

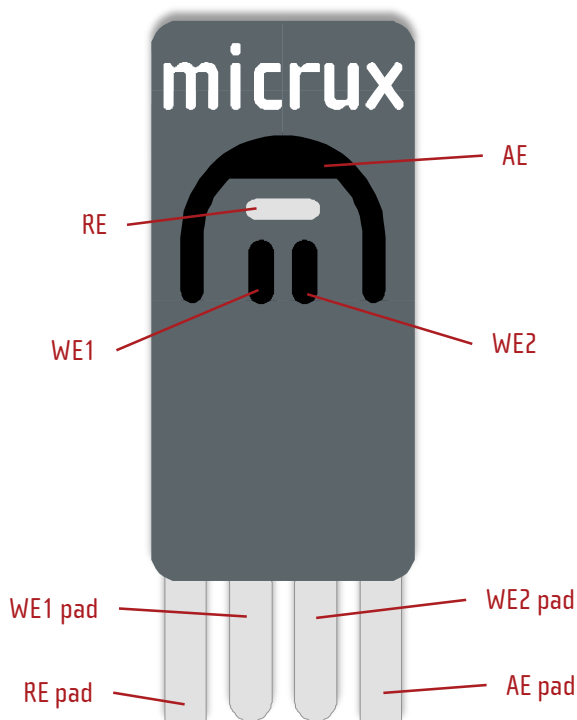


Thick-film Carbon Dual-Electrodes



Thick-film carbon dual-electrodes (ED-D2PE-C10) are fabricated by printing technologies on a flexible and high-resist PET substrate. These low-cost and disposable electrochemical sensors enable the use of **small sample volume**.

» Thick-film dual-electrodes features



Printing technologies enable the manufacture of **planar dual-working electrodes** suitable for simultaneous detection sharing the reference and auxiliary electrodes.

» Standard dimensions:	27.5 x 10.1 mm
» Substrate:	PET (white)
» Substrate thickness:	350 µm
» WE dimensions:	1,0x2.5 mm (2,3 mm ²)
» Sample volume:	20 – 50 µL
» Electrode material	
Working electrodes (WE1/WE2):	Carbon
Reference electrode (RE):	Silver
Auxiliary electrode (AE):	Carbon

» Thick-film electrode packs

Thick-film D2PE electrodes are supplied in **50 units packs**. They should be stored at room temperature in a dry place.

» Applications

Printed dual-electrodes are a suitable tool for **multiple applications**, providing many advantages such as low-cost, disposable, multiplexing analysis, low reagent consumption as well as non-tedious pre-cleaning procedures.

