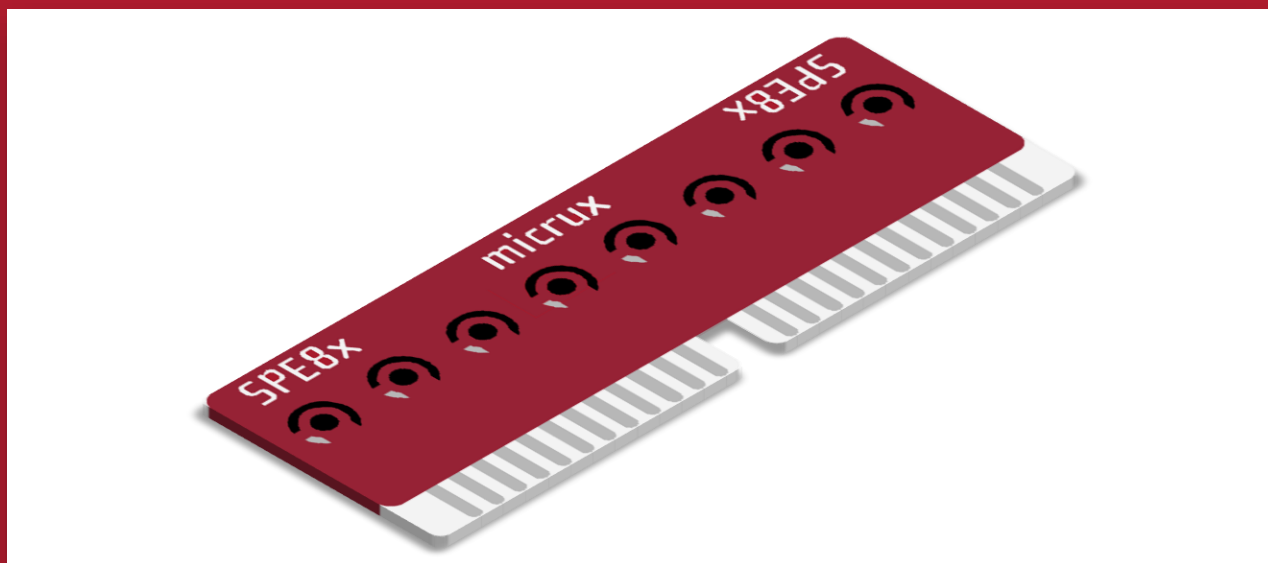




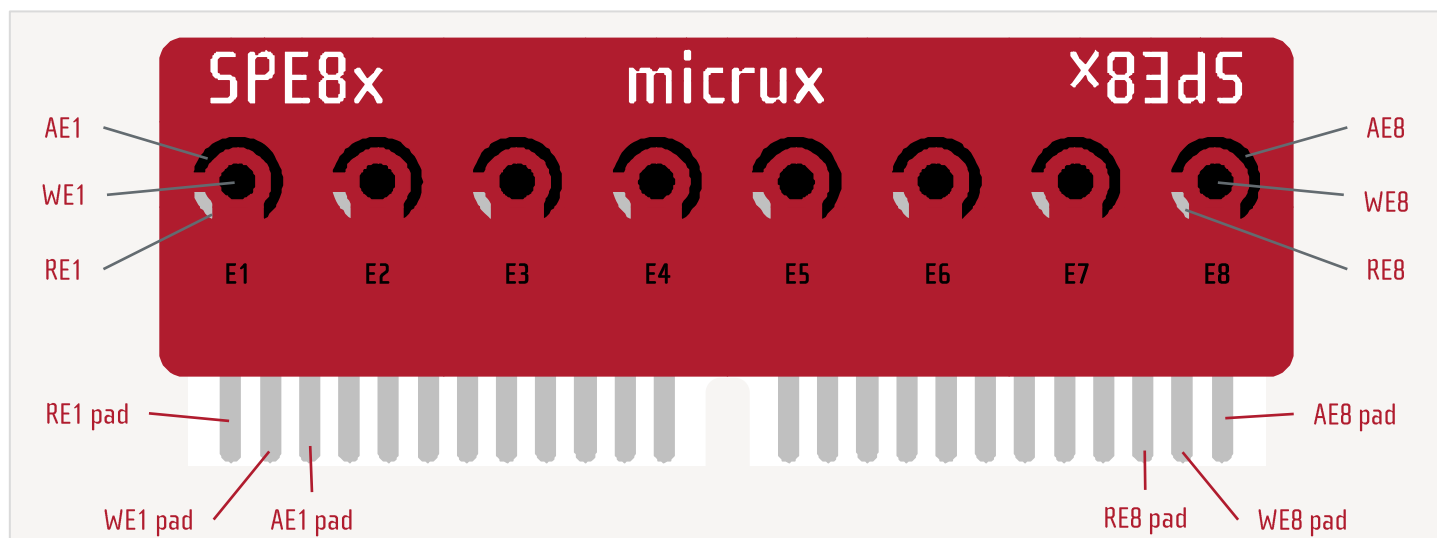
SPE8X THICK-FILM CARBON MULTIELECTRODES

8-cell screen-printed electrodes for parallel electrochemical measurements

Thick-film carbon multielectrodes (ED-SPE8x-C) are manufactured using printing technologies on a flexible PET substrate offering high mechanical and chemical resistance and integrate eight independent electrochemical cells. These low-cost, disposable multielectrodes enable multiplexed analysis using small sample volume.

» THICK-FILM MULTIELECTRODE FEATURES

Printing technologies enable the manufacture of planar multielectrodes suitable for working with microdrop samples.



SPE8x — eight independent electrochemical cells (E1–E8) on a single flexible strip

» TECHNICAL SPECIFICATIONS

External dimensions	73.0 × 27.5 mm
Substrate	PET (white)
Substrate thickness	250 µm
WE dimensions	2.5 mm Ø (4.9 mm² per WE)
