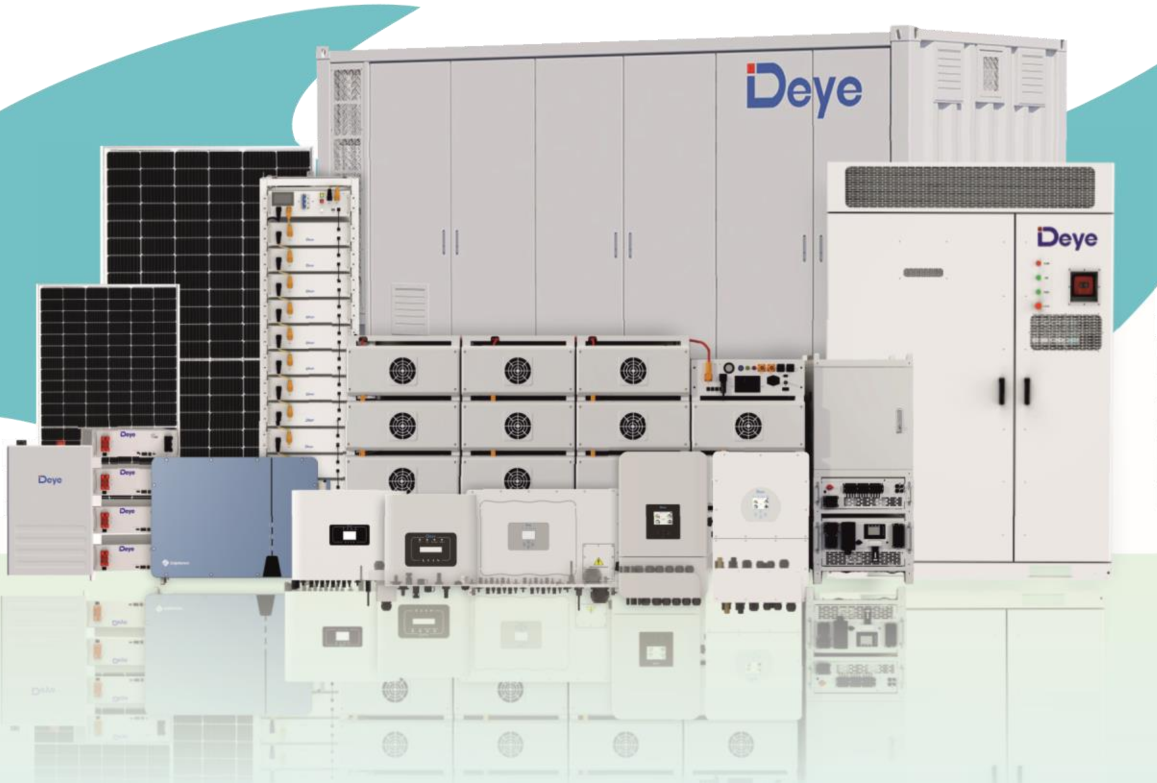
Smaart Solutions

"South India's
Leading Distributor"

