

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231	Калининград (4012)72-03-81	Омск (3812)21-46-40	Сыктывкар (8212)25-95-17
Ангарск (3955)60-70-56	Калуга (4842)92-23-67	Орел (4862)44-53-42	Тамбов (4752)50-40-97
Архангельск (8182)63-90-72	Кемерово (3842)65-04-62	Оренбург (3532)37-68-04	Тверь (4822)63-31-35
Астрахань (8512)99-46-04	Киров (8332)68-02-04	Пенза (8412)22-31-16	Тольятти (8482)63-91-07
Барнаул (3852)73-04-60	Коломна (4966)23-41-49	Пермь (342)205-81-47	Томск (3822)98-41-53
Белгород (4722)40-23-64	Кострома (4942)77-07-48	Петрозаводск (8142)55-98-37	Тула (4872)33-79-87
Благовещенск (4162)22-76-07	Краснодар (861)203-40-90	Псков (8112)59-10-37	Тюмень (3452)66-21-18
Брянск (4832)59-03-52	Красноярск (391)204-63-61	Ростов-на-Дону (863)308-18-15	Улан-Удэ (3012)59-97-51
Владивосток (423)249-28-31	Курган (3522)50-90-47	Рязань (4912)46-61-64	Ульяновск (8422)24-23-59
Владикавказ (8672)28-90-48	Курск (4712)77-13-04	Самара (846)206-03-16	Уфа (347)229-48-12
Владимир (4922)49-43-18	Липецк (4742)52-20-81	Санкт-Петербург (812)309-46-40	Хабаровск (4212)92-98-04
Волгоград (844)278-03-48	Магнитогорск (3519)55-03-13	Саранск (8342)22-96-24	Чебоксары (8352)28-53-07
Вологда (8172)26-41-59	Москва (495)268-04-70	Саратов (845)249-38-78	Челябинск (351)202-03-61
Воронеж (473)204-51-73	Мурманск (8152)59-64-93	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Екатеринбург (343)384-55-89	Набережные Челны (8552)20-53-41	Симферополь (3652)67-13-56	Чита (3022)38-34-83
Иваново (4932)77-34-06	Нижний Новгород (831)429-08-12	Смоленск (4812)29-41-54	Якутск (4112)23-90-97
Ижевск (3412)26-03-58	Новокузнецк (3843)20-46-81	Сочи (862)225-72-31	Ярославль (4852)69-52-93
Иркутск (395)279-98-46	Новосибирск (383)227-86-73	Ставрополь (8652)20-65-13	
Казань (843)206-01-48	Ноябрьск (3496)41-32-12	Сургут (3462)77-98-35	

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Мембранные электроды для электростанций на топливных элементах МЕА (ССМ), МЕА (ССМ, GDL), МЕА Техническое описание

HIGH-PERFORMANCE MEMBRANE ELECTRODE ASSEMBLIES FOR FUEL CELL

FUJIAN YANAN POWER GROUP company has been engaged in developing fuel cell technology and products since 2010, making Yanan one of China's first enterprises in these areas. We have conducted successful R&D through the National High-Technology Research and Development Program of China (863 programs) and the National Key Research and Development Program of China. Yanan possesses advanced technology for membrane electrode assemblies, fuel cell stacks, and fuel cell engines and has successfully developed a fuel cell power supply system currently sold in numerous countries and regions around the world. Our newly developed 30kW fuel cell engine has passed a 2,000-hour durability test.

Yanan has developed an advanced MEA preparation process

using state-of-the-art materials. Our MEA has the following notable characteristics:

1. High power density: a maximum power density of up to $117\text{W}/\text{cm}^2$ at 0.6V
2. Low platinum loading: $0.40\text{mg Pt}/\text{cm}^2$
3. Low-humidity operation, at 30% humidity or less
4. Excellent stability/durability, passing a 2,000-hour durability test in a 30kW stack
5. The MEA is solidly assembled, with excellent water and heat tolerance due to the use of an adhesive film frame that tolerates high temperatures, and a water- and heat-resistant adhesive. No adhesive failure or deformation occurred after 2,000 hours of operation.

Yanan offers three different levels of MEA products, tailored to the customer's requirements:



THREE-LAYER MEA (CCM)

The three-layer MEA, or catalyst-coated membrane (CCM), is a semi-finished product comprising a cathode catalyst and anode catalyst coated on a proton exchange membrane. The customer can configure the gas diffusion layer (GDL) themselves and then assemble everything into a completed MEA.



SEVEN LAYER MEA (CCM + GDL)

The seven-layer MEA (CCM + GDL) is equipped with a GDL in the anode and cathode on the both side of the CCM. Customers can configure the sub-gasket themselves and then assemble everything into a complete MEA.



