

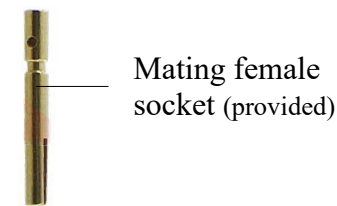
## Carbon fiber microelectrodes for electrochemical and biosensor applications

The carbon fibers are encapsulated in thick borosilicate glass for durable mechanical support and electrical insulation. A unique hermetic seal between the carbon core and the glass sheathing allows usage of these electrodes in any environment. Microelectrodes are manufactured using two sizes and types of carbon fibers as shown. Standard lengths are described; other lengths are available on special orders. Mating female sockets are provided or use our adaptors M2334 for BNC-input (Dagan, np) or M2335 for HLU-type (Axon) headstages.

### Tips of microelectrodes

Part no. CFE34200

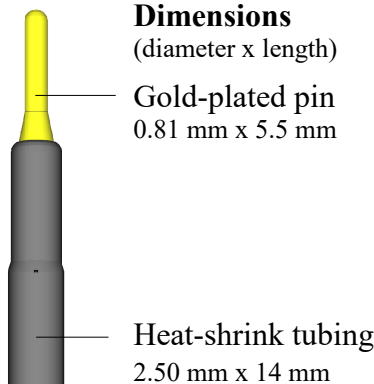
Part no. CFE10100



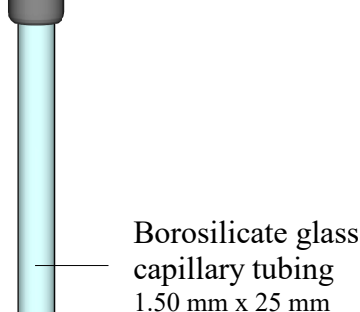
Mating female socket (provided)

**Dimensions**  
(diameter x length)

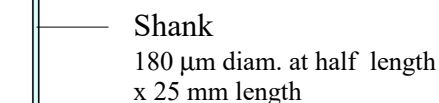
Gold-plated pin  
0.81 mm x 5.5 mm



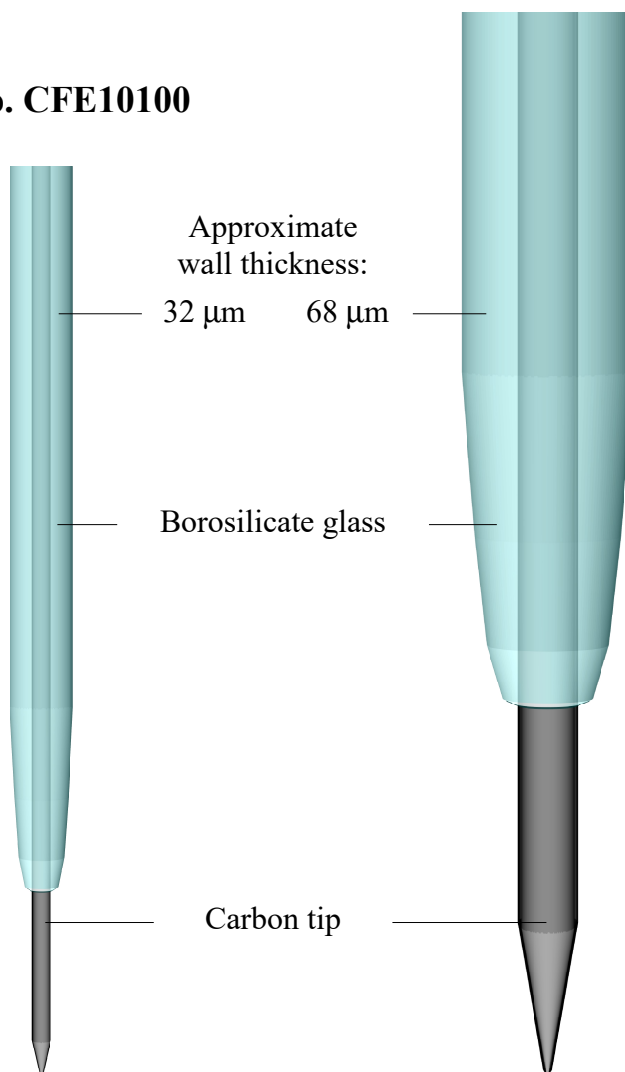
Heat-shrink tubing  
2.50 mm x 14 mm



Borosilicate glass capillary tubing  
1.50 mm x 25 mm



Shank  
180  $\mu\text{m}$  diam. at half length  
x 25 mm length



Approximate wall thickness:

32  $\mu\text{m}$     68  $\mu\text{m}$

Borosilicate glass

Carbon tip

100  $\mu\text{m}$

### Technical data:

Response to 1 $\mu\text{M}$  dopamine: 38 nA (FSCV, 300 V/s)  
Diameter of carbon fiber: 10  $\mu\text{m}$   
Exposed length: 100  $\mu\text{m}$   
Active area, approx.: 2 850  $\mu\text{m}^2$   
Impedance @ 1KHz: 150 K $\Omega$   
Fiber type: Pitch-type  
Autoclavable to: 140  $^{\circ}\text{C}$

420 nA (FSCV, 300 V/s)  
34  $\mu\text{m}$   
200  $\mu\text{m}$   
18 500  $\mu\text{m}^2$   
47 K $\Omega$   
Glassy carbon  
140  $^{\circ}\text{C}$