Harness the Sun with Our Advanced Solar Solutions

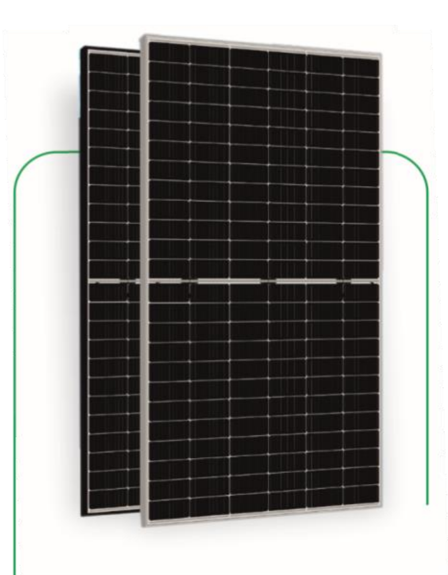


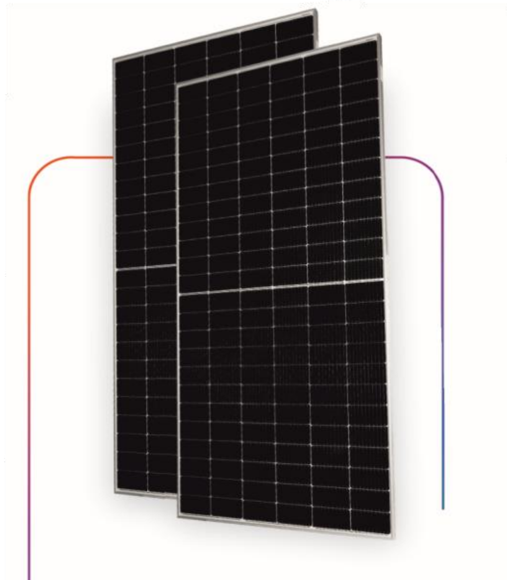
AUTHORIZED DISTRIBUTION PARTNERS

Waaree One With the Sun | adani Solar | Deye | Solplanet | Kirloskar

Solar Module

DCR & Non-DCR





Scan for Panel info

N-Type TOPCon Cell

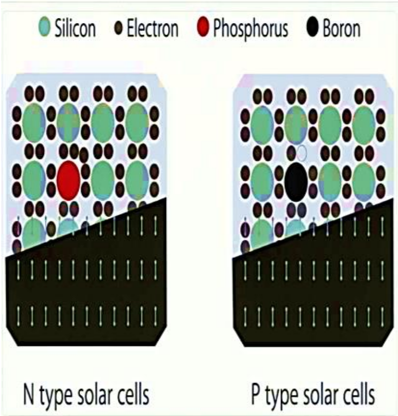
Power Gain	: **Upto +30% Output**
LID Loss	: **None**
Low Light	: **High Output**
Temperature	: **Better Coefficient**
Bifaciality	: **80±5%**

P-Type PERC Cell

Efficiency	: **21.22% Conversion**
Light Response	: **Low-LightPerformance**
Durability	: **LID & LeTID Resistant**
Protection	: **Anti-Crack & PID**

Solplanet Inverter

for Utility Scale Projects

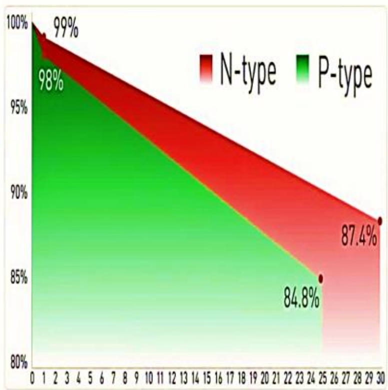


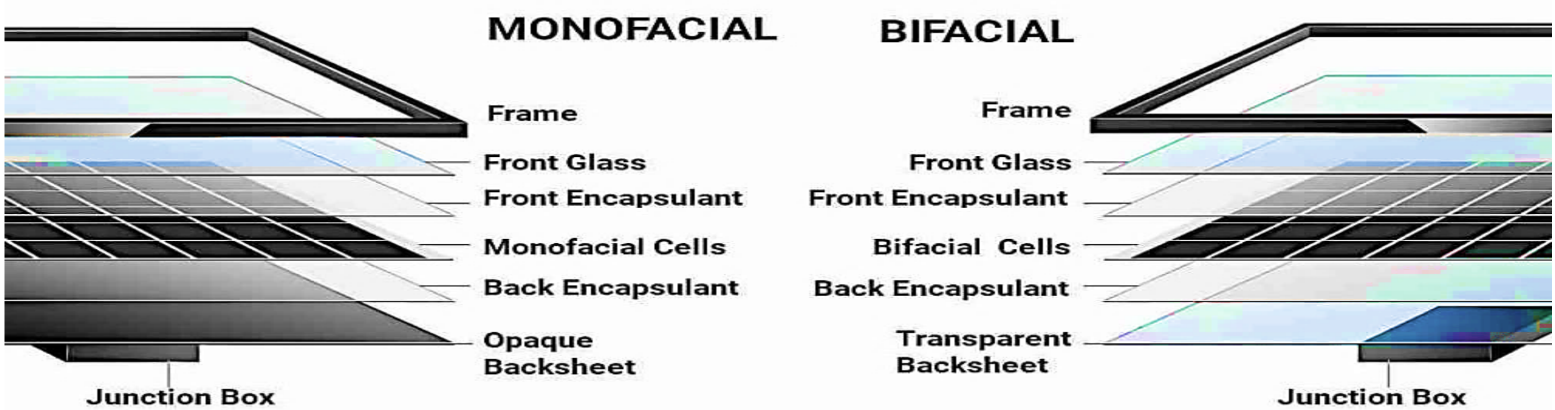
N-type Cells for Higher Efficiency

With P-type Cells, the base silicon layer is doped with boron, which crea an electron hole and positive charge carriers dominate. On the other hanc in N-type Cells, the base layer is doped with phosphorus. This generates free electrons which provide higher efficiency.