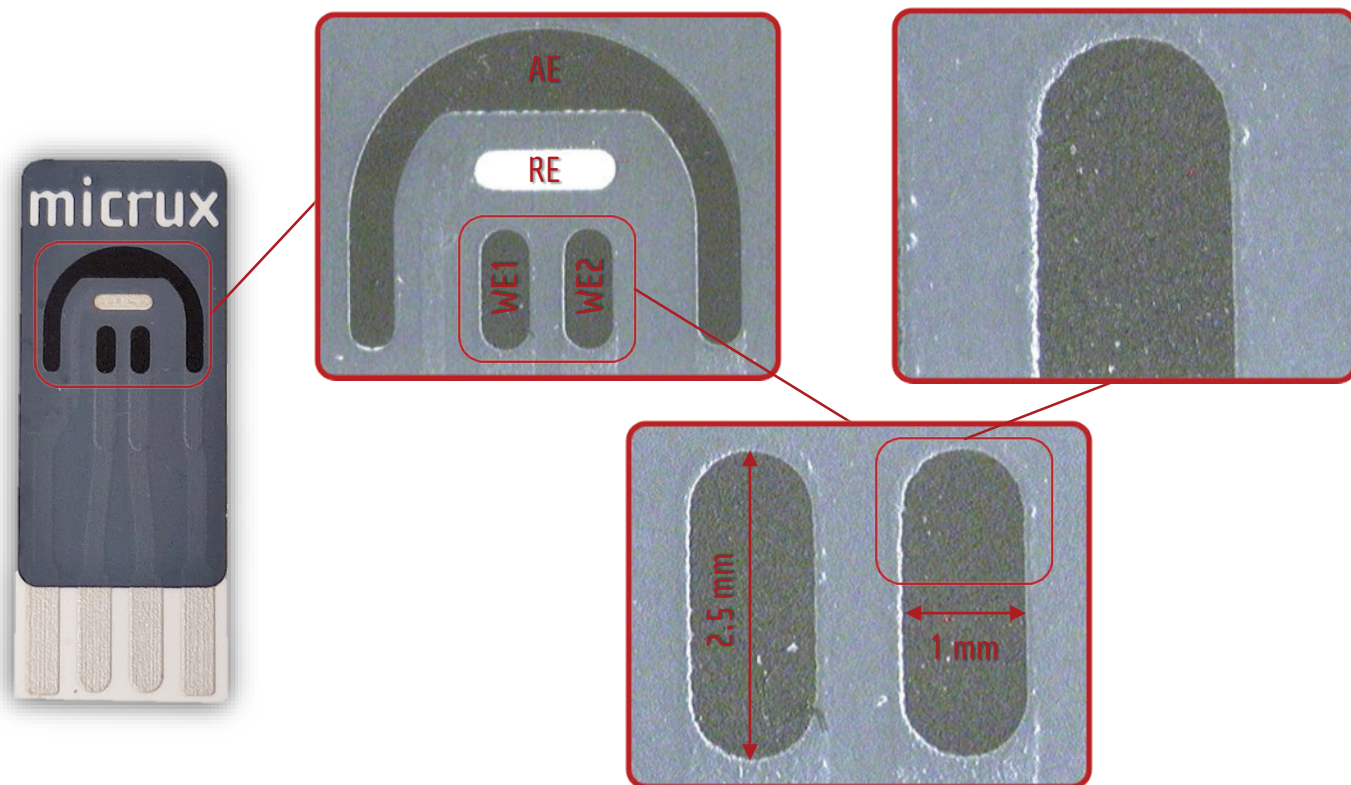
Electroanalysis	Nanotechnology	Biosensors	Flow Analysis Systems
✓ Study EC reactions	✓ Modified electrodes	✓ Multiplexing analysis	✓ FIA Systems
✓ Trace EC analysis	✓ New nanostructures	✓ New recognition elements	✓ HPLC
✓ In-vivo measurements	✓ New nanomaterials	✓ POC / wearable systems	✓ Capillary Electrophoresis



» Dual electrochemical cell

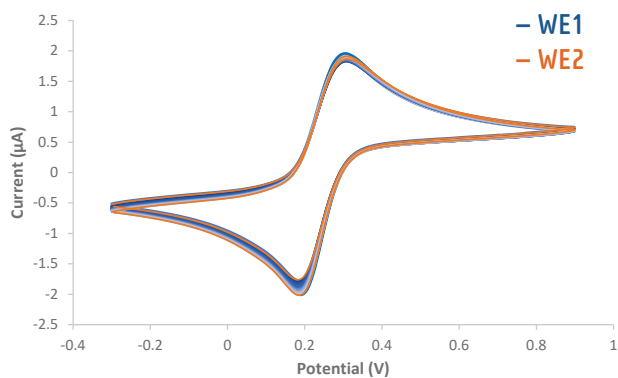
Thick-film carbon dual-sensors (Ref. ED-D2PE-C10) are based on a four-electrodes approach with two working electrodes (WE1 / WE2), sharing a reference (RE) and an auxiliary (AE) electrode.

