

# Solar Photovoltaic Lab

Solar Photovoltaic lab provides a holistic learning and training in the field of Solar Photovoltaic. Solar Photovoltaic Lab consists of three products which together covers the entire concepts of Solar PV's training and installation.

## Solar PV Grid Tied Training System (PVGT)

PVGT is a mini Solar PV Grid-tied power plant prototype which enables users to understand in-depth concepts about Grid Connected PV systems.

### Design

Wall Hanging and Table top

### Usability

Can be used only indoors

### Specifications

Grid Connected PV System with, 250 Wp Solar Panels\*2, Virtual Grid with variable capacitance and inductance to simulate transmission line properties and Grid Tied Inverter





## Features

- An active measurement panel to measure different Voltage, current and power analysis
- User can observe Voltage and Current Waveform for Linear & Nonlinear Loads and Calculations
- User can observe Impact of Transmission Line Inductance on Voltage Quality at PCC
- Power factor improvement using capacitor bank and its impact on power quality at PCC
- Grid Synchronization of Solar PV Inverter and its Performance Analysis
- Evaluation of Active, Reactive and Apparent power Flow between PV Grid and Virtual grid
- Net metering
- Demonstration of Anti-Islanding protection of Grid-Tied Inverter for Sudden Grid Failure and running the system using virtual grid