N-type TOPCon Structure for Lower Degradation

Gautam Solar's N-type TOPCon Solar Modules have lower degradation rates of 1% in the first year and 0.4% YoY compared to 2% in the first year and 0.55% YoY for P-type Modules. Hence, Gautam Solar's N-type TOPCon Modules degrade only to 87.4% after 30 years compared to P-type modules which degrade to 84.8% after 25 years.

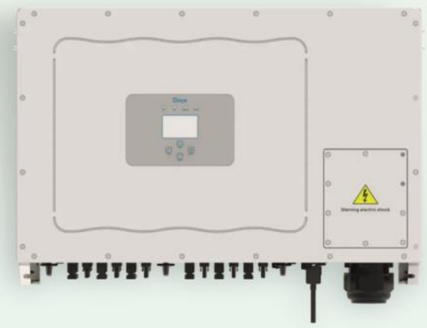




Ongrid Inverters

Deye

1.5 kW-136kW



- 20A/string DC input, supports 600W panels
- 1.3 DC/AC ratio for higher yields
- Up to 8 MPP trackers 98.9% max efficiency
- Optional string monitoring & anti-PID
- Zero export with 0.5s fast response
- Wide output voltage range 277-520Vac

Scan for Ongrid Info

Hybrid Inverters

Deye

3kW-80kW

Low Voltage Range

3kW to 20kW

Battery Voltage	: 40V-60V
Parallel Support	: Max 16 Unit
Max Charge	: 350A
No. of Battery Input	: 1

High Voltage Range

30kW to 80kW

Battery Voltage	: 160V-1000V
Parallel Support	: Max 10 Unit
Max Charge	: 80A
No. of Battery Input	: 2

- 100% unbalanced output, 4ms of Switching time
- Support storing energy from diesel generator
- 6 time periods for battery charging/discharging

SUBSIDY FOR RESIDENTIAL HOUSEHOLDS

Rs. 30,000
per kW
up to 2 kW

Rs. 18,000
per kW
for additional capacity up to

Rs. 78,000
Total subsidy for systems
larger than 3 kW capped at

Scan for Hybrid Info

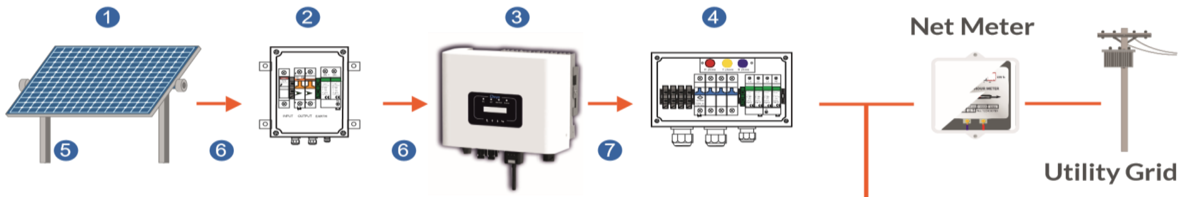
On-Grid Solar System

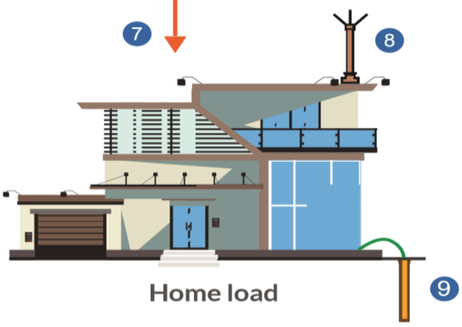
Deye

An **on-grid solar system** is connected to your local electricity grid. It allows you to use solar energy during the day and switch to grid power at night or when solar production is low.