SEVEN LAYER MEA

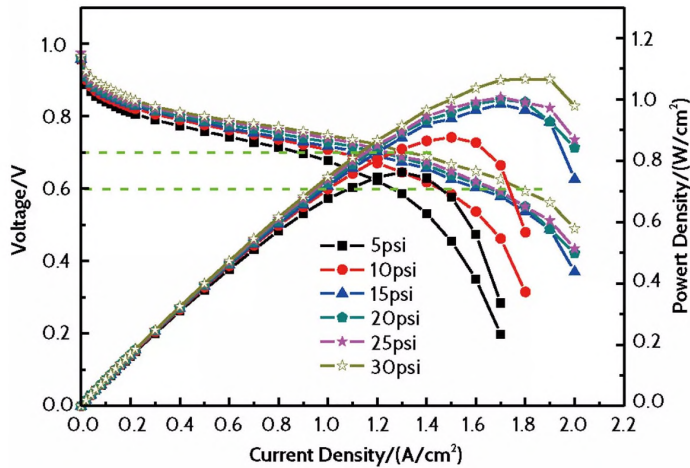
The second type of seven-layer MEA is configured in a frame (sub-gasket) and completely assembled. The frame can be customized to meet to the user's requirements.

BASIC MEA SPECIFICATIONS AND MEASUREMENT CONDITIONS:

Active area: 5cm^2 Total Pt loading: $0.4\text{mg}/\text{cm}^2$ Gas type: hydrogen/air

MEA PERFORMANCE IN A SINGLE CELL

AT DIFFERENT BACK PRESSURES



Test condition:

Cell temperature: 70°C , $\text{H}_2/\text{air}100\%\text{RH}$

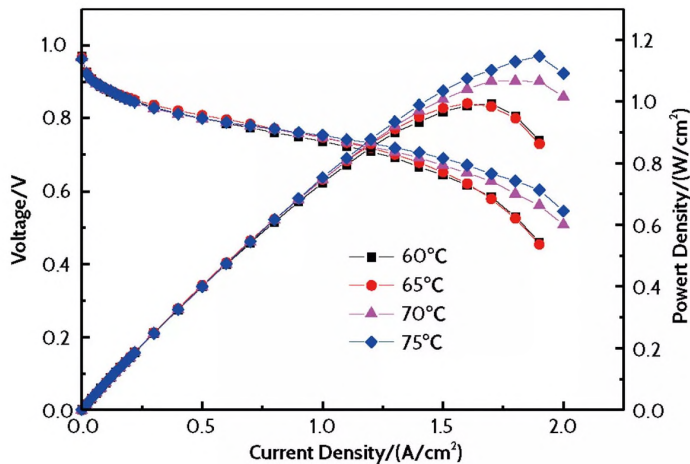
At a cell temperature of 70°C , a gas back pressure of 30psi, and 100% RH, the performance can reach:

$0.5\text{A}/\text{cm}^2$ at 0.8V

$1.35\text{A}/\text{cm}^2$ at 0.7V

$1.75\text{A}/\text{cm}^2$ at 0.6V

AT VARIOUS CELL TEMPERATURES



Test condition:

H_2/air back pressure 30psi, 100%RH

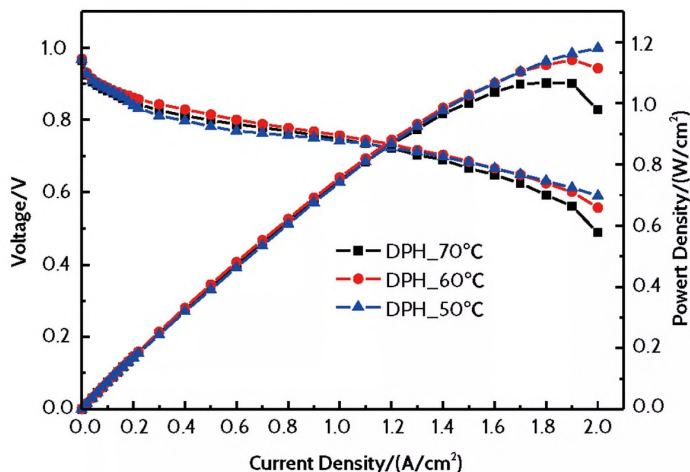
At a cell temperature of 75°C , a gas back pressure of 30psi, and 100% RH, the performance can reach:

$0.5\text{A}/\text{cm}^2$ at 0.8V

$1.4\text{A}/\text{cm}^2$ at 0.7V

$1.9\text{A}/\text{cm}^2$ at 0.6V

AT DIFFERENT HUMIDITIES



Test condition:

70°C , H_2/air back pressure of 30psi

At a cell temperature of 70°C , a gas back pressure of 30psi, and a humidification temperature of 50°C , the performance can reach:

$0.3\text{A}/\text{cm}^2$ at 0.8V

$1.4\text{A}/\text{cm}^2$ at 0.7V

$1.95\text{A}/\text{cm}^2$ at 0.6V

Under low-humidity conditions, the maximum power density is $1.17\text{W}/\text{cm}^2$ at 0.6V .

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