



Solar Lighting... & LED Lighting...

Catalogue 2017

*Go Green...
Go Clean...*

• AN ISO 9001 : 2015 COMPANY

• AN ISO 14001 : 2015 COMPANY

• OHSAS 18001 : 2007 COMPANY

www.greindia.com



About Us

Welcome to **GRE ELECTRONICS PVT. LTD.** AN ISO 9001 : 2015 Company. We light up your life with our world class LED lighting, General lighting, Solar lighting and Power Products. At **GRE**, we strive to offer you the most innovative and the highest quality lighting solutions globally.

Dedicated Employees, Expert sourcing and Precise Quality Control ensures that we offer the finest products at the best prices, our constant R&D results in new product developments and introductions on a regular basis.

GRE's products are tried and tested in the most unfavorable conditions and hence are ready to perform in any erratic power supply environment any where in the world.

Vision

To get the international quality output we definitely need world class input. Be it in the raw material, quality checks or the total process parameters.

Mission

To reduce carbon emission by lighting up the world, we aim to deliver cutting edge technology of solid state green lighting technology with lighting solution for energy saving and make this world a right & bright space for future generations.



Why GRE ?

- PROVEN TECHNOLOGY.
- RELIABLE AND ROBUST.
- PREDICTABLE GENERATION.
- LOW MAINTENANCE.
- CLEAN AND SECURE.
- RIGHT ECONOMICS.
- EXPERT ENGINEERING.
- QUALITY MANAGEMENT PROCESS.
- RESEARCH AND INNOVATION.
- ETHICAL BACKBONE.
- EMPANELMENT.

Our Values

Pioneer in the field of Solar Energy in India since a long time. Continuously updating and upgrading for the best Quality products & services.

Our Commitments

- Quality Product and Solutions.
- Timely Delivery.
- Cost Effectiveness.
- Total Customer Satisfaction.

Certificates / Registrations / Approvals / Customers / Tested by :



• Certificates belongs to associate manufacturers



About Solar Technology

Solar energy is a resource that is not only sustainable for energy consumption, it is indefinitely renewable. Solar power is the conversion of the energy from the sun to usable electricity. Solar PV systems utilize photovoltaic cells to convert sunlight into electricity. Thus solar PV systems reduce our consumption of fossil fuels used in conventional power generation and help us to reduce our impact on the environment- greenhouse emissions into the atmosphere and depletion of natural resources. PV panels are totally silent, producing no noise at all; consequently, they are a perfect solution for urban areas and for residential, commercial & industrial applications.

Benefits of Technology

- Accelerated Depreciation Benefit.
- Manifold appreciation in the value of land at the end of 25 years.
- Up To 50% Saving In Electricity Bill.
- 25 Years Long Lasting Life of Solar PV Module.
- 4 To 5 Years Project Payback.
- Fulfil CSR Responsibilities.
- High efficiency, almost nil maintenance.
- Protects you against annual rises in electricity cost.
- Saving in transmission and distribution losses.
- Rooftop, No requirement of additional land.
- Reduces greenhouse gas emission.

SOLAR HOME LIGHTING



Description

GRE Home Lighting System harnesses the sun's energy to light up your home and power your small appliances with benefits that extend both to your wallet and to the environment.

Key Features

This system comprises PV module for charging the battery, solar deep cycle lithium battery for storage, a solar charge controller for the same charging and discharging of the battery, lighting luminary and provision for connection of other loads.

System components

- Available in a range of system configurations with lights.
- User friendly designs – easy to install and use.
- Temperature compensation for better battery charging for various climate and terrain.
- Free from noise, smoke and pollution.
- Possible to expand the system in future.
- Longer battery life.
- Adequate protections and indications.
- Corrosion resistant metallic frame structure provided to hold the SPV module.

Available Model

- **SHINNY**
❖ With 3 Lamps & mobile charger

Applications

- Residences. • Hospitals. • Offices. • Farm Houses etc...

SOLAR LED LANTERN

Description

GRE Solar LED Lanterns use sunlight to power high intensity LED's that provide light for upto 12 Hours on a fully charged battery. Lantern features a solar photovoltaic panel, a rechargeable battery & a 50,000 hours LED cluster lamp. The linear configured lantern features 12 imported high bright white LED's on a double – sided PCB. The maintenance free Lead acid battery ensures long battery life. The rugged & compact solar panel connects to the lantern by a 5 Meter cable. The lantern can be operated in high bright or in low bright modes thus saving energy further.