Sample volume	15 – 40 µL per cell
Working electrodes (8× WE)	Carbon (High-performance or Low-cost)
Reference electrode (RE)	Silver
Auxiliary electrode (AE)	Carbon

» THICK-FILM MULTIELECTRODE PACKS

Thick-film SPE8x electrodes are supplied in packs of 8 units. They should be stored at room temperature in a dry place.

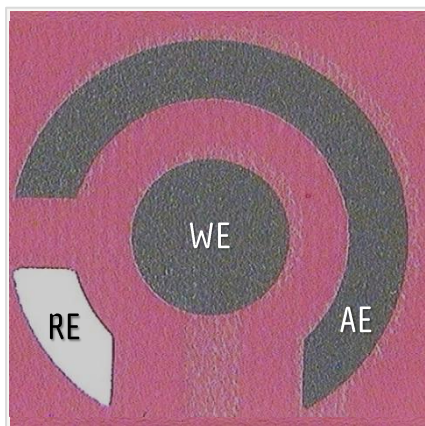
» THICK-FILM MULTIELECTRODES — ORDERING

Thick-film multielectrodes (SPE8x) are available in different carbon materials.

SKU	Substrate	WE material	RE material	AE material
ED-SPE8x-C10	PET	Carbon-HP	Silver	Carbon
ED-SPE8x-C20	PET	Carbon-LC	Silver	Carbon

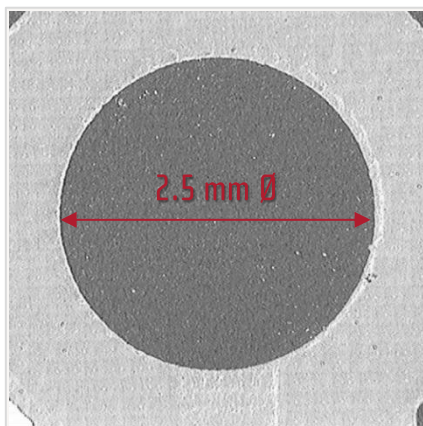
» ELECTROCHEMICAL CELL

The thick-film carbon multielectrodes (*Ref. ED-SPE8x-C*) integrate **eight** independent electrochemical cells, each consisting of a working electrode (**WE**), a reference electrode (**RE**) and an auxiliary electrode (**AE**).



