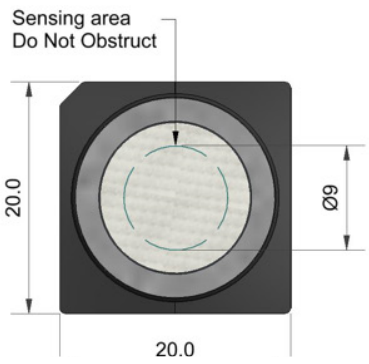
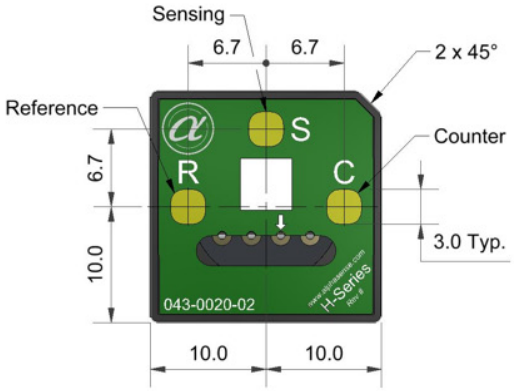
HCN-H4 Hydrogen Cyanide Sensor – Miniature Size

Side View



Top View



Bottom View

Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm 20ppm HCN		30 to 50
	Response time	t90 (s) from zero to 20ppm HCN		< 50
	Zero current	ppm equivalent in zero air		< ± 5
	Resolution	RMS noise (ppm equivalent)		< 0.3
	Range	ppm limit of performance warranty		50
	Linearity	ppm error at full scale, linear at zero, 200ppm HCN		0 to -4
	Overgas limit	maximum ppm for stable response to gas pulse		250
Lifetime	Zero drift	ppm equivalent change/year in lab air		nd
	Sensitivity drift	% change/year in lab air, monthly test		nd
	Operating life	months until 80% original signal (12-month warranted)		> 12
Environmental	Sensitivity @ -10°C	% (output @ -20°C/output @ 20°C) @ 20ppm		55 to 90
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 20ppm		105 to 120
	Zero @ -20°C	ppm equivalent change from 20°C		< ± 1
	Zero @ 50°C	ppm equivalent change from 20°C		< ± 1
Cross-sensitivity	H_2S sensitivity	% measured gas @ 20ppm	H_2S	< 50
	NO_2 sensitivity	% measured gas @ 10ppm	NO_2	< -120
	Cl_2 sensitivity	% measured gas @ 10ppm	Cl_2	< -40
	NO sensitivity	% measured gas @ 50ppm	NO	< -1
	SO_2 sensitivity	% measured gas @ 20ppm	SO_2	< 25
	CO sensitivity	% measured gas @ 400ppm	CO	< 0.1
	H_2 sensitivity	% measured gas @ 400ppm	H_2	< 0.1
	C_2H_4 sensitivity	% measured gas @ 400ppm	C_2H_4	< 0.1
	NH_3 sensitivity	% measured gas @ 20ppm	NH_3	< 5
Key Specifications	Temperature range	°C		-10 to 50 -30 to -10 with reduced sensitivity
	Pressure range	kPa		80 to 120
	Humidity range	% rh (see note below)		15 to 90
	Storage period	months @ 3 to 20°C (stored in sealed pot)		6
	Load resistor	Ω (recommended)		10 to 47
	Weight	g		< 2

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Add: 16/F, Bldg. #3, Zhongke Mansion, No.1 Hi-Tech S. Rd, Hi-Tech Park South, Shenzhen, Guangdong, 518067 P.R.China
Tel: + 86-755-83289036 Fax: + 86-755-83289052 E-mail: sales@isweek.com

Figure 1 Sensitivity Temperature Dependence

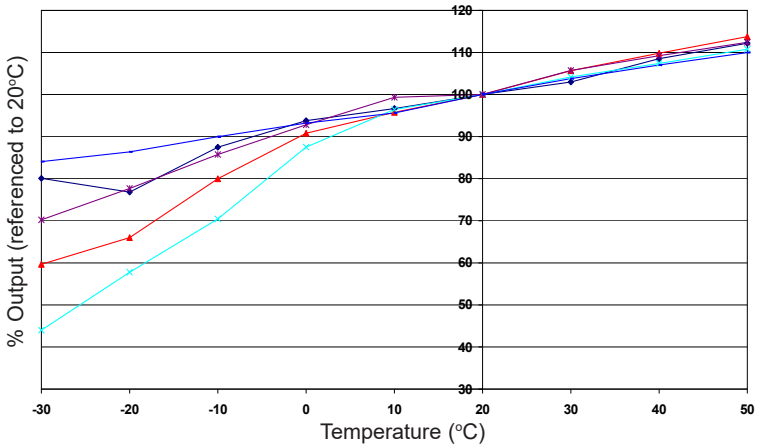

Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of HCN-D4 sensors.

Figure 2 Zero Temperature Dependence

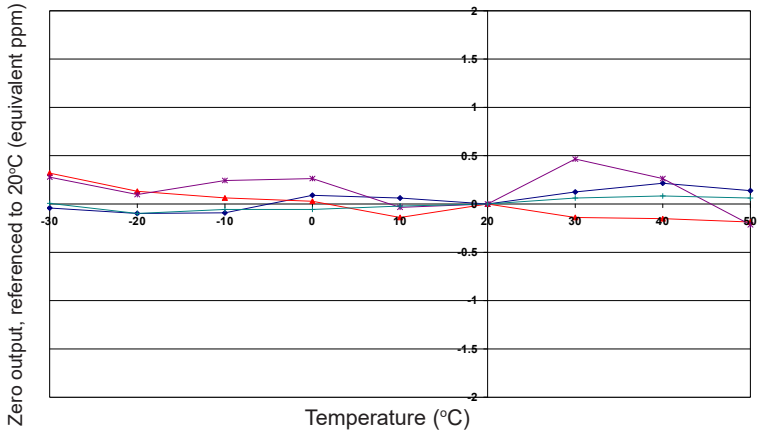

Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Response to 25ppm HCN

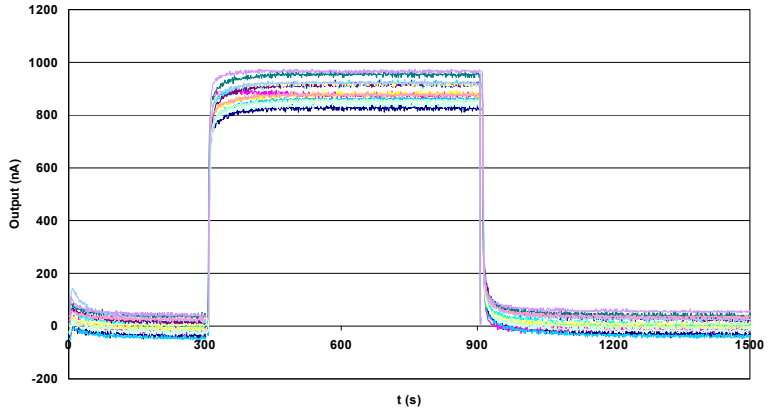

Figure 3 shows response to first zero air, then 25ppm HCN and then zero air.

Fast response time and good zero stability give confidence that the sensor will respond rapidly and reliably to a gas emergency.

Note: Above 85% rh and 40°C a maximum continuous exposure period of 10 days is warranted. Where such exposure occurs the sensor will recover normal electrolyte volumes when allowed to rest at lower % rh and temperature levels for several days.

At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer, Alphasense or its distributor for disposal instructions. NOTE: all sensors are tested at ambient environmental conditions unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.