Membrane Electrode Assembly

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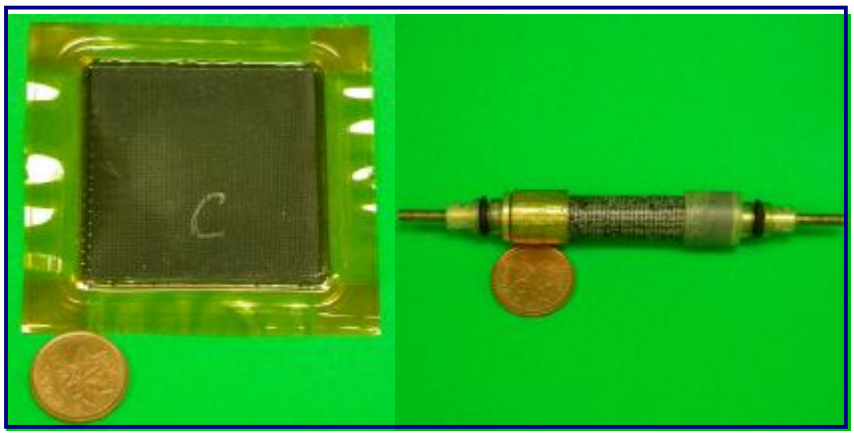
Fuel Cell Ready to Use



Flat MEA **Cylindrical/tube MEA**

Performance of complete fuel cell:

Nominal Current Density, mA/cm^2: >100
Maximum Current Density, mA/cm^2: >200

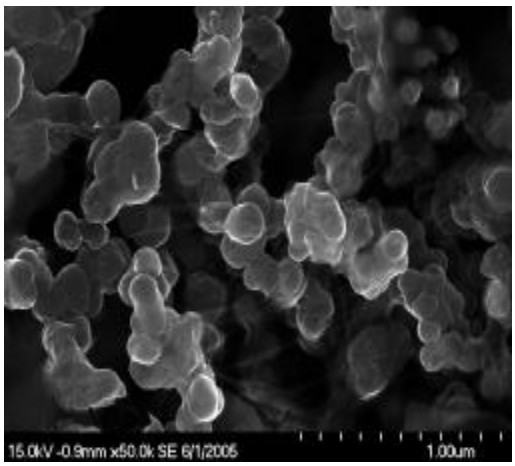
Operating Environment:

	Oxidizer	**Air**, CO_2 none scrubbed, breathing (no pressurized);
	Reducer	**Hydrogen,** dry@3PSI and 1.0 stoichiometry
	Temperature	30-40”C
Physical Dimensions	**Width, cm**	Up to 50
	Length, cm	Unlimited can be shipped in 100 meter rolls.
	Thickness, mm	100-750

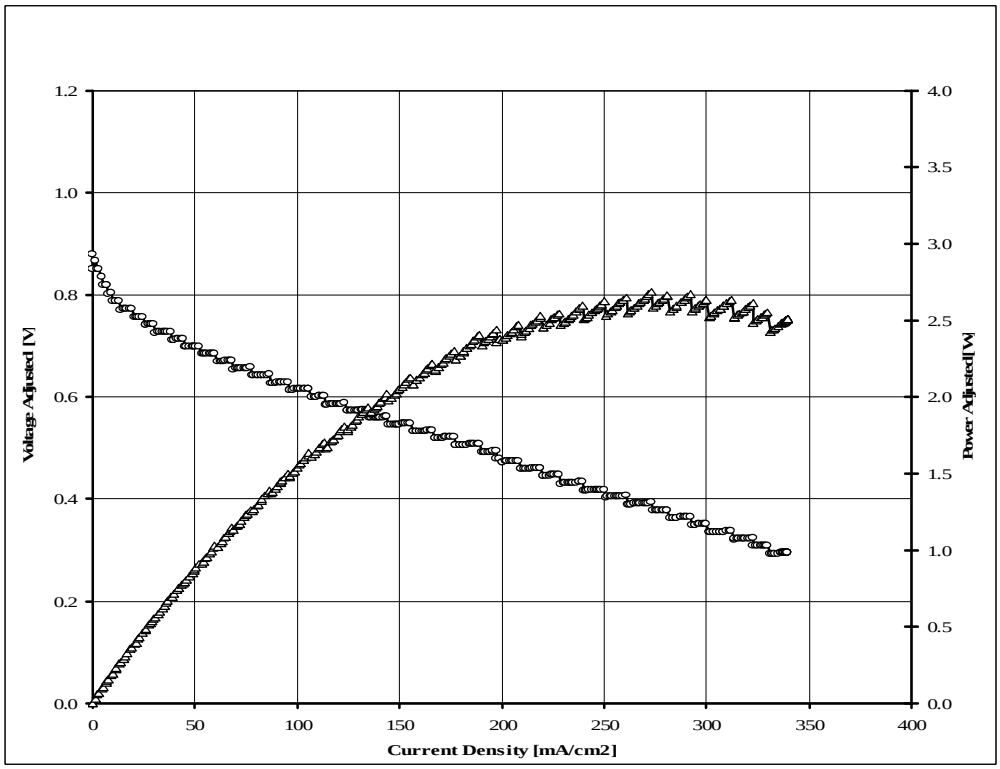
Altek Fuel Group introduces proprietary MEAs based on uniquely structured catalyzed GDEs.

Altek has developed a way to mass produce low-cost MEAs. The core of the technology is an extruded all in one design that avoids costly current collector/flow field plates, while at the same time developing a final product with minimal man-hours. This has led to the development of new MEA assemblies using a new catalyst and improved distribution of catalyst particles. The design of Altek’s MEA has integrated-structures with optimal porosity, hydrophilic and hydrophobic layering with current collectors encapsulated into a low electrical resistivity structure
As stated above, PEMFCs with Altek’s MEAs do not require heavy end-plates in the fuel cell stack nor do they require bipolar plates between cells for current collection. They also do not require high pressure contact between current collectors and the carbon structure.
The Price is substantially low compared to other companies. The basic 10x10 cm MEA produced by other companies has an average price of about two hundreds dollars. Altek’s MEA product, with the same performance or better, is delivered for only a fraction of that price.

Microstructure of MEA/GDE’s cross section.



Voltage and Power vs. Current Density of AFG's MEA on base of catalyzed GDEs



Obtained by 25 cm^2 standard fuel cell
Test conditions: air-breathing, hydrogen-dry, pressure 3psi; flow @ 1.0 stoichiometry, ambient temperature