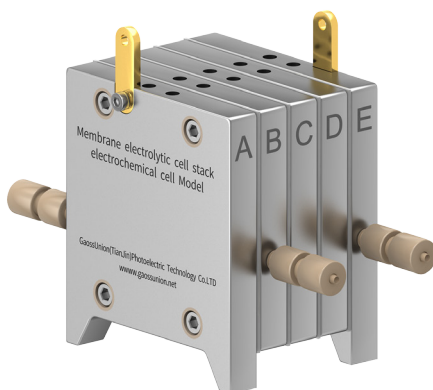
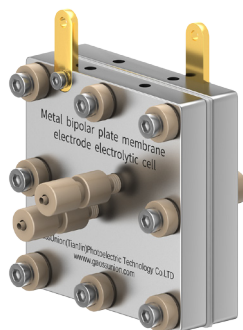
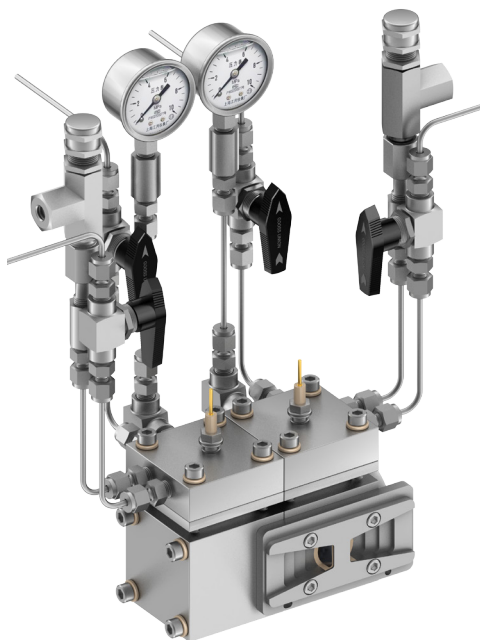


Electrochemical Product Catalogue

Electrolytic Cells Electrode



COMPANY

Company Profile Gaoss Union was established in 2008 in East Lake High-Tech Development Zone of Wuhan, known as "Optics Valley of China".

Ever since its establishment, Gaoss Union has devoted to research, development, production, sales and service of electrochemical products. It is a scientific and technological company with research of electrochemical reactions as well as design and manufacture of electrochemical devices as its major businesses.

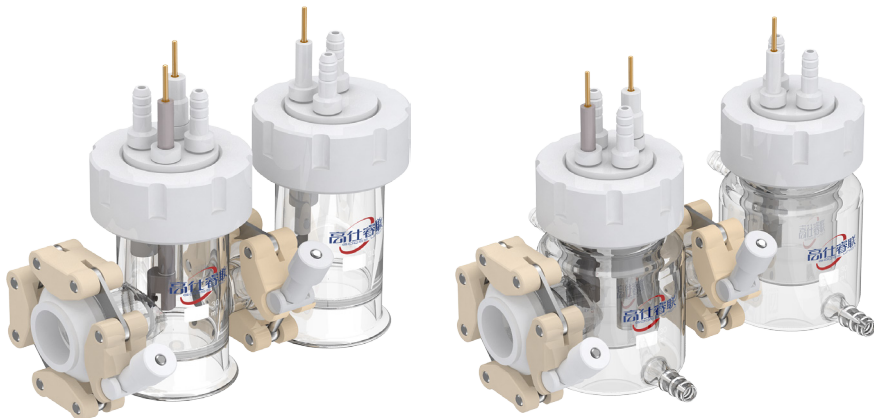
Gaoss Union manufacture and sell three-electrode, electrolytic cells, flow cells, characterization cells, electrochemical materials, etc. required for electrochemical experiments, as well as provide customized electrode and electrochemical device services.

Welcome to inquire.



Single Window Photocatalytic Electrochemical Cell Series

H-Type Photoelectrochemical Cell (Single Optical Window, Relatively Sealed) Model: C023-1



- The cell is made of high purity borosilicate glass.
- The optical window of the electrolyte cell is made of quartz, with a transmittance >95%.
- The quartz window is easily replaceable and securely sealed using a proprietary designed clamp.
- Electrodes need to be the longer type based on dimension of the cell.
- The single-layer cell body has a top-drop vial design, which effectively reduces the dead volume
- This cell is often used in a 3-electrode system, with a customizable volume of 30ml to 500ml.
- The cell is a relatively sealed system. The cathode chamber and the anode chamber are separated by an ion exchange membrane. The two chambers are connected by a flange with chain-type clamp, which is convenient for assembling and disassembling. The reference electrode and the working electrode are in the same chamber, which effectively reduces the reduction in R value.
- The compatible electrodes of the electrolytic cell need to be purchased separately.
- The top electrodes holder is 360-degree rotatable, made of PTFE, allowing precise alignment of electrodes to the optical window, then sealed by tightening the outer cover made of POM material.
- Electrode area seals via O-rings and screws.