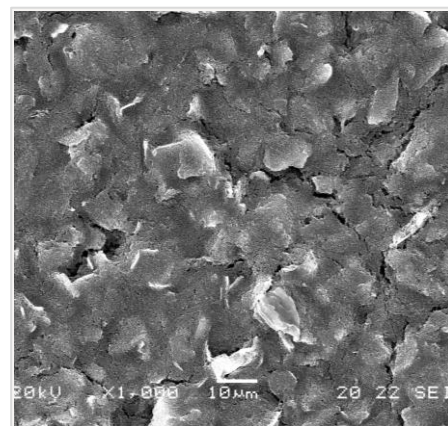
Cell schematic

WE (2.5 mm Ø) · AE · RE



Optical microscope image

Working electrode, top view



SEM image (C10)

Carbon working electrode surface

The **eight-cell configuration** enables parallel electrochemical measurements on a single flexible substrate, facilitating the development of **multiplexed chemical sensors** and **biosensors**.

8

Independent cells per strip

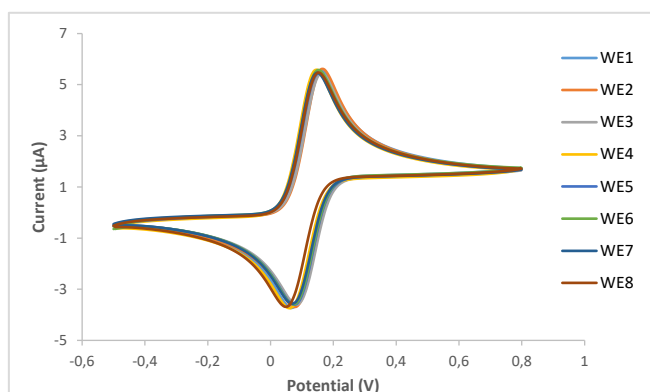
15 – 40 µL

Sample volume per cell

PET

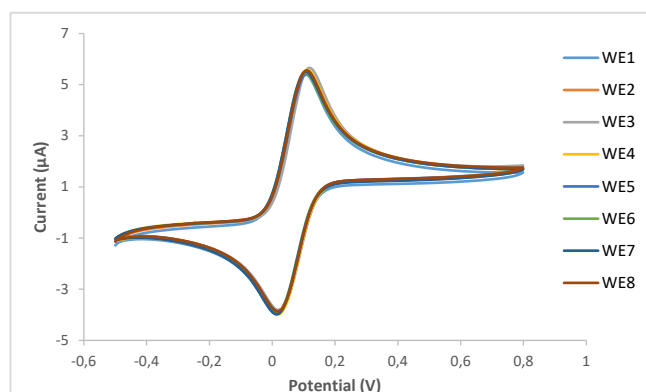
Flexible substrate – 250 µm

» ELECTROCHEMICAL PERFORMANCE



Thick-film carbon-HP multielectrode (ED-SPE8x-C10)

Cyclic voltammograms for 1 mM ferrocene methanol in 0.1 M H_2SO_4
Scan rate: 50 mV/s · n = 8 · **RSD = 2%**



Thick-film carbon-LC multielectrode (ED-SPE8x-C20)

Cyclic voltammograms for 1 mM ferrocene methanol in 0.1 M H_2SO_4
Scan rate: 50 mV/s · n = 8 · **RSD = 3%**

» THICK-FILM MULTIELECTRODE ACCESSORIES

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

» MULTI-BOX CONNECTOR (ED-SPE8x-BOX)



The **Multi-BOX connector** (Ref. **ED-SPE8x-BOX**) connects the multielectrode chips to any commercial potentiostat, enabling microvolume operation (15 – 40 μ L sample drops *per cell*).

The **Multi-BOX connector** is supplied with eight cables, with three electrical connections *per cable*. Two terminal configurations are available:

- 2-mm female banana plugs, supplied with male adapters.
- 2-mm male banana plugs, supplied with crocodile clips.

A dedicated tool is also included for securing the SPE8x multielectrode in the connector.

Dimensions: **L170 × W65 × H25 mm**

BIG IDEAS
SMALL PLATFORMS



ELECTROCHEMICAL SENSING SOLUTIONS

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