

1KW GCPV SOLAR POWER TRAINER RE102

The 1KW GCPV Solar Power Trainer is a comprehensive educational platform designed for advanced learning in solar energy systems. It includes a 1-kilowatt solar panel setup, along with battery storage, inverters, and monitoring equipment, enabling users to explore the principles of off-grid and grid-tied photovoltaic (PV) systems. This trainer provides hands-on experience in solar energy generation, system design, and performance analysis. Ideal for students, engineers, and renewable energy professionals, it facilitates an in-depth understanding of solar technology and its applications in real-world scenarios.

Able to learn : -

- Identification of Solar PV module
- Characteristic curve of a solar PV module
- Understand the solar system diagram and connection
- Analysis, size and installation of solar PV module
- Temperature, tilt angle and isolation effect on solar power output
- Use of solar inverter
- PV power output depend on the angle of incidence of the light source
- Simulation power output of a solar PV module depending on the position of the sun
- Series & parallel connection of solar PV module
- DC to AC conversion by inverter
- DC and AC load testing

Required Item : -

- 1000W PV module training structure
- Solar training work table
- DC combiner set
- AC combiner set
- Grid Tie Solar Inverter
- 4mm DC Cable
- Mc4 connector
- Mc4 tool kit
- Irradiance meter
- ACDC Multimeter
- Computer laptop



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Technical Specification : -

No	Component	Qty
1	Solar PV Module Min 300W	2
2	Solar PV Structure	1
3	DC Isolator Switch	1
4	DC Combiner Box	1
5	Solar Inverter	1
6	AC Combiner Box	1
7	AC Energy Meter	1
8	AC Distributor Board	1
9	DC Cable (1M)	50
10	MC4 Connector	1
11	Irradiance Measurement Sensor	1
12	Aluminum Profile mounting structure	1
13	Solar Mounting Base	4
14	Solar Tool Kit	1
15	PC Laptop	1
16	PV Mounting Railing (1M)	6
17	PV Mounting Bracket	1