

# ***CREATING ENERGY CURATING THE FUTURE***

Welcome the sunshine, into your lives with  
**INSOLATION ENERGY LTD.**  
[www.insolationenergy.in](http://www.insolationenergy.in)

# OUR CREDENTIALS

## SPEAK THE STANDARDS WE MAINTAIN!

Insolation Energy Ltd., now is the only Solar Panel Manufacturing Company of Rajasthan being listed at BSE SME Platform. Our commitment to quality and our firm belief in our potential has lead us towards a progessive future. Right from its inception, INA growth has never stopped and Within no time the brand has proven its potential by acquiring preferential dominance amongst the consumers. The following highlights validate the statement:

**Amongst Top 10**  
Solar Panel Brands in India

**700 MW Capacity**  
Solar Panel Manufacturing

End To End *Services*

**EPC**

Engineering,  
Procurement &  
Commissioning

Roof-top & Ground Mounted

Presence *In*

**100+**

Districts

Business *Network*

**300 +**

Distributors & Dealers

CONSUMER *Connect*

**10,000 +**

Happy Customers

SERVICE *Portfolio*

**500 +**

Projects Delivered

TRUST *& Certification*

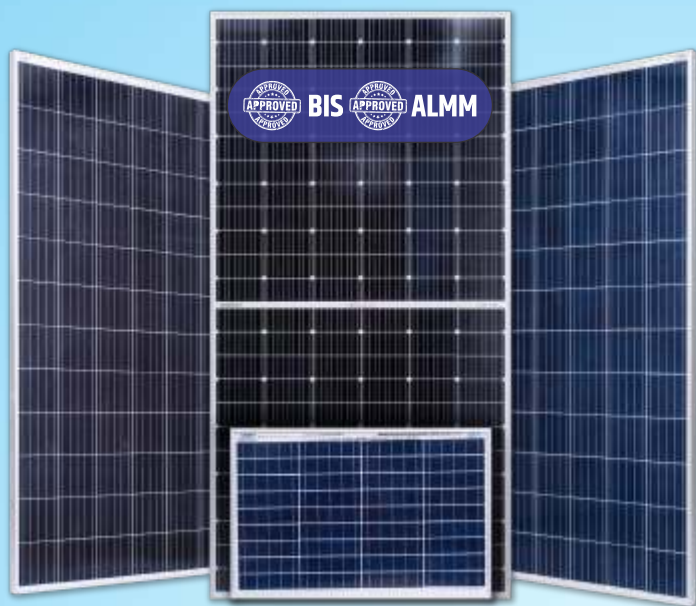
**BIS  
ALMM**

Best Quality & Standards





# DIVERSE PRODUCTS TO MEET DIVERSE DEMANDS!



## SOLAR PANELS

40Wp – 545Wp

### Salient Features:

- Superior module efficiency as per international benchmarks.
- Positive power tolerance.
- 25 years linear performance warranty.
- PID free modules with long term reliability.
- Glass with anti reflective coating improves light transmission.
- Salt mist, ammonia, blowing sand and hail resistant passed.
- Excellent energy generation in weak light.
- Sustain heavy wind & snow loads (2400 pa & 5400 pa).
- Double stage EL tested pre & post lamination.
- IP 67/68 junction box with extended cable.

Insolation Energy Ltd. is the largest Solar Panel Manufacturer in Rajasthan known for better generation modules manufacturing even in low light conditions. We produce a range of high efficiency solar PV modules including both Polycrystalline and Monocrystalline / Mono PERC from 40Wp – 545Wp. Some of our innovative products include twin power, Dual glass (Glass to Glass), BIPV, Poly, Monofacial / Bifacial modules. Each solar PV module passes through stringent quality tests and meets the international as well as BIS standards. Our Made In India Solar Panels are BIS & ALMM approved and certified by UL, NISE, CE, BIS-IS:14286 & meet all the standards of The Ministry of New & Renewable Energy.

STC : 1000W/m<sup>2</sup> irradiance, 25°C cell temperature, AM1.5G spectrum according to EN 60904-3  
Average relative efficiency reduction of <5% at 200W/m<sup>2</sup> according to EN 60904-1

### Technical Data

Electrical Data : All Data refers to STC (1000W/m<sup>2</sup>, AM1.5G, 25°C)

