,000$  and offers a fast, stable response over a wide operating frequency range. The sensor elements are built into a low noise circuit that has an internal CMOS op amp, with a 10 G $\Omega$  feedback resistor outputting a voltage signal centered on half the supply rail.

[\[PDF\] ezPyro SMD+ I<sup>2</sup>C Pyroelectric Extended Infrared Sensor for Gas Sensing Data Sheet](#)

### Features

- High sensitivity
- Fastest response leading to higher resolution and lower power consumption
- High responsivity and SNR
- Robust - low microphonics
- Thermally stable to slow drift and thermal shock
- Instant switch-on
- Long operational life - a stable pyroelectric material
- Operational from 1-40 Hz. Class-leading SNR above 10-15 Hz
- Wide filter choice
- Extended temperature range
- Less external gain required
- Reliable and easy to use
- Outstanding support of hardware, software and algorithm development

### Applications

- NDIR gas detection
- Flame detection
- NDIR pellistor and electrochemical replacements
- Automotive gas analysis
- Medical gas analysis
- Anaesthesia
- Fluid analysis
- Food safety
- THz detection
- Energy measurement
- Miniaturized designs





### Lifecycle Status

Active

### Substance Compliance



RoHS6  
Y with exemptions

## Specifications

Specification	Value
Lifecycle	Active
Distributor Inventory	Yes
Application	Gas Sensing
Filter	370 $\mu\text{m}$ / 110 nm + 4.26 $\mu\text{m}$ / 180 nm
RoHS6 Compliant	Y with exemptions

## Documentation

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[Data Sheet](#) 1 i



[White Papers](#) 1 i



## Previously Viewed



### [AFBR-S6PY2626](#)

Thin film analog pyroelectric dual-channel high sensitivity sensor with a 3.91  $\mu\text{m}$  / 90 nm filter and a 3.30  $\mu\text{m}$  / 160 nm filter for CH<sub>4</sub> detection



### [ACPL-W346-000E](#)

2.5 Amp Output Current Power, GaN & SiC MOSFET Gate Drive Optocoupler with Rail-to-Rail Output Voltage in Stretched SO6

