

## CONDUCTOMETRIC SENSOR SUBSTRATES

Type: CC1.W\* (\*)

### Description

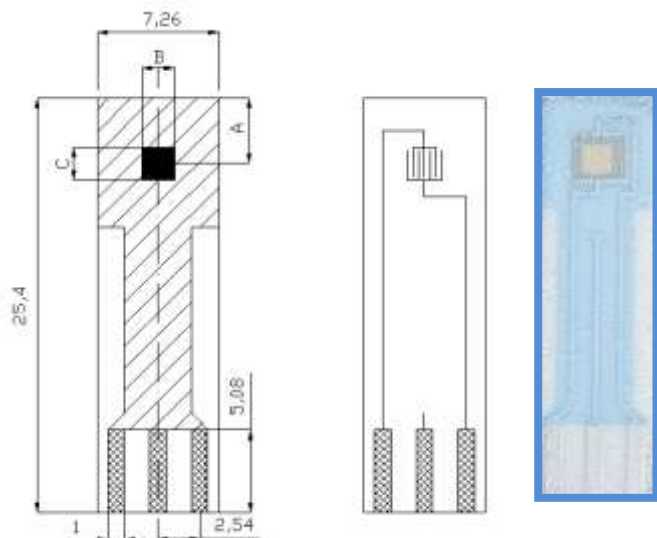
The sensor is formed on a corundum ceramic base. Onto this surface two interdigitated structures of electrodes are applied. The electrodes are made of Platinum-Gold alloy in standard product CC1.WS. At the end of the sensor there is a contact which is connected with the active part by the silver conducting path which is covered by a dielectric protection layer. A bio-chemically active substance is put on the working electrode of the sensor.

### Physical parameters

#### *Dimensions:*

Weight: 0.4 gms  
 Length: 25.40 mm  
 Width: 7.26 mm  
 Thickness of sensor: 0.63 mm  
 Thickness of lines: 150 μm  
 Gap between lines: 200 μm

A = 4.00 ± 0.05 mm  
 B = 2.00 ± 0,05 mm  
 C = 2.00 ± 0.05 mm

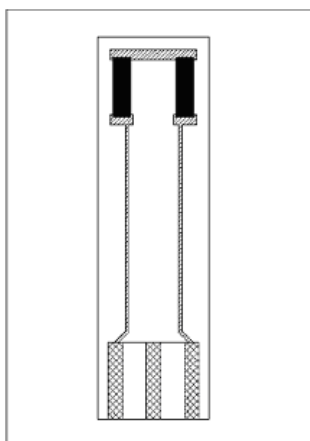


Electrode Materials are defined by:

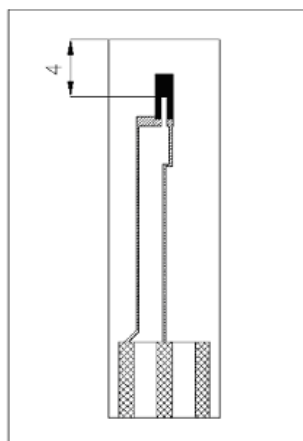
CC1.W\* (\*)

The asterisk is replaced by the appropriate number or letter.

C - Conductometric sensor	2 - Pure Platinum
C - Corundum ceramic base	3 - Pure Silver
1 - Sensor group reference number	4 - Graphite
W - Working electrode material	(*) - Additional Technical specification
S - Alloy of Gold and Platinum	H - Heating of the sensor
1 - Pure Gold	T - Temperature sensing element



CC1.W\* (H)



CC1.W\* (T)

**Heating parametry:**

Maximum voltage is 35 V and temperature approximately 500°C, resistance: 800hm.

**Thermistor:**

- 1) resistance paste -resistance 1600hm, coefficient K= 6100 ppm/K
- 2) Pt1000

**Connector types for CC1 sensors range**

	KA1	KA1C	KA1s	KA4
CC1.W*	✓	✓	✓	✓
CC1.W* (H)				✓
CC1.W* (T)				✓

**Sensor Usage**

This specific range of CC1 sensors enables the measurement of:

- Basic electrochemical and bio-electrochemical techniques
- Conductivity analysis

**References**

- W.-L. Lee, S.-R. Kim, T.-H. Kim, K. S. Lee, M.-Ch.Shin, J.-K. Park  
Sol-gel-derived thick-film conductometric biosensors for urea determination in serum  
Analytica Chimica Acta 404 (2000) 195 - 203.
- P. Jacobs, A. Varlan, W. Sansen, Design optimisation of planar electrolytic conductivity sensors, IFMBE, 1995
- J. Hubálek, V. Kolařík, J. Krejčí. Miniaturization of conductometric sensors  
Proceedings of Electronic Devices and Systems 1999. Brno: 1999. s. 179 (s.)  
ISBN: 80-214-1466- 9

### **Software Packs**

These are available for:

- Bipolar current pulse measurement

### **Related patents**

- CZ-PV 2001-3227

### **Ordering Information**

- The order is specified by whole sensor description formula
- Minimum order quantity - 20 sensors
- All order quantities are to be in multiples of 20 e.g. 20, 40, 60, etc.
- Delivery time for standard CC1 sensors is 4 weeks from receipt of order
- Delivery time for non-standard CC1 sensors depends on final technical specification of order

### **Example of Order**

- 100 pieces - CC1.W2