| Sapphire Series (Poly)        |               |               |               |                   |               |               |               |              |              |              |              |
|-------------------------------|---------------|---------------|---------------|-------------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|
| Type                          | INA72P<br>340 | INA72P<br>335 | INA72P<br>330 | INA72P<br>335/12V | INA60P<br>270 | INA36P<br>170 | INA36P<br>100 | INA36P<br>75 | INA36P<br>60 | INA36P<br>50 | INA36P<br>40 |
| Peak Power Pmax (Wp)          | 340           | 335           | 330           | 335               | 270           | 170           | 100           | 75           | 60           | 50           | 40           |
| Maximum Voltage Vmpp (V)      | 38            | 38.30         | 38.00         | 19.15             | 31.60         | 18.6          | 18.30         | 18.10        | 18.00        | 17.80        | 17.4         |
| Maximum Current Imp (A)       | 8.95          | 8.75          | 8.70          | 17.49             | 8.61          | 9.13          | 5.66          | 4.18         | 3.36         | 2.85         | 2.30         |
| Open Circuit Voltage Voc (V)  | 47.4          | 46.50         | 46.30         | 23.50             | 38.20         | 22.70         | 22.20         | 22.00        | 21.90        | 21.80        | 21.4         |
| Short Circuit Current Isc (A) | 9.18          | 9.35          | 9.24          | 18.09             | 9.08          | 9.33          | 6.06          | 4.67         | 3.83         | 3.30         | 2.80         |
| Module Efficiency (%)         | 17.04         | 17.35         | 17.07         | 17.35             | 16.65         | 16.80         | 15.50         | 14.55        | 14           | 14.10        | 14.00        |
| Length x Width x Height (mm)  | 1995x1000x35  | 1970X990X35   |               |                   | 1655X990X35   | 1495X670X35   | 905X665X34    | 705X665X34   | 645X665X34   | 505X665X34   | 415X665X34   |

| Diamond Series [Mono PERC]    |              |             |             | Ruby Series [Mono PERC] |                       |
|-------------------------------|--------------|-------------|-------------|-------------------------|-----------------------|
| Type                          | INA72MP400   | INA36MP200  | INA32MP180  | INA-144MHC-<br>WF-540   | INA-144MHC-<br>WF-545 |
| Peak Power Pmax (Wp)          | 400          | 200         | 180         | 540                     | 545                   |
| Maximum Voltage Vmpp (V)      | 41.2         | 20.60       | 18.31       | 41.81                   | 42.02                 |
| Maximum Current Imp (A)       | 9.72         | 9.72        | 9.84        | 12.92                   | 12.98                 |
| Open Circuit Voltage Voc (V)  | 49.79        | 24.90       | 22.12       | 49.81                   | 50.14                 |
| Short Circuit Current Isc (A) | 10.31        | 10.31       | 10.40       | 13.51                   | 13.55                 |
| Module Efficiency (%)         | 20.17        | 19.70       | 19.70       | 20.92                   | 21.12                 |
| Length x Width x Height (mm)  | 1995X1000X35 | 1495X680X35 | 1345X680X35 | 2279X1133x35            |                       |

\*Ruby series are available in transparent backsheet on demand.



# TALL TUBULAR SOLAR BATTERY

40, 100, 160, 180 Ah

INA Solar Batteries are C10 rated deep cycle batteries. Our innovative design, stringent quality standards and extra thick tubular plates provides longer backup and battery life. Our solar batteries are specially designed as per solar application requirement. We offer Tall Tubular Lead Acid Batteries which are the most reliable, successful and widely used across solar applications.

| Model                             | INAS401236          | INAS1001236         | INAS1601236         | INAS1801236         |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|
| Battery type                      | Tubular Lead Acid   | Tubular Lead Acid   | Tubular Lead Acid   | Tubular Lead Acid   |
| Battery Rating                    | 12V, 40Ah@C10       | 12V, 100Ah@C10      | 12V, 160Ah@C10      | 12V, 180Ah@C10      |
| Warranty                          | 36 Months           | 36 Months           | 36 Months           | 36 Months           |
| Nominal Voltage                   | 12                  | 12                  | 12                  | 12                  |
| Standard to which Battery is made | IS 13369:1992       | IS 13369:1992       | IS 13369:1992       | IS 13369:1992       |
| Dimension (L x W x H) ± 5mm       | 410 x 172 x 265     | 505 x 190 x 412     | 505 x 190 x 412     | 505 x 190 x 412     |
| Net Dry Weight of battery (Kg)    | 11 Kg(± 3%)         | 28 Kg(± 3%)         | 30 Kg(±3%)          | 32.50 Kg(± 3%)      |
| Battery Container                 | Polypropylene       | Polypropylene       | Polypropylene       | Polypropylene       |
| Type of Postive Plate             | Tubular             | Tubular             | Tubular             | Tubular             |
| Type of Negative Plate            | Flate pasted        | Flate pasted        | Flate pasted        | Flate pasted        |
| Terminals                         | Lead Antimony alloy | Lead Antimony alloy | Lead Antimony alloy | Lead Antimony alloy |
| Material of seperator             | PE                  | PE                  | PE                  | PE                  |
| Electrolyte                       | Sulphuric Acid      | Sulphuric Acid      | Sulphuric Acid      | Sulphuric Acid      |
| Net Charge battery weight         | 21 Kg(±3%)          | 42Kg(±3%)           | 53Kg(±3%)           | 56 Kg(±3%)          |
| Net Gross Battery weight          | 22.5 Kg (±3%)       | 44 Kg (±3%)         | 55 Kg (±3%)         | 58 Kg (±3%)         |

# SOLAR PCU

440 VA – 2500 VA

Solar PCU is amongst the most critical components of any solar energy system. Solar PCU is a Solar Power Conditioning Unit (PCU) which uses solar energy and also the power from the grid, to charge the batteries. It facilitates the conversion of direct current (DC) into alternating current (AC) to produce electricity for usage as well as storage purpose.



|                  | PWM SOLAR PCU  | INA SUPS