Excess electricity is sent back to the grid, earning you credits or payments (via net metering).

No power backup is available during outages unless combined with batteries.





Key Componets in On Grid System:

1. Solar Panel
2. DCDB
3. Inverter - Grid tie
4. ACDB
5. MMS (Mounting)
6. DC Cables
7. AC Cables
8. Lightning arrester
9. Earthing accessories

Step-by-Step Guide:

Deye

1. Understand Your Load & Consumption

Check your usage:
Sanction load, monthly consumption (MC)
Formula: Daily consumption (kWh) = MC ÷ 30

Example:

5 kW load, 500 kWh/month ≈ 16.67 kWh/day

2. Size Your Solar System (kWp)

Formula: System Size (kWp) = Daily Usage ÷ 4.5

Example:

16.67 ÷ 4.5 ≈ 3.7 kWp

3. Choose the Right Inverter

Inverter Size = 70–100% of Panel Capacity

Tip: Choose inverters with:

- Strong financial backing companies
- Long warranties
- Strong financial backing companies

Example:
4 kWp panel→3 kW inverter (3 x 30% = 3.9)

4. Check Your Roof Space

Space Requirement: 70sq ft per 1 kWp
3.7 kWp system→≈ 280 sq ft

Considerations:

- Shadow-free area
- South-facing orientation (in the northern hemisphere)

5. Size of the Balance of Systems

2	DCDB	- Safety device before inverter
4	ACDB	- Protects grid-side wiring
5	MMS (Mounting)	- Choose per roof type and wind speed. Use aluminum or HDG steel.
6	DC Cable	- 1 core × 4–6 sq mm
7	AC Cable	- 2.5 core × 4 sq mm
8	Lightning Arrester	- Protects against surges
9	Earthing Pit	- Min. 3 pits recommended

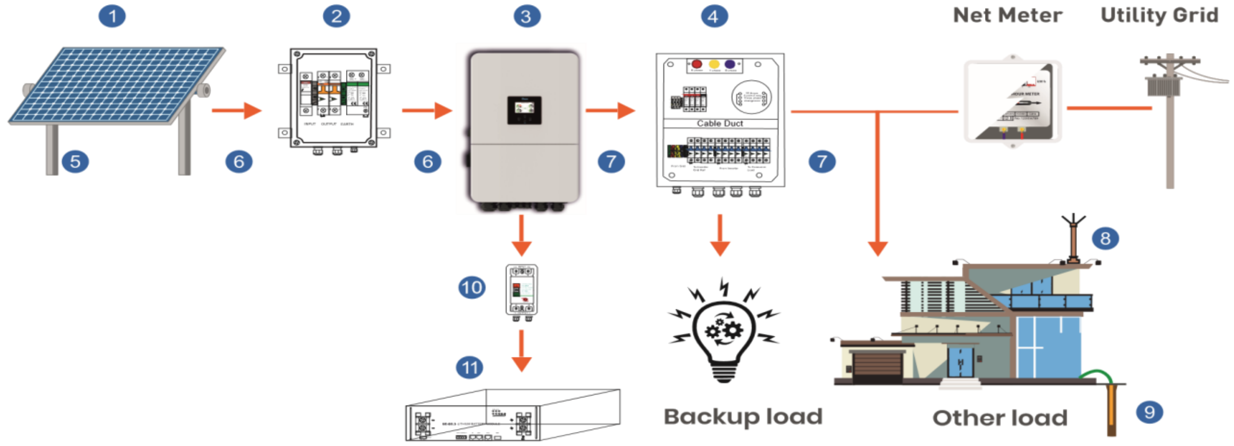
6. Find an Installation Partner

Choose a trusted installer who can:

- Handle electrical approvals
- Ensure grid connection
- Over after-sales support

Hybrid Solar System

Hybrid Solar System combines solar panels, a hybrid inverter, and battery storage to ensure uninterrupted power — even during outages!