Key Features

- Reading Light / Dimming Light.
- High quality SMD driver is used.
- Double switch mode HIGH – LOW.
- AC mains & solar panel charging options.
- Battery charging indicator provided.
- Battery Backup (with full charged Battery).
 - 12 Hours on High mode.
 - 20 Hours on Low mode.
- One year warranty .
- Constant light output (from V[max] 7V to 5.5V).
- Strong ABS body and acrylic top.
- Multi mobile charger.
- Powered by Japanese LEDs.
- Over charge protection.

System components

- Solar photovoltaic panel. • Rechargeable battery. • LED cluster lamp.

Applications

- Residences. • Hospitals. • Offices. • Farm Houses etc...

Available Model

- 3W SUNLIT • 3W SUNBRIGHT



Description

The sun is an eternal source of energy and today solar power can be an independent & reliable power source for all the locations with frequent power cuts, where previously people depended on a home inverter / UPS or a diesel generator for power back – up. With solar power we can enjoy the abundant energy from the sun, reduce our electricity bills and at the same time help to reduce CO₂ gas emissions.



Key Features

- Due to our design, battery doesn't face sun rays directly in the peak hours, so battery life will increase.
- Reduce the threatening of theft.
- Auto Dusk to Dawn Operations.
- Long life and high performance LED luminaries.
- Very High lumens output, excellent CRI.
- High backup (autonomy), even under extreme cloudy conditions.
- Built-in reverse polarity, battery over – charge / deep – discharge, Over Load, Short Circuit and Open Circuit protections.
- All parts are corrosion resistant.

Applications

- Street Lightings.
- Switchyard Lightings.
- Security Lightings.
- Garden Lightings.

Available Capacity

- **For Solar Street Light System - 12W to 120W.**
- **For Solar Flood Light System - 40W to 150W.**
- **For Smart Solar Street Light System - 10W to 60W.**



Key Features

- Environment friendly
- Unique and sleek design
- PIR motion Sensor
- Ideal for illuminating remote areas with minimum maintenance.
- No Cable laying required
- No manual ON-OFF required (Fully automatic)
- No maintenance required (Lithium-ion battery)
- Long installation distance between two light (upto 15Mrt)
- Up to two days autonomy
- No discrete arrangement is to made for panel, battery, battery box, Luminary & Pole
- No maintenance is required for battery (No water Top Up)
- Boundary Lightings.
- Any outdoor Lighting.
- Secondary roads in cities and towns.

System components

- LED Luminary.
- Battery.
- Solar Charge Controller (Inbuilt in Luminary).
- Pole.
- Other Nesessery Hardware.
- Solar PV Module.
- Battery Box.

SOLAR WATER PUMP



Description

GRE SOLAR Water Pumping System is a stand – alone system operating directly on the perennial solar energy. Our advance VFD based inverter not only converts the DC power produced by solar array into AC power to drive the pump but also adjusts the output frequency in real – time according to the variation of sunlight intensity. Therefore, achieving performance even during - early morning and evening hours. The pump driven by the 3 – phase AC motor can draw water from the deep wells or rivers and lakes. This system is most operational where grid / local power are not available.



Applications

- Drinking Water.
- Irrigation.
- Swimming Pool.
- School.
- Poultry Farm.
- Gardens.
- Health Centers.
- Hostels.

Key Features

- Submersible Pump AC / DC.
- Surface Pump AC / DC.
- Head : 5 Meters to 500 Meters.
- Automatic protection against high voltage, low voltage and dry run.
- No electricity bills to be paid.
- Saving of diesel expenses.
- No maintenance cost and zero running cost.
- Hot Dip Galvanized Iron Structure for corrosion resistance.
- Energy efficient pump, motor and controller.
- Energy efficient Solar PV modules with minimum life span of 25 years.
- Automatic pump controller with MPPT (Max Power Point Tracking).
- Protection Available : Dry run, Reverse Polarity, Open Circuit, Short Circuit.
- LCD Display Parameters.
- Central and state govt. subsidies (for India).
- Works from dawn to dusk.
- Durable and rugged construction.
- Simple installation and maintenance.
- Highly reliable.

Available Capacity

- **1 HP to 50 HP.**

System components

- Crystalline PV Modules.
- Pump Controller.
- Submersible / Surface Pump.
- Mounting Structure and accessories.