Volume (ml)		Single layer	Jacketed
30mL	150mL		
50mL	200mL		
100mL	250mL		

All sizes listed are common sizes, can be customized according to requirements.

Single Window Photocatalytic Electrochemical Cell Series

H-Type Photoelectrochemical Cell (Single Optical Window, Absolutely Sealed)
Model: C023-2



- The optical window of the cell is made of high purity quartz, with a transmittance >95%.
- The sealed cell is vacuumable (below -100Kpa) and can be slightly pressurized up to 0.5MPa for single cell. **Jacketed cells cannot be used for pressurization!** The sealed cell is equipped with valves and gas connectors; inlet direction is through the aeration device valve.
- The working electrode, counter electrode and reference electrode of the cell need to be matched in dimension, inserted through the cover for absolute sealing. The compatible electrodes of the electrolytic cell need to be purchased separately.
- The quartz window is easily replaceable and securely sealed using a locking ring.
- The cathode chamber and the anode chamber are separated by an ion exchange membrane. The two chambers are connected by a flange with chain-type clamp, which is convenient for assembling and disassembling. The reference electrode and the working electrode are in the same chamber, which effectively reduces the reduction in R value.
- The top electrodes holder is 360-degree rotatable, made of PTFE, allowing precise alignment of electrodes to the optical window, then sealed by tightening the outer cover made of POM material.
- The cell is equipped with a bubbler that can aerate below the liquid surface, creating different atmospheres for various experiments. For example, straight bubbler is used for carbon reduction, and L-type bubbler is used for nitrogen reduction.
- The cell comes in both single-layer and jacket form. The jacket layer allows a constant temperature through water circulation on top of the single layer design.
- The electrolyte cell comes in both single-layer and jacket form. The jacket layer allows a constant temperature through water circulation on top of the single layer design.

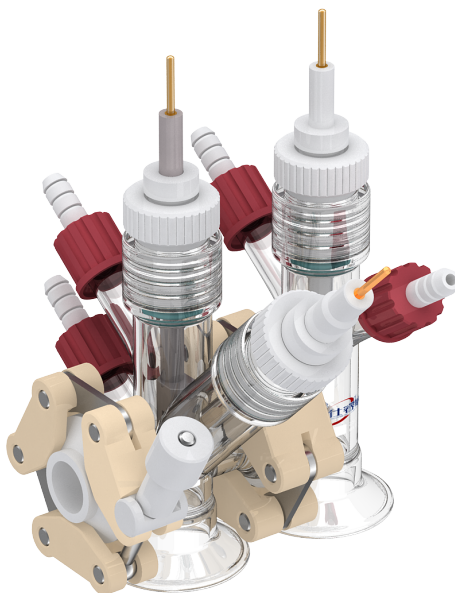
Volume (ml)		Single layer	Jacketed
30mL	150mL		
50mL	200mL		
100mL	250mL		

All sizes listed are common sizes, can be customized according to requirements.

Committed to the electrochemical equipment research&development, and manufacturing

Single Window Photocatalytic Electrochemical Cell Series

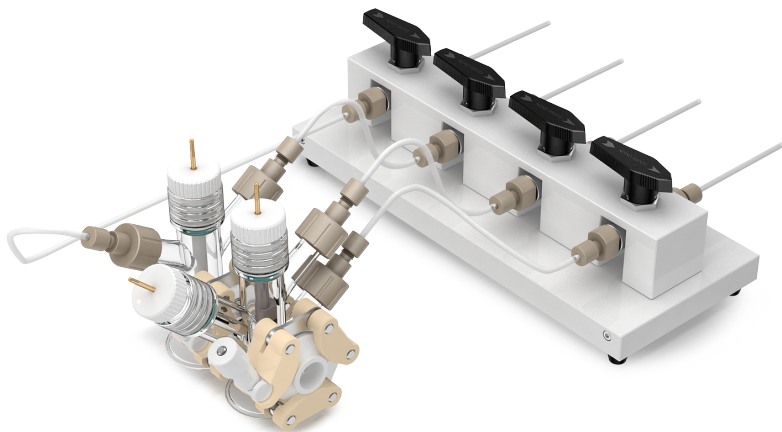
H-Type Photoelectrochemical Cell (Single Optical Window, Absolutely Sealed)
Model: C023-2