Key Componets in Hybrid System:

1 Solar Panel   2 DCDB   3 Inverter - Grid tie   4 ACDB   5 MMS (Mounting)   6 DC Cables   7 AC Cables

8 Lightning arrester   9 Earthing accessories   10 Battery Box   11 Battery

Step-by-Step Guide:

1. Understand Your Load & Consumption

Check your usage: Sanction load, monthly consumption (MC)

Separate daytime vs nighttime usage

Formula: Daily consumption (kWh) = MC ÷ 30

Example: 5 kW load, 1000 kWh/month ≈ 33.3 kWh/day

Daytime 400 kWh/month ≈ 13.3 kWh/day

Night-time 600 kWh/month ≈ 20 kWh/day

2. Size Your Solar System (kWp)

Formula: System Size (kWp) = Daily Usage ÷ 4.5

Example: 33.3 ÷ 4.5 ≈ 7.4 kWp

3. Choose the Right Inverter

Inverter Size = 70–100% of Panel Capacity

Tip: Choose inverters with:
- Strong financial backing companies
- Long warranties
- Strong financial backing companies

Example: 7.4 kWp panel→5 kW inverter (5 x 30% = 7.4)

4. Check Your Roof Space

Space Requirement: 70sq ft per 1 kWp

7.4 kWp system→≈ 520 sq ft

Considerations:
- Shadow-free area
- South-facing orientation (in the northern hemisphere)

5. Size Your Battery

Night usage drives battery size

Example: 20 kWh night load→4-5 lithium batteries (5.3 kWh each)

Battery Tips:
- Lead Acid (50% DOD)→More capacity needed
- Lithium-Ion (90% DOD)→Fewer batteries, longer life

For Continuous Load (kW)	LV Inverter (kW)	Back Up		
		For 1 Hours	For 2 Hours	For 4 Hours
		Battery - 5.3 kWh (4.7 Usable Energy)		
3	3	1	2	3
4.5	5	1	2	4
8	8	2	4	7
12	12	3	5	11

6. Balance of System

2 DCDB	-	Safety device before inverter
4 ACDB	-	Protects grid-side wiring
5 MMS (Mounting)	-	Choose per roof type and wind speed. Use aluminum or HDG steel.
6 DC Cable	-	1 core × 4–6 sq mm
7 AC Cable	-	2.5 core × 4 sq mm
8 Lightning Arrester	-	Protects against surges
9 Earthing Pit	-	Min. 3 pits recommended
10 Battery Box	-	Protect the battery
11 Battery	-	Store the energy

7. Choose a trusted installer

Pick a trusted installer. Make sure:
- They help with approvals
- Over service & support
- Provide product warranties

Battery Energy Storage Systems

Deye

From kWh to MWh

Modular Solution

PCS+MPPT+STS

Seamless Switching:
STS switches modes in <10ms- on-grid, off-grid, or diesel.

Integrated EMS:
Supports zero-export and time-of-use charging/ discharging

Powerful Capacity:
PCS offers 100kW/125kW, expandable up to 2MW/ 2.5MW

Efficient PV Integration:
Supports up to 200kW PV input with 8 MPPT channels (40A each)