Solar Rooftop Systems

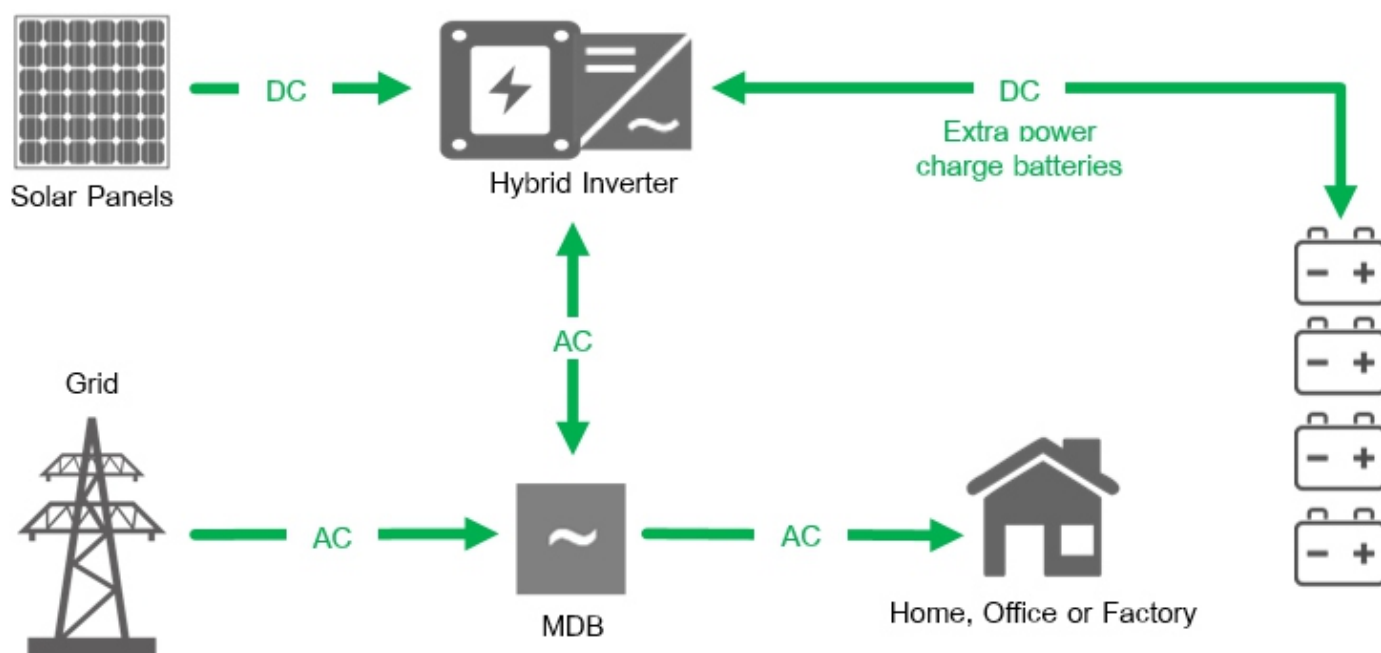
Solar Rooftop is a type of solar power generating system wherein the solar panels are installed on the roof of the premises. The solar panels convert solar radiations into DC electricity which is converted to AC by the inverter & then used to run the electrical appliances. Batteries (optional) are charged first by solar power & if required, by grid power through the inverter & when the grid fails, the connected loads get power from batteries through inverter.

Solar Rooftop Systems (Hybrid)

Description

The solar Hybrid system converts sunlight into electricity and it is the hybrid of solar PV module, batteries & grid access. These are also ideal for the areas without public grid access. Hybrid solar rooftop system includes storage solution in form of batteries. The supply from the battery is converted into AC by inverter to provide electrical supply to appliances in absence of sunlight. The system can give power if grid access given in absence of sunlight & batteries backup.

Hybrid Solar System



Key Features

- One time Investment.
- Saving in Electricity bill.
- Low Maintenance & Eco – Friendly system.
- Pure sinewave output available.
- Freedom from Power failure.

System components

- Solar Panels.
- Hybrid Inverter.
- Batteries.
- Module Mounting Structure.