Optical Microscope Image

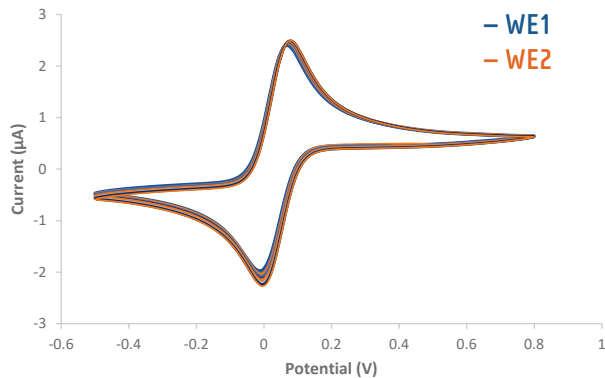


Printed dual-electrodes are very useful in order to avoid tedious polishing of traditional solid electrodes, and make easier the development of multiplexed chemical-sensors and bio-sensors for field analysis.

» Thick-film carbon dual-electrodes performance



Successive cyclic voltammograms for 1 mM $K_4Fe(CN)_6$ in 0.1 M H_2SO_4 at thick-film carbon dual-electrode (ED-D2PE-C). $v = 50$ mV/s, $n = 20$ (10+10), RSD = 2%



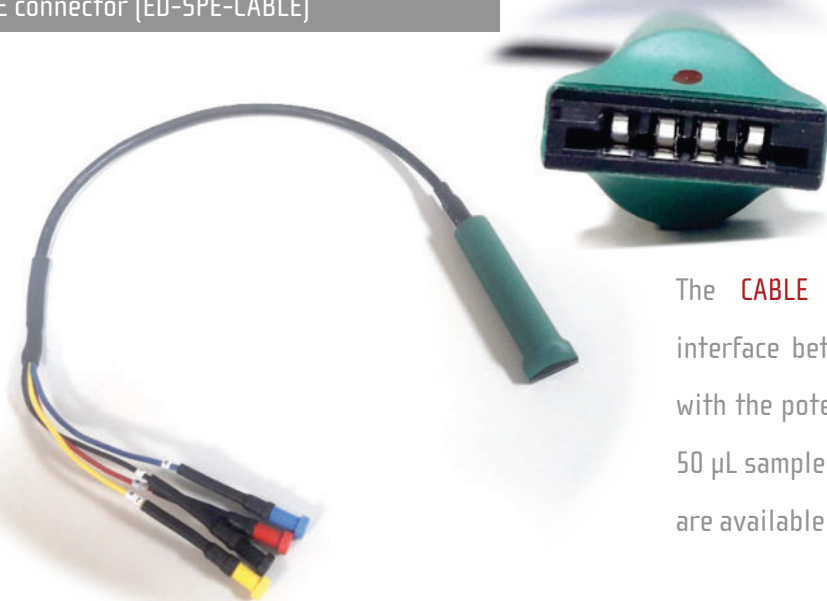
Successive cyclic voltammograms for 1 mM ferrocene methanol in 0.1 M H_2SO_4 at thick-film carbon dual-electrode (ED-D2PE-C). $v = 50$ mV/s, $n = 20$ (10+10), RSD = 2%



» Thick-film electrodes related accessories

Different **connectors** for interfacing the printed electrodes with any commercial potentiostat are also available at MicruX.

» CABLE connector (ED-SPE-CABLE)



The **CABLE connector** (*Ref. ED-SPE-CABLE*) provides an interface between the electrodes (up to four contact pads) with the potentiostat, enabling the use of microvolume (20 – 50 μ L sample drops) or dipping into a solution. The cable ends are available with **2 mm female or male bananas**.

Dimensions: 50 cm long

» BOX Connector (ED-SPE-BOX)



The small **BOX connector** (*Ref. ED-SPE-BOX*) provides an interface between the electrodes (up to four contact pads) with any kind of potentiostat, enabling the use of microvolume (20 – 50 μ L sample drops). The interface ends are available with **2 mm female bananas**.

Dimensions: L58 x W40 x H15 mm

Draw a smile on your research :-)



!
micrux
TECHNOLOGIES

Mora-Garay Industrial Park
Juan de la Cierva, 2C, Bldg. # 6
33211 · Gijón (Asturias) · SPAIN

Phone/FAX: +34 984151019

E-mail: info@micruxfluidic.com
Web: www.micruxfluidic.com

Smart Microfluidic and Electrochemical
olutions for Research Science

