

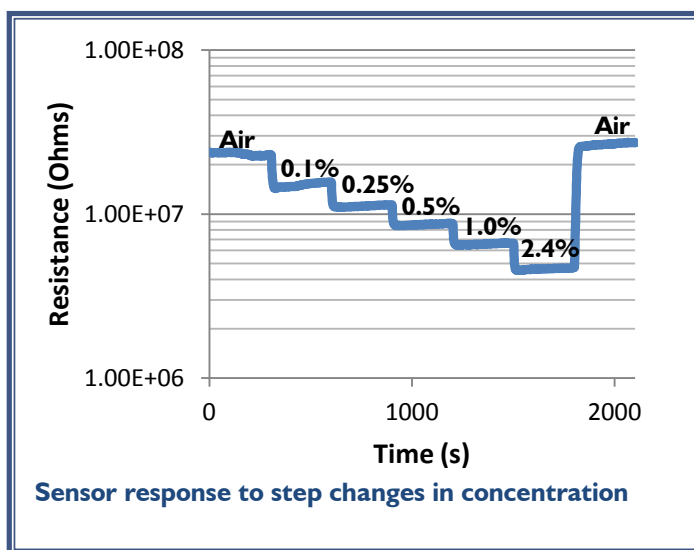
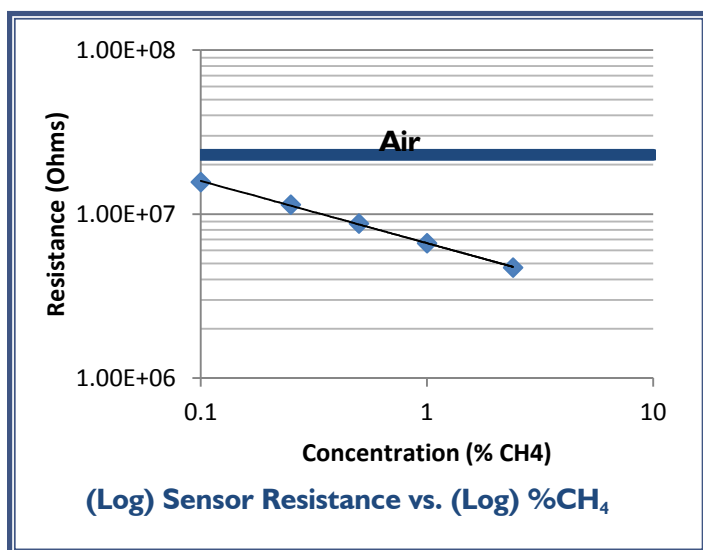
### SENSOR FEATURES:

- New low power design: 42 mA @ 1.18V
- Innovative chemiresistor technology with possibility of integration into intrinsically safe devices
- 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.



### CROSS SENSITIVITY – CH<sub>4</sub> EQUIVALENTS

Vapor	Concentration CH <sub>4</sub>	Vapor	Concentration CH <sub>4</sub>
Hexane- 0.05%	0.4%	CO – 100 ppm	350 ppm
Ethanol- 50 ppm	500 ppm	Hydrogen Sulfide- 10 ppm	200 ppm
Propane- 2500 ppm	3%	Hydrogen- 100 ppm	5%



# UltraKera™ TO IS Methane Sensor P/N 729

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

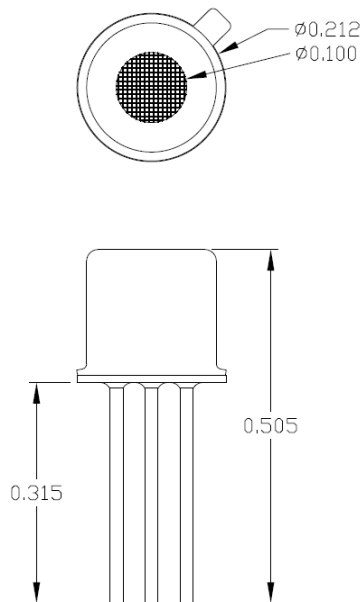
## ELECTRICAL CHARACTERISTICS:

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

PROPERTY	SYMBOL	VALUE	REMARKS
Heater Power Consumption	$P_H$	~ 50 mW	Continuous at $V_H = 1.18$
Heater Voltage	$V_H$	1.18 VDC	$T_{\text{sensor}} \sim 230^\circ\text{C}$
Heater Current	$I_H$	42 mA	$T_{\text{sensor}} \sim 230^\circ\text{C}$
Heater Resistance	$R_H$	15 to 17 Ohms	At room temperature
Sensing Voltage	$V_C$	2.5 VDC	Typical
Typical Resistance in Air	$R_a$	1 M $\Omega$ /20 M $\Omega^*$	Min/Max
Typical Resistance in 1.0% CH <sub>4</sub>	$R_{1.0}$	50 k $\Omega$ /800 k $\Omega^*$	Min/Max
Repeatability		$\pm 5\%$ Full Scale/ $\pm 10\%$ Reading	Whichever is Greater
Accuracy		$\pm 5\%$ of Full Scale	0-5% CH <sub>4</sub>

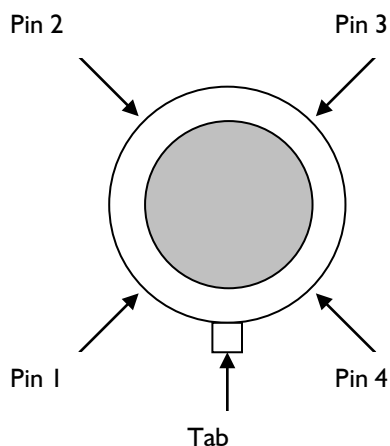
\*Note that all measurements were in dry gas, at room temperature. Specifications based on preliminary data and are subject to change

## SENSOR DIMENSIONS:



## SENSOR PIN OUT:

Top view of sensor



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

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- 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.

October 2014