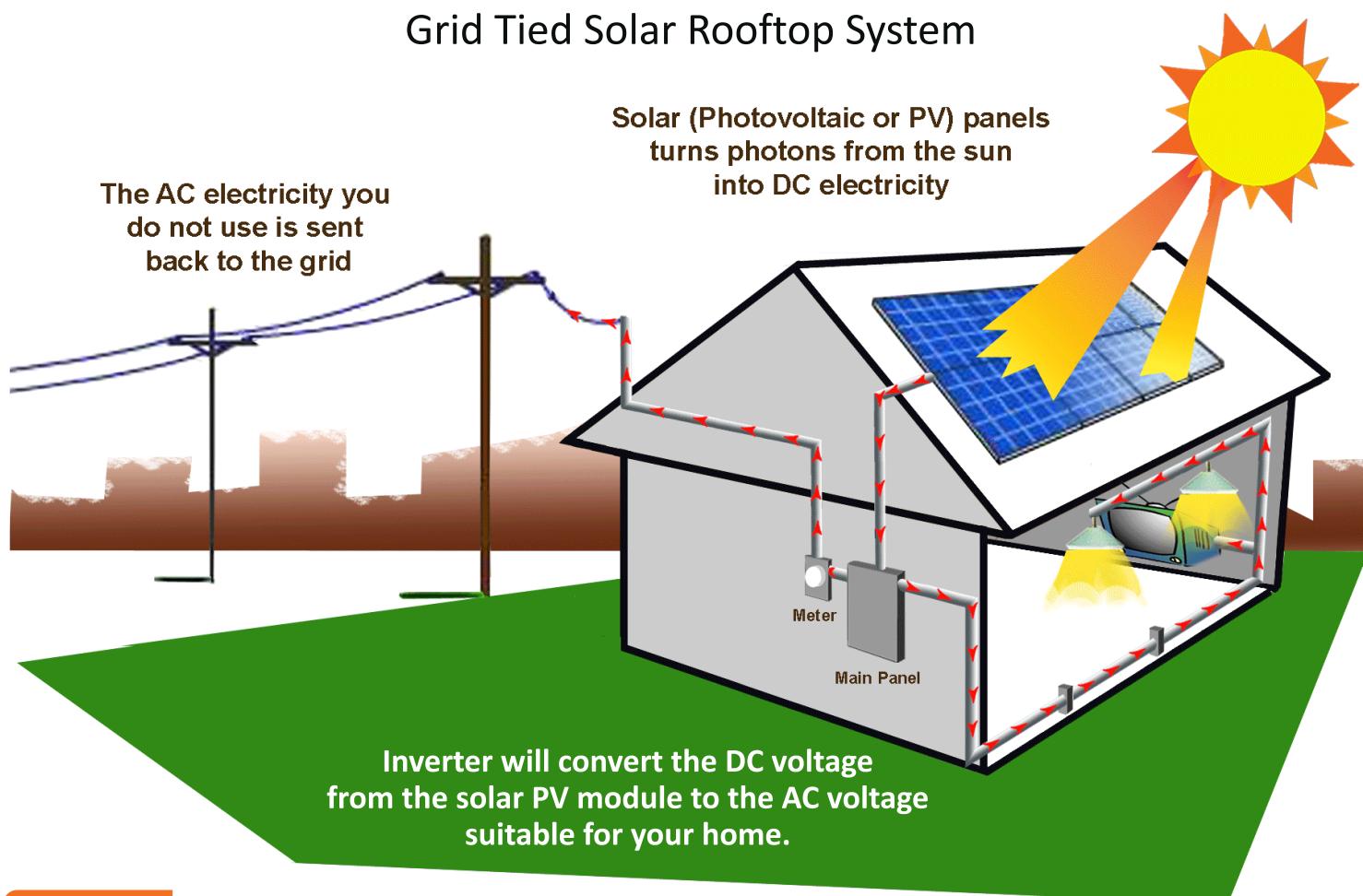
Description

On-Grid Systems are also known as GRID TIED System. On-Grid System operates in parallel with an electric utility.

Working Principle

During the daylight hours, the solar system generates power, offsetting the consumption of electricity from the utility and reduces electric bills. The balance of the KWh required is automatically drawn from the Mains. If the PV panels are producing more electricity than you are using, the system will feed the surplus energy to the utility and if you are using more electricity than generated, it will draw power from utility.

Grid Tied Solar Rooftop System


Key Features

- One Time Investment.
- Saving in Electricity Bill.
- Low maintenance and Eco- friendly system.
- Cheaper Power than grid with faster ROI (Return on Investment) / Payback period.
- Uninterrupted Power supply available.
- All extra power generated are fed to grid and owner gets credit for those injected units.
- No pollution and no recurring fuel costs, highly reliable and consistent power supply.

System components

- Solar PV Panel.
- AC / DC Distribution Boxes.
- On-Grid Inverter.
- Module Mounting System.

