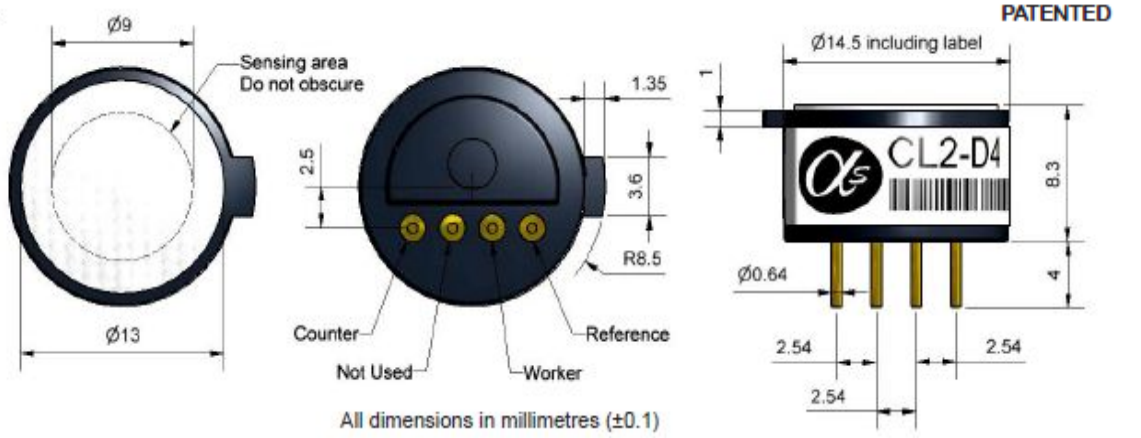
CL2-D4 Chlorine Gas Sensor Micro

Figure 1 schematic diagram of CL2-D4



vertical view upward view lateral view

function	sensitivity	Sensitivity $_2$ in 10ppmCl (nA/ppm)	-150~-350
	reaction time	Time to t90(s) from zero to 10ppmCl $_2$	< 35
	zero current	Equivalent ppm value in zero air	±0.8
	resolution ratio	RMS noise (equivalent ppm value)	< 0.1
	range	Measuring limits (ppm) that guarantee product performance	20
	degree of linearity	The ppm value of the full scale error is linear from 0 to 10ppm	±0.5
	overload	Maximum ppm value of gas pulse stabilized reaction	60
life span	zero drift	Equivalent ppm values that change in the laboratory air from year to year	nd
	sensitivity drift	Percentage change in laboratory air year on year, measured twice a month	nd
	working life	Number of months to which the output is reduced to 80% of the original signal (24 months guaranteed)	> 18
environment	-20°C sensitivity	10ppm Cl $_2$ at (-20°C output/20°C output)%	80~110
	Sensitivity at 50°C	10ppm Cl $_2$ at (output at 50°C/ output at 20°C)%	95~125
	-20°C when zero point	Change in equivalent ppm values with reference to 20°C zero	-0.4~0.4
	50°C at the zero point	Change in equivalent ppm values with reference to 20°C zero	0~0.5
cross sensitivity	H_2S	Gas sensitivity percentage measured at 20ppmH $_2$ S	< 200
	NO_2	Gas sensitivity percentage $_2$ at 10ppmNO	< 120
	NO	Gas sensitivity percentage measured at 50ppmNO	< 0.5
	SO_2	Gas sensitivity percentage $_2$ at 20ppmSO	< -3
	CO	Gas sensitivity percentage measured at 400ppmCO	< 0.1
	H_2	Gas sensitivity percentage $_2$ at 400ppmH	< 0.1
	C_2H_4	Gas sensitivity percentage measured at 400ppmC $_2$ H $_4$	< 0.1
	NH_3	Percentage sensitivity of gas $_3$ at 20ppmNH	< 0.1
Critical temperature range		℃	-20~50
parameter	pressure limit	kPa	80~120
humidity range		Percentage of continuous relative humidity	15~90
Storage period		Number of months for preservation from 3 to 20℃ (to be kept in a sealed tank)	6
	load resistance	Ω (For optimized performance)	33
	weight	g	< 2

Note: Using the sensor in an environment with humidity above 85%RH and temperature above 40℃ can only ensure product performance for up to 10 days. If this is the case, place the sensor in a low-humidity and low-temperature environment for several days until its electrolyte level returns to normal before use.