- The cell is made of high purity borosilicate glass.
- The optical window of the cell is made of quartz, with a transmittance >95%.
- The quartz window is easily replaceable and securely sealed using a proprietary designed clamp.
- The compatible electrodes of the electrolytic cell need to be purchased separately.
- The single-layer cell body has a top-drop vial design, which effectively reduces the dead volume
- This cell comes in a 3-electrode system, the single cell volume can be as low as 10ml
- The cathode chamber and the anode chamber are separated by an ion exchange membrane. The two chambers are connected by a flange with chain-type clamp, which is convenient for assembling and disassembling. The reference electrode and the working electrode are in the same chamber, which effectively reduces the reduction in R value.
- The top electrodes holder is 360-degree rotatable, made of PTFE, allowing precise alignment of electrodes to the optical window, then sealed by tightening the outer cover made of POM material.
- Electrode area seals via O-rings and screws.
- **Jacket type is not available for small volume cells.**

Single Window Photocatalytic Electrochemical Cell Series

Small Volume Replaceable Membrane Photoelectrochemical Cell (Single Optical Window, Absolutely Sealed) Model: C023-10-2



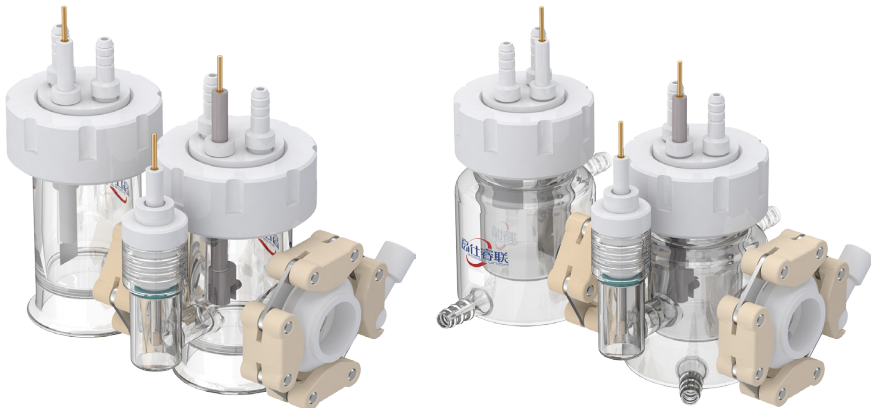
- The optical window of the cell is made of quartz, with a transmittance >95%.
- The quartz windows are easily replaceable and securely sealed using a proprietary designed clamp attached to the cell body, can be assembled and disassembled quickly and conveniently.
- The working electrode, counter electrode and reference electrode of the electrolytic cell must be matched as required.
- The compatible electrodes of the electrolytic cell need to be purchased separately.
- The cell body of the electrolytic cell has an overhead layer design, which effectively breaks the solution hiding.
- This electrolytic cell is often used in a 3-electrode system, and the single cell volume is 10ml.
- The cathodic chamber and the anode chamber of the electrolytic cell are separated by an ion exchange membrane (prepared by the user), and the two chambers adopt a chain. The sealed connection is convenient to replace the diaphragm, and the reference electrode and the working electrode are in the same room, which can effectively reduce the resistivity (R drop).
- The electrodes of the electrolytic cell are plugged in and out through the earphone jack on the PTFE cover, so that the electrode system is absolutely sealed.

Jacket type is not available for small volume cells.

The default of air inlet and outlet are red screw cap with pagoda connector (For silicone tubing with ID6mm). PEEK quick connectors (for PTFE tubing with OD3mm, shown in the product image above) can be purchased separately.

