

CP-392E

Professional Fuel Cell Training System



INTRODUCTION

The CP-392E Professional Fuel Cell Training System is equipped with a 7W electrolyzer and 2.5W fuel cells in the dual structure. The Professional Fuel Cell Training System can measure the characteristics and generation quantity of fuel cells according to the hydrogen generation. It helps the user understand the power generation characteristics of parallel and serial connections and also learn energy conversion through the electrolysis practices in connection to solar energy generation.

EXPERIMENTAL CONTENTS

- Characteristic curves of the solar PV module
- Characteristic curves of the electrolyzer
- Faraday's Law
- Faraday efficiency and energy efficiency using the electrolyzer
- Characteristic curves of fuel cells in series / parallel connection
- Faraday efficiency and energy Efficiency of the fuel cell
- Faraday's 1st Law using fuel cell

FEATURES

- Capable of hybrid combination practices using a solar cell and a fuel cell
- Transparent acrylic PEM and unit fuel cells enhancing the training effectiveness
- Dual fuel cell structure enabling power generation practices related to power connection
- Easy acquisition of generating efficiency data through the digital voltmeter and ammeter

SPECIFICATIONS

Solar Cell Module	<ul style="list-style-type: none"> • Power output : 1.6W • Max. voltage : 2.0 VDC • Max. current : 1.2A
Electrolyzer	<ul style="list-style-type: none"> • Storage volume : 65 ml (hydrogen) / 65 ml (oxygen) • Hydrogen production rate : 28 ml/min (max.)
Fuel Cells	<ul style="list-style-type: none"> • Open circuit voltage (in series) : 1.9VDC • Maximum current (in parallel): 4A • Maximum power (in parallel): 2.5W
Load	<ul style="list-style-type: none"> • Resistance : 0.3 Ω / 0.5 Ω / 1 Ω / 3 Ω / 5 Ω / 10 Ω / 20 Ω / 50 Ω / 100 Ω / 500 Ω • Motor <ul style="list-style-type: none"> - Operating voltage: 0.2 ~ 3V - Current: 10 ~ 15mA • Lamp <ul style="list-style-type: none"> - Operating voltage: 1.5V - Current: 80mA
Digital Meter	<ul style="list-style-type: none"> • Voltmeter : 0 ~ 2V, 0 ~ 20V • Ammeter : 0 ~ 2A, 0 ~ 20A

STANDARD ACCESSORIES

- Power cord: 1ea
- Power adapter: 1ea
- User's guide CD : 1ea
- User's guide manual & experimental manual: 1set

OPTIONS

- 300W standing lamp : 1ea
- Distilled water (800ml) : 1ea