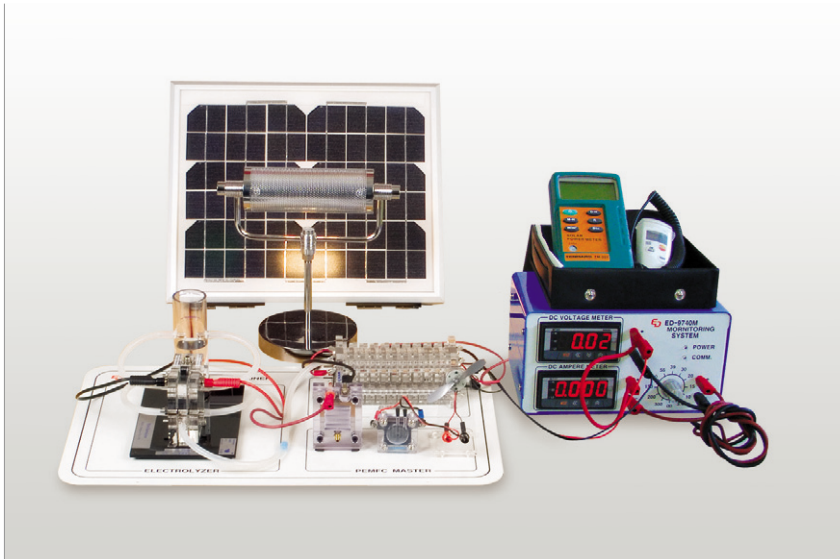


• New & Renewable Energy

FUEL CELL TRAINER (CASE TYPE)

New
ED-9740

- Understand the conception and principal of fuel cell generation
- Fuel cell generation using photovoltaic
- Complete disassembly and assembly of the fuel cell
- Current and voltage measurement for PEM Fuel Cell Stack according to each of Cell
- Power production experiment using PEM Fuel cell
- Modularized of the processes covering electrical dissolution of water and drive of fuel cell
- Experiment on various types of load
- PEMFC(Hydrogen) generation experiment
- Testing of load for maximum four fuel cell at the same time
- Monitoring through LabVIEW program



> EXPERIMENTS

- Experiment on Photovoltaic Generation
 - » Solar cell generation experiment according to luminance
 - » Solar cell generation experiment according to angle
 - » Experiment on characteristic curve solar cell IV
 - » Experiment (Motor, Lamp, Resistor) according to solar cell Load
- Experiment on Fuel Cell Generation
 - » Understand the conception and principal of fuel cell generation
 - » Hydrogen electrical dissolution experiment
 - » Experiment the principal for Hydrogen Generation
 - » Experiment characteristic Load of PEMFC Cell (Motor, Lamp, Resistor)
 - » Experiment characteristic Load of PEMFC Stack (Motor, Lamp, Resistor)
 - » Experiment changed power which is created from each of cell
 - » PEMFC cell serial and parallel experiment
 - » Experiment on characteristic curve IV of PEMFC Stack
 - » Experiment on disassembly and assembly of PEMFC Cell

> CONFIGURATION

- Solar Module : 1ea
- Halogen Lamp : 1ea
- Dimmer : 1ea
- Solar H₂/Air PEMFC Stack(PEM Fuel Cellx10) : 1ea
- PEM Fuel Cell : 2 ea(Serial and parallel experiment)
- H₂/Air Electrolyzer : 1ea
- Adjust Resistor / Electric Load Meter : 1ea
- LED Lamp Load : 1ea
- Motor Load : 1ea
- Insolation Meter : 1ea
- Infrared Thermometer : 1ea

FUEL CELL TRAINER (CASE TYPE)

ED-9740

> SPECIFICATIONS

- **Solar Cell**
 - » Max Operation Power : 10W
 - » Open Voltage : 21.8V
 - » Short Current : 0.64A
 - » Operation Voltage : 17.6V
 - » Operation Current : 0.64A
 - » Size : 310(W) x 18(H) x 368(D)mm
 - » Weight : 1.5kg
- **Halogen Lamp**
 - » Power 220V/300W
- **Dimmer**
 - » Using Voltage : AC220V
 - » Rated Capacity : 1kW
 - » Noise Terminals Voltage : below 7dB 45MHz~30MHz
 - » T Shape Dimension : 80(W) x 60(H) x 120(D)mm
- **H₂/Air Electrolyzer**
 - » Power : 15W at 4DC
 - » Allowable Voltage : 3.0~4.0V DC
 - » Allowable Current : 0~4.0A DC
 - » Electrolyzer Area : 16cm²
 - » Dimension : 180(W) x 140(H) x 120(D)mm
 - » Weight : 460g
- **H₂/Air PEMFC Stack(Fuel Cell x 10)**
 - » Power : 200mW per cell
 - » Power(10cells) : 2W
 - » Dimension : 175(W) x 60(H) x 70(D)mm
 - » Electrode area : 4cm² per cell
 - » Fuel : H₂/Air
 - » Weight : 430g
 - » Generated Voltage : 0.4~0.96 per cell
- **PEM Fuel Cell Master KIT**
 - » Power : 0.3~0.4W
 - » Size : 30 x 30mm
 - » Fuel : H₂/Air
- **Motor Pan(Load)**
 - » Operating Range : 1~6V
 - » Nominal : 3.0V
 - » No Load Speed : 3100rpm
 - » Dimension : 60(W) x 140(H) x 40(D)mm
 - » Weight : 45g
- **LED Lamp(Load)**
 - » LED Lamp(Load)Power : 0.8W
 - » Allowable Voltage : 5V
 - » Allowable Current : 0.15A
 - » LED : Per 15mA(8ea)
 - » Dimension : 60(W) x 140(H) x 40(D)mm
- **Monitoring system Adjust Resistor**
 - » Allowable Voltage : DC 0V~30V
 - » Allowable Current : 10~50W, 1A~5A
 - » Load Type : Analog Type
 - » Load Error : ± 1.2%
 - » Variable Resistance : 3.4~300Ω
- **Electric Voltage /Ampere Meter**
 - » Power Voltage : AC 100~240 50/60Hz
 - » Power Consumption : 5VA
 - » Max Range : -1999~9999
 - » RS-485 Comm Output : 1200/2400/4800/9600bps
 - » Protocol : Modbus
 - » Communication Method : Half-DUP Lex
 - » Communication with PC : USB

GENERAL CHARACTERISTICS

- Power : 10W
- Weight : 1.5kg
- Dimension : 658(W) x 245(H) x 447(D)mm

SOFTWARE



- Monitoring on basic of text & monitoring current and voltage graphic which is created from solar and full cell
- Save testing accumulated data, and possible printing
- Function to output the characteristic curve for current and voltage
- I-V graphic curve function

ACCESSORIES

- Cable (Power, USB, Circuit Connection) : 1set
- Manual : 1ea
- Program CD : 1ea