Single Window Photocatalytic Electrochemical Cell Series

3H Type Photoelectrochemical Cell (Single Optical Window, Relatively Sealed)
Model: C025-1



- The cell is made of high purity borosilicate glass. The optical window of the cell is made of quartz, with a transmittance >95%.
- Easily replaceable, securely sealed quartz window with proprietary clamp for quick assembly and disassembly. The cell separates the reference electrode from the working electrode chamber, connected by Luggin capillary for reduction in R value. The aperture of the capillary is less than 0.2mm. Agar can be added inside the capillary to reduce the electrolyte flow rate.
- The reference electrode chamber of the cell is sealed with internal threads. Effective sealing is essential during experiments to prevent leakage due to capillary effects between the reference electrode chamber and the working electrode chamber. The anode and cathode chambers of the cell are isolated by an ion exchange membrane and sealed with a chain clamp, facilitating membrane replacement.
- The compatible electrodes of the electrolytic cell need to be purchased separately.
- The volume of the electrolytic cell ranges from 30ml to 500ml and can also be customized according to requirements.
- The top electrodes holder is 360-degree rotatable, made of PTFE, allowing precise alignment of electrodes with the channels (generally parallel to the membrane), then sealed by tightening the outer cover made of POM material.
- The cell is equipped with a bubbler that can ventilate under the liquid surface, and different shapes of bubblers are selected for the atmosphere according to different experiments. For example, straight bubbler is used for carbon reduction, and L-type bubbler is used for nitrogen reduction.

Volume (ml)		Volume (ml)	
30mL		150mL	Single layer Jacketed
50mL		200mL	
100mL		250mL	

Single Window Photocatalytic Electrochemical Cell Series

3H Type Photoelectrochemical Cell (Single Optical Window, Absolutely Sealed)
Model: C025-2



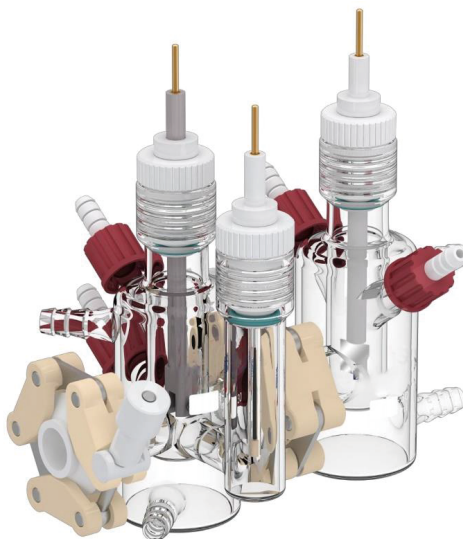
- The optical window of the cell is made of quartz, with a transmittance >95%. It's easily replaceable and securely sealed with a unique clamp design, allowing quick assembly and disassembly.
- Commonly used in a 3-electrode setup, customizable volume: 30ml to 500ml (min. 30ml). Available in single-layer or jacketed form for precise temperature control through water circulation.
- The sealed cell is equipped with valves and gas connectors, which is vacuumable (below -100Kpa) and can be slightly pressurized up to 0.5MPa for single cell. Jacketed cells cannot be used for pressurization!
- The working electrode, counter electrode and reference electrode of the cell need to be matched in dimension, inserted through the cover for absolute sealing.
- The compatible electrodes of the electrolytic cell need to be purchased separately.
- Cell isolates reference electrode via a Luggin capillary (aperture < 0.2mm) to reduce R value. Agar can be added for lower electrolyte flow

Volume (ml)	Volume (ml)	Single layer	Jacketed
30mL	150mL		
50mL	200mL		
100mL	250mL		

All sizes listed are common sizes, can be customized according to requirements.

Single Window Photocatalytic Electrochemical Cell Series

Small Volume 3H Type Photoelectrochemical Cell (Single Optical Window, Relatively Sealed) Model: C025-10



- The cell is made of high purity borosilicate glass.
- The cell's quartz optical window has >95% light transmittance. It's easily replaceable and securely sealed with a unique clamp design, allowing quick assembly and disassembly.
- The compatible electrodes of the electrolytic cell need to be purchased separately.
- The single-layer cell body has a top-drop vial design, which effectively reduces the dead volume
- This cell comes in a 3-electrode system, the single cell volume is 10ml.
- The cathode chamber and the anode chamber are separated by an ion exchange membrane. The two chambers are connected by a flange with chain-type clamp, which is convenient for assembling and disassembling.
- Electrode area seals via O-rings and screw caps.
- Cell isolates reference electrode via a Luggin capillary (aperture < 0.2mm) to reduce R value. Agar can be added for lower electrolyte flow.
- The cell is equipped with a bubbler that can ventilate under the liquid surface, and different shapes of bubblers are selected for the atmosphere according to different experiments. For example, straight bubbler is used for carbon reduction, and L-type bubbler is used for nitrogen reduction.

Jacket type is not available for small volume cells.