Description

GRE is fully forward – integrated and comprehensive EPC solutions provider. We deploy world-class technology for designing, installing and commissioning benchmark solar projects.

The company, over the years, has developed an accredited expertise in engineering and technology with the highly skilled and dedicated solar professional team.

GRE specifies in turnkey EPC projects for solar PV installations on land as well as the rooftop.



Process for EPC

1. Site Survey.
2. System Optimization.
3. Proposal.
4. Statutory Approvals.
5. Detailed Designing.
6. System Installation.
7. Commissioning.
8. Comprehensive Maintenance.

Types of EPC

1. Our EPC offering includes turnkey installation ranging from design to commissioning, followed by operation and maintenance (O&M) as required by our customer.

Key Features

- Customer purchases and owns the PV system.
 - We install and commission the PV system. Further, we operate and maintain it as per the customer's need.
 - Customer gets government subsidies, tax benefits, etc., whichever applicable.
 - Customer's monthly payment is towards EMI if a bank loan is availed.
 - Customer's savings are based on reduced purchase of electricity from the distribution company.
 - This model is qualified under 'net-metering', which is currently being widely promoted.
 - All extra power generated are fed to grid and owner gets credit for those injected units
 - No pollution and no recurring fuel costs, highly reliable and consistent power supply
2. We directly or indirectly (through our investors) own the rooftop PV solar system and sell the solar-generated electricity to our customer at a mutually decided rate.

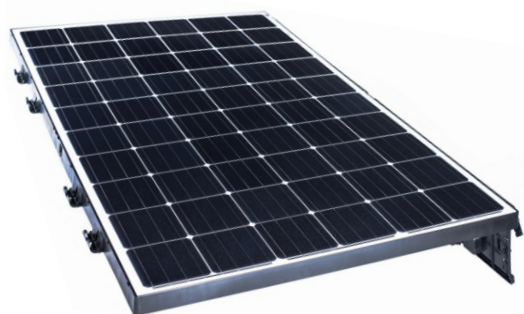
Key Features

- Customer does not bear the upfront cost of the PV System.
- We will own and directly oversee the performance of the PV system.
- While we (or our investors) can claim the tax benefits, our customers can indirectly enjoy these benefits by paying a lower rate of the solar electricity.
- Customer's monthly payment is towards the solar electricity consumed.
- Customer benefits by paying a lower rate for the solar electricity consumed.
- This model qualifies under 'net-metering', which is currently being widely promoted.

PV MODULE



Key Features

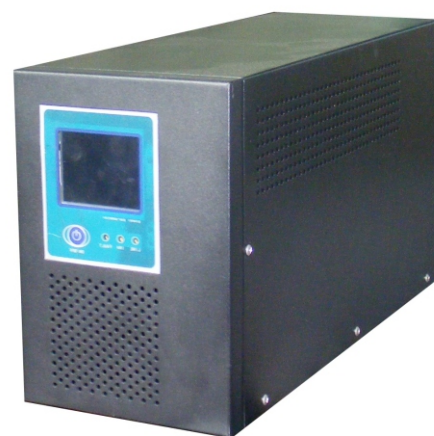


- High reliability and performance suitable in residential, commercial and industrial PV systems.
- Positive power output tolerance.
- Excellent efficiency and long term reliability.
- Good performance under high temperature and low irradiance conditions.
- Standard product warranty upto longer period.
- Industry leading third party validation results.
- Unique designed profile ensuring strong mechanical loading performance.

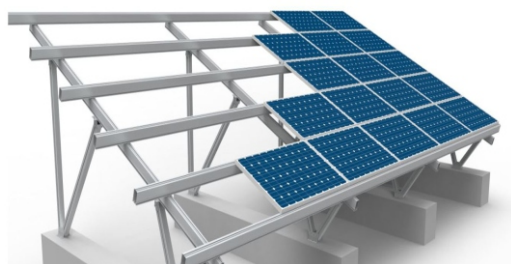
Key Features

- Transformer-less Inverter.
- Over 98.3% Max. Efficiency.
- Ultra wide input voltage range.
- Dual MPPT design with precise MPPT algorithm.
- Compact and light design for one-person easy installation.
- IP65, visually pleasing for domestic environment.
- RS 485, Wi-Fi / GPRS (optional) interface.
- Multiple protection levels.
- Wi-Fi and monitoring app available.
- 5 Years standard warranty against manufacturing defect.

