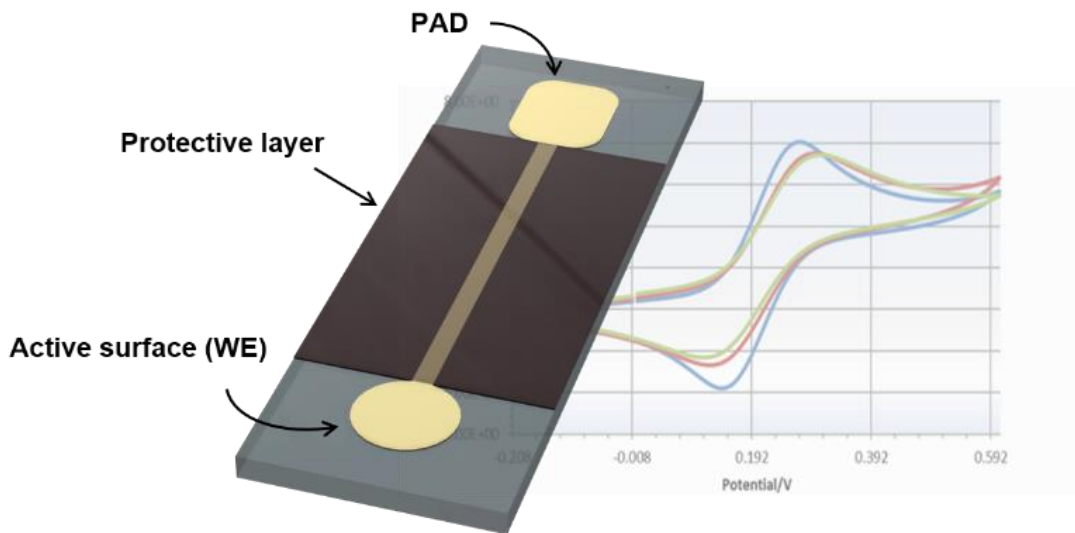




LabInGlass

Planar micro-electrodes brochure



You are looking for micro-electrodes for your electrochemical studies ? you are looking to control your active surface by modifying the geometrical shape ? KLEARIA supports you in your development by offering you its range of micro-electrodes.

Our custom made planar microelectrodes are fully made of inorganic materials and the active layer is manufactured using thin film technologies on high level cleanroom environment (ISO6) giving advantages to:

- High conductivity
- Improve electrochemical signal
- Repeat and validate your experiments
- Perform experiments on hard acidics conditions (pH = 0)



Interdigitated electrodes

1- Electrode material available

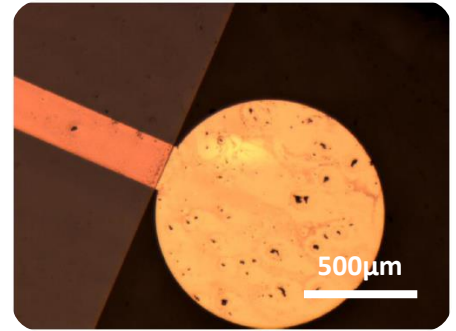
Three electrodes materials are available. An intermediate layers is specifically coated between glass substrate and the electrode material in order to promote stronger adhesion and improve timelife.

Materials	Gold	Platinum	carbon
Available thicknesses	50nm-200nm (±5nm)	50nm-200nm (±5nm)	50nm-200nm (±5nm)

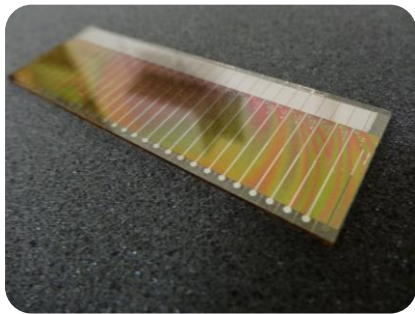
* For Gold and Platinum references only.

2- Supporting substrate

Electrode materials can be coated on various glass material (D263, Boro 33, fused silica,...) cutted while using dicing technologies:



1mm circular shape gold electrode



Micro-G clip serie

3- Protective layer

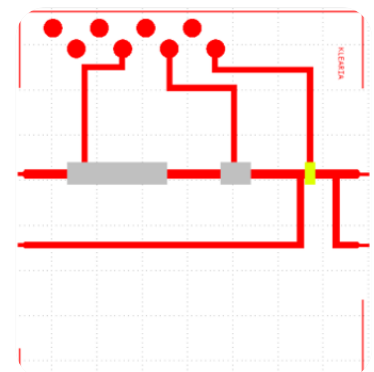
The protective dielectric material covering and protecting the wire from the active surface (WE) to the connection PADS can be composed of silicon nitride layer (Si_3N_4). or silicon oxide layer (SiO_2)

4- Design/ features

The active surface can be modulated according to different designs to be suitable for the user experience (geometry, diameter, thickness...).

A fabrication mask will need to be processed for each customized layer. We encourage customer to send us a .dxf or .cif file.

Maximum resolution within the design is fixed at **10µm** (smallest feature size).



File provided in .dxf

you are interested to test the performances of our planar micro-electrodes with simple geometries and reasonable cost? The MICRO-X series should satisfied you!



Units	Pricing
10	399€
20 (-10%)	699€
50 (-20%)	1559€

1- Available references:

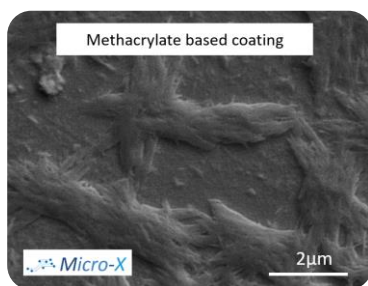
Ref.	MICRO-G	MICRO-P	MICRO-C
Material	Au (100nm±5nm)	Pt (100nm±5nm)	Carbon (100nm±5nm)

2- Specifications:

Dimensions	Shape	Dimension (mm)
Active surface	circular	1
PAD	Rectangular	2.5*5
Support (width*length*thickness)	Rectangular	26x2.4x1mm

3- Packaging

MICRO-X electrodes are supplied with a protective resist layer.



S.E.M view of methacrylate based coating



Rinse and soak for 2 min with Acetone and then rinse with ethanol to release the active surface and the PADS

4- Performances- Cyclic voltamperometry

Cyclic voltammograms performed with a Pt counter-electrodes and a saturated calomel electrode as ref.

Ref	CV H2SO4 (0.5M)	CV Ferri(5mM) /Ferro(5mM) , KCl (0,1M)
Micro-G ($\Delta E_p = 80$ mV)		
Micro-P ($\Delta E_p = 100$ mV)		
Micro-C ($\Delta E_p = 130$ mV)		

Need more informations?



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