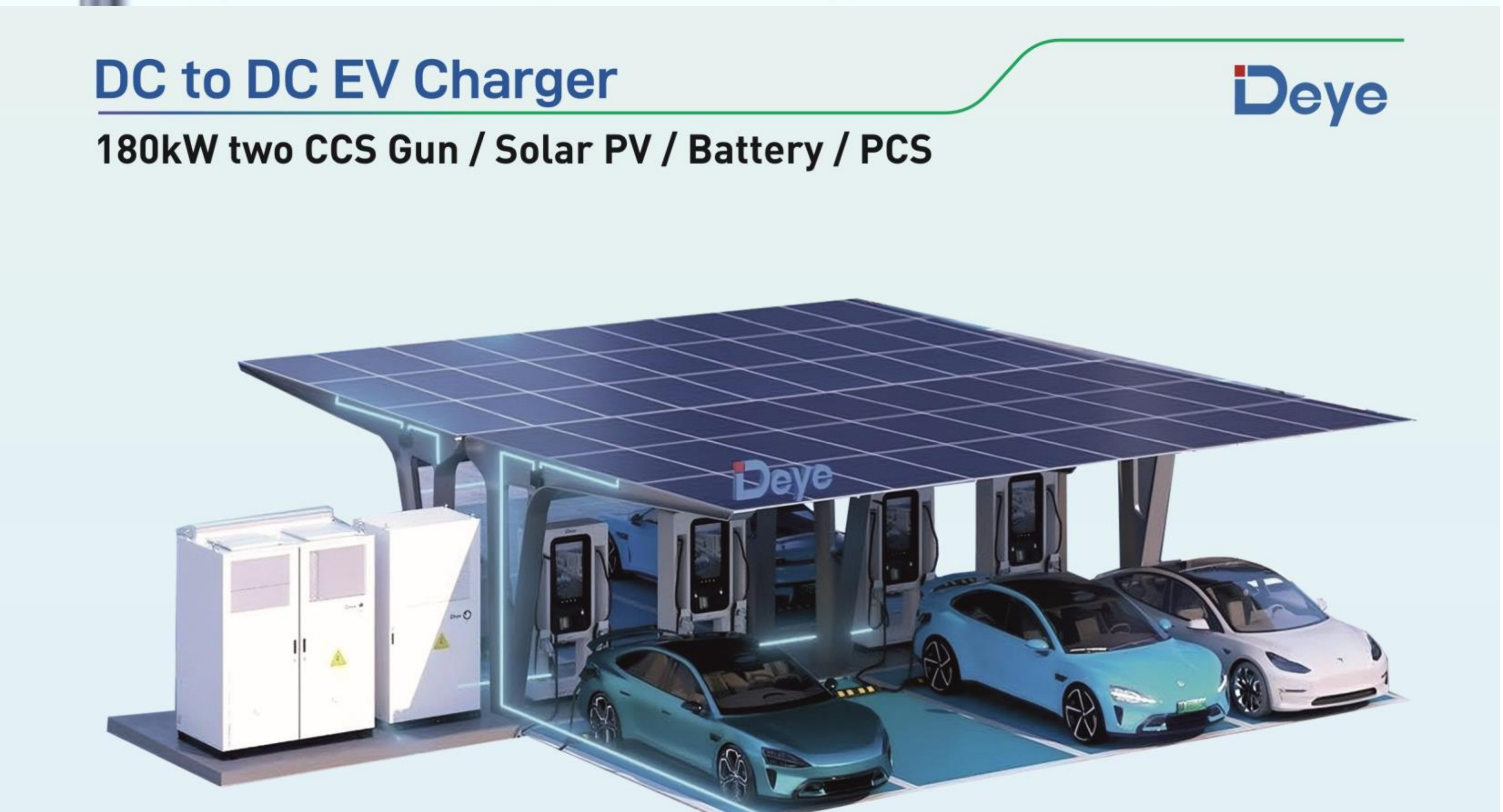
Scan for Modular info

Indoor Batteries

Deye

SE & RW series - 5kWh **SE F5 Plus**
BOS A- 150kWH **BOS B- 215kWh**
BOS G Pro - 87kWh

Scan for Battery Info



SUBSIDY FOR GHS/RWA

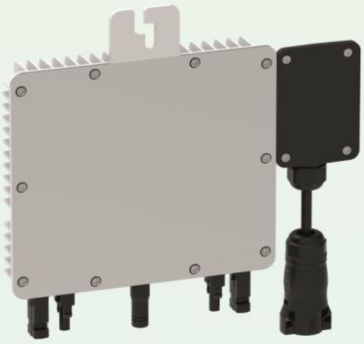
(Group Housing Society/Resident Welfare Association) Rs. 18,000 per kW for common facilities, including EV charging, up to 500 kW Capacity (@3 kW per house) with the upper limit being inclusive of individual rooftop plants installed by individual residents in the GHS/RWA

Scan for Charger info

Micro Inverters

Deye

0.6kW-2.2kW



MPPT	: 2/4 Tracker	Installation	: Plug & Play
DC Input	: 700W/Channel	Safety	: Roof-Level Low Voltage
Protection	: IP67 Rated	Shading	: Module-Level Tolerance
Connectivity	: Built-in WiFi		

Scan for Micro info

Solar Distribution Boxes

ACDB / DCDB / Combiner Boxes / Accessories

We can customize to your requirements

- For On Grid, Hybrid, Utility Projects
- Both Indoor and Outdoor
- IEC Certified Materials

PM SURYA GHAR TNEB VENDOR

NISE

नवीन और नवीकरणीय ऊर्जा मंत्रालय
Ministry of New and Renewable Energy

सत्यमेव जयते

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One With the Sun

Smaart Solutions

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