Figure 2 Reaction With 10ppm Chlorine Gas

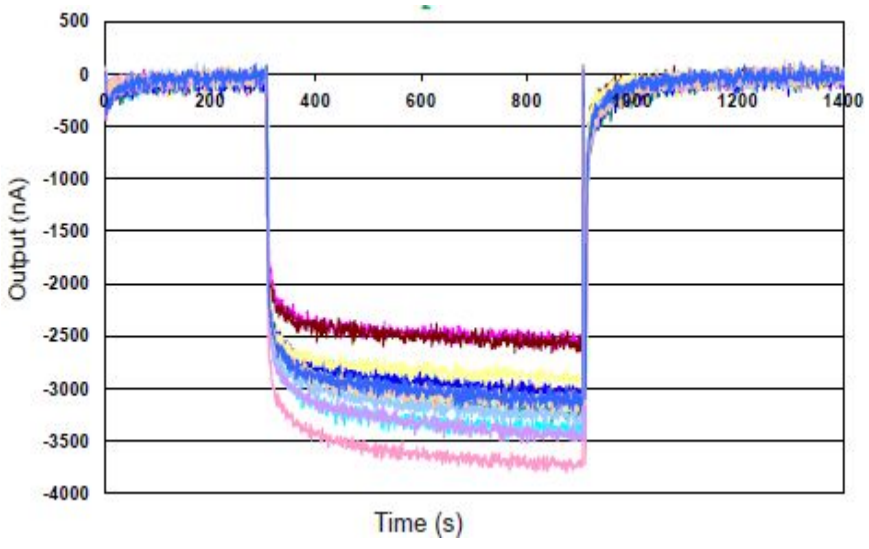


Figure 2 shows the sensor's response to 10ppm chlorine gas.

Data was collected from typical batch sensors.

Figure 3 Zero Temperature Characteristics

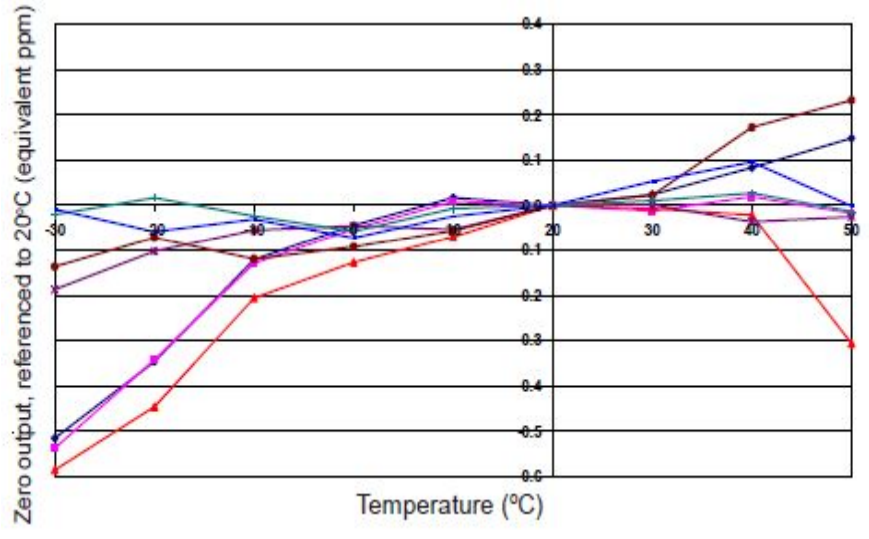


Figure 3 shows the zero point change caused by temperature changes, expressed as equivalent ppm values, with reference to the zero point at 20°C.

Data was taken from a typical batch of sensors.

Figure 4 Load Resistance Correlation

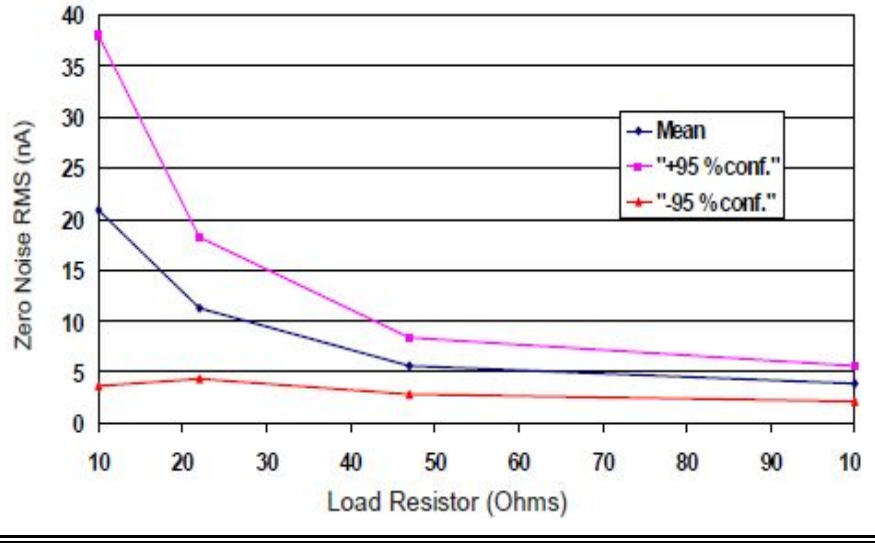


Figure 4 shows the effect of negative load resistance on noise. High impedance resistance reduces sensor noise, but increases its response time linearly.

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