UltraKera™ TO VOC Sensor
P/N 731

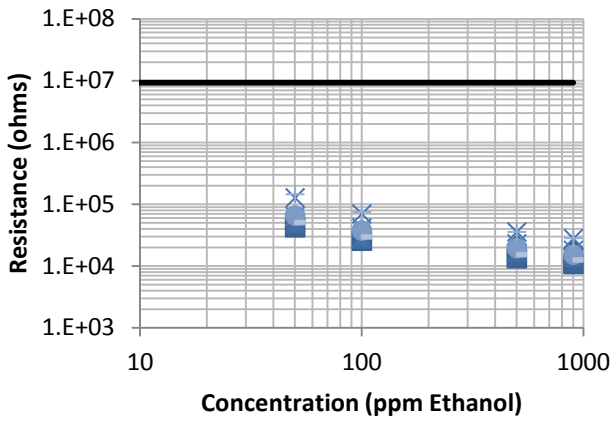
Synkera Technologies, Inc.
2605 Trade Centre Ave., Ste. C
Longmont, CO 80503

SENSOR FEATURES:

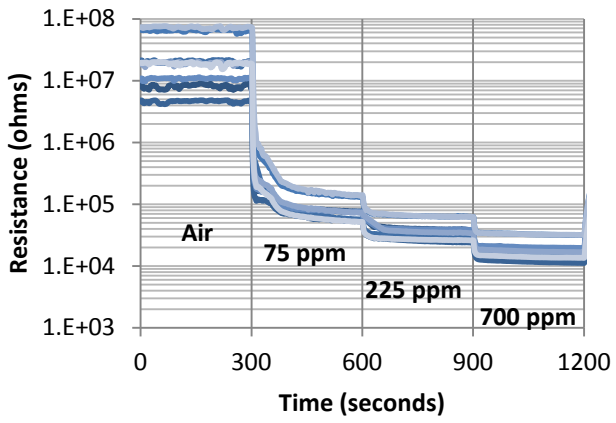
- New low power design: 40 mA @ 1 V
- Innovative chemiresistor technology
- Environmental temperature range of –40 to 60°C with appropriate heater control
- Thermistor heater allows active control of sensor temperature based on environmental temperature
- Environmental humidity range of 0 to 95% RH, non-condensing
- Sensor packaged on low profile TO-46 header

SENSOR RESPONSE CHARACTERISTICS:

The information below represents typical behavior for sensors operated in clean, dry gas.



Sensor Response Function: (Log) Sensor Resistance vs. (Log) ppm Ethanol



Sensor response to step change of Ethanol concentrations.

CROSS SENSITIVITY – ETHANOL EQUIVALENTS

Vapor	Concentration Ethanol	Vapor	Concentration Ethanol
Isobutylene- 100 ppm	200 ppm	NO_2- 5 ppm	Negative Response
CO- 70 ppm	25 ppm	Formaldehyde- 1.5 ppm	No Response
Hydrogen- 100 ppm	<10 ppm	Methane- 1000 ppm	20 ppm

720-494-8401 e-mail: info@synkera.com www.synkera.com 720-494-8402 (fax)

- For information on warranty, please refer to Synkera Technologies, Inc. Standard Terms and Conditions.
- Information on this data sheet represents typical values from a number of Synkera sensors. Actual values from sensor to sensor can vary slightly.

UltraKera™ TO VOC Sensor
P/N 731

Synkera Technologies, Inc.
2605 Trade Centre Ave., Ste. C
Longmont, CO 80503

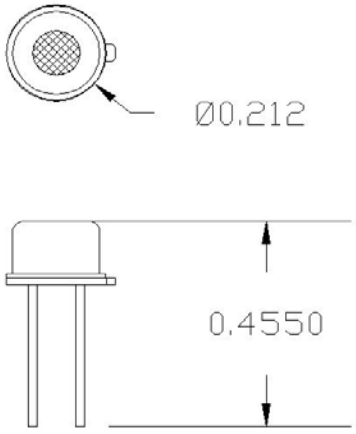
ELECTRICAL CHARACTERISTICS:

The properties below are typical for UltraKera™ TO VOC Sensors.

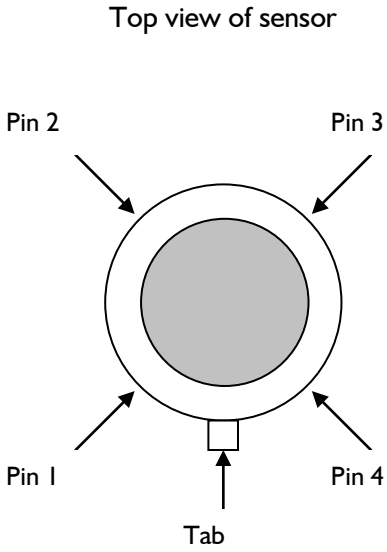
PROPERTY	*SYMBOL*	*VALUE*	*REMARKS*
Heater Power Consumption	P_H	40 mW	Continuous at V_H = 1.0
Heater Voltage	V_H	1.0 VDC	T_{sensor} ~220°C, R_H = 16 Ω
Heater Resistance	R_H	14 to 18 Ohms	At room temperature
Sensing Voltage	V_C	2.5 VDC	Typical
Typical Resistance in Air	R_a	10 MΩ*/ 1000 MΩ*	Min/Max
Typical Resistance in 500 ppm Ethanol	$R_{1.0}$	100 kΩ* / 10 M Ω*	Min/Max
Typical Sensitivity	R_a/R_{500}	10	Min
Repeatability		±5% Full Scale/ ±10% Reading	Whichever is Greater

**Note that all measurements were in dry gas, at room temperature. Specifications are typical values based on preliminary data and are subject to change*

SENSOR DIMENSIONS:



SENSOR PIN OUT:



1 - Heater +
2 - Sensor +
3 - Common
4 - No Connect

- For information on warranty, please refer to Synkera Technologies, Inc. Standard Terms and Conditions.
- Information on this data sheet represents typical values from a number of Synkera sensors. Actual values from sensor to sensor can vary slightly.