GRID TIED INVERTER



Module Mounting Structure



Key Features

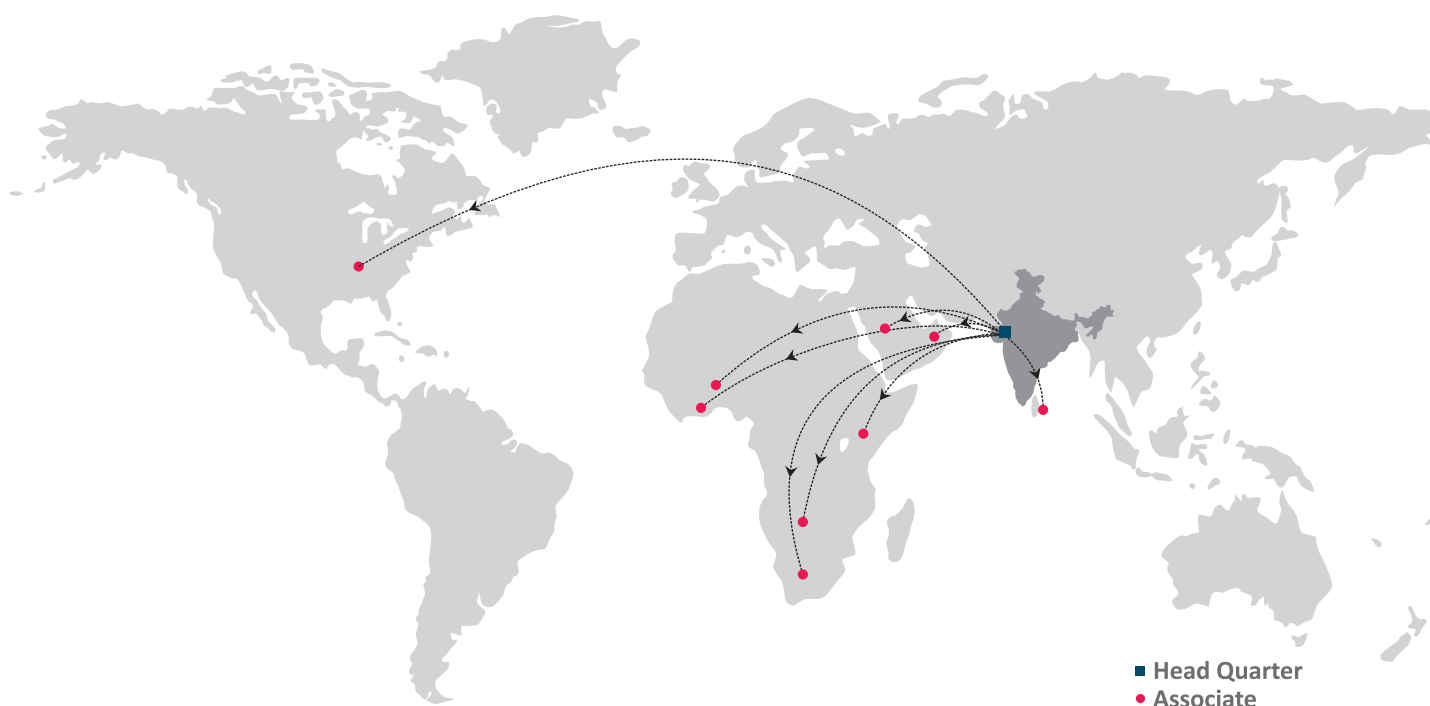
- Module mounting structures are used to mount PV modules in place.
- Our mounting structures are made of hot – dip galvanized iron / mild – steel, designed to last through the life of the PV systems.
- All fasteners are made of stainless steel in order to avoid any corrosion issues.
- There is no drilling or penetration on the RCC roof, so the water – proofing of the roof remains intact.
- Certification / Standard:-
 - Mounting structure MS : IS 2062: 1992.
 - Mounting structure GI : IS 4759.
- Mounting structure is designed to withstand a wind speed of 150 km/hr.

Key Features

- DC and AC – side junction boxes are used to connect equipment such as strings of PV modules in parallel or inverters in parallel, if needed.
- They provide housing to the necessary protection equipments, if not already present in inverters, such as :
 - (+)ve and (-)ve DC terminal fuses from PV modules.
 - Surge Protection Devices (SPD).
 - DC disconnection switch.
- Our junction boxes are made of polycarbonate, which are rated IP65 for outdoor and indoor use.

Junction Box





For LED Products Please Refer Our LED Catalogue

Certificates :



Factory & Regd. office :

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