



VERITAS Engineering

Catalog

Of

Solar Power Generation Trainer

Solar Power Generation Trainer

Brand: FRAN

Model: FSGT-2401



Picture: Solar Power Generation Trainer

Technical Specification

Power supply

1. Input: 220V, 50 Hz AC
2. Output: 15V DC/1A

Solar Cell Base:

1. Solar Cell Modules

1. 4 pcs of mono crystalline silicon solar cell (6x12) cm
2. Each unit solar cell consists of:
 - a) Open circuit voltage (V_{oc}): 0.55V
 - b) Short circuit current (I_{sc}) : 2.3A
 - c) Max. Load voltage (V_{pm}) : 0.5V
 - d) Max. Load current (I_{pm}) : 2.2A
 - e) Max. Power (P_{pm}) : 1.1W
 - f) Efficiency (Eff): 15%

2. Dimmer

- a) Adjust the brightness of halogen lamp:
Input voltage- 220V AC,
Output voltage- 12V

3. Light Source

- a) Halogen lamp: 12V/50W
- b) Beam angle: 60°

Solar Cell Module:

1. Digital Multi meter x 2

- (a) DC voltage: 400mV, 4V, 40V, auto range Input resistance $\geq 10M \Omega$
- (b) AC voltage: 400mV, 4V, 40V, auto range input resistance $\geq 10M\Omega$
- (c) DC current: 400mA, 400mA, 10A, push button selector switch 10A range: 10A fuse protected mA/mA ranges: 0.5A fuse protected.
- (d) AC current: 400mA, 400mA, 10A, push button selector switch 10A range: 250V/10A fuse protected mA/mA ranges: 250V/0.5A fuse protected
- (e) Resistance: 400 Ω , 4K, 40K, 400K 4M, 40M, auto range
- (f) Diode test: 0-1.5V
- (g) Continuity: buzzer for the measured resistance < 30
- (h) Display: 3 3/4 digit LCD, Max. indication 3999

2. Energy Storage

- a. NiMH rechargeable battery: 1.2V/80mAh
- b. Super capacitor: 10F/2.7V

3. Load

- a. DC motor: 0.5V-6V, 10 mA
- b. Light bulb: 1.1V, 300mA
- c. Potentiometer: 100ohm, 10-turn

4. Inverter:

Input voltage: 2V DC

Output:

- a) Modified sine wave: 1Vpp 50 /60Hz,
- b) Square wave: 2Vpp 50Hz/60Hz

Accessories:

- 1 Training Manual
- 4mm safety banana Cable – 1 Set