QDA Pyroelectric Infrared Food, General IR Spectroscopy & Oil Monitoring Sensors, Array

Overview

KEMET's QDA line sensor arrays, or linear arrays, utilize unique thin-film pyroelectric PZT material to offer outstanding resolution and performance across a wide infrared wavelength range.

The ASIC readout electronics output is a multiplexed, amplified and filtered analogue signal for each sensor element. The sensor is housed in a low profile sealed metal package along with a temperature sensor, and can be fitted within a choice of filter windows.

An additional "+1" sensor element can provide higher sensitivity on a discrete wavelength, typically for lubrication oil or foodstuffs. This +1 sensor is located for ATR and transmission use.

Applications

- General IR spectroscopy (portable, robust spectral engines)
- Lubricating oil and fuel monitoring (quality, wear, adulteration)
- Foodstuffs (constitution, adulteration, milk tampering, decay)
- Industrial process and safety
- Process monitoring (wind turbine, petrochemical, pharmaceutical)
- Engine condition monitoring
- Temperature measurement (non-contact line scanning measurement)
- Flame, material, gas and gas flues analysis
- HVAC and refrigerants
- Home and building technology
- Environmental and pollution monitoring
- Laser calibration
- Imaging (line scanning)
- Medical capnography
- Markers in blood and body fluids

Benefits

- Small package
- Excellent resolution and performance across a wide infrared wavelength
- Broadband and LVF range can be selectable
- No cooling required
- No moving parts

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Ordering Information

USE	QDA	A	A	5101	0	0
Product Family	Series	Sensor Type	Mounting Type	Specification	Packaging	Version
Sensors	QDA = IR Sensor for Food Analysis, General IR Spectroscopy and Oil Monitoring	A = Array	A = Sensor only 6 = Kit type 6 7 = Kit type 7 7 = Kit type 8	5101 = AR Silicon (510 ch) 255S = AR Silicon (255 ch) 128S = AR Silicon (128 ch) 128L = LVF 5.5 – 11.0 µm (128 ch) 1285 = LVF 2.5 – 5.0 µm (128 ch) 128W = LVF 5.5 – 11.0 µm 128A = LVF 5.5 – 11.0 µm 0000 = Without sensor	0 = Bulk	0

Environmental Compliance

All KEMET Food Sensors are RoHS and REACH Compliant.

Article 33(1) of the REACH Regulation states that manufacturers and importers of articles (products) are required to notify their customers of the presence of any Substances of Very High Concern (SVHC) in their products exceeding 0.1% by weight and provide instructions on safe use of the product.

KEMET Corporation reports regarding the Article 33(1) of REACH Regulation as follows:

1. Applicable Product: Food Sensors (QFC & QFS series)

2. Report for the content of REACH SVHC list:
The product(s) above contains a substance by more than 0.1wt% per product weight that was published in the 8th update of the REACH SVHC substances (December 19, 2012).

3. Regarding the safety of the food sensors (Piezoceramic products):
The Piezoceramic that is used in this product becomes ceramic by sintering powder containing PZT as the main ingredient. It is chemically stable, with minimum risks toward the human body or environment within the intended use of the product. Please note that risks could occur in the case of inhalation or accidental oral uptake of powder ceramics.

4. Technical product information on the food sensors (Piezoceramic products):
The manufacturing technique of the "piezoceramic products" whose main ingredient is Lead Titanium Zirconium Oxide (PZT) has been established, and there is no alternative material that can exhibit superior performance than PZT at this moment. Please note that the piezoceramic is listed as an exempt on RoHS (2011/65/EU) AnnexIII (7c.1).

5. The responsibility of piezoceramic manufacturers:
Piezoceramic manufacturers report information regarding PZT containment in their products to the customers to obey the article 33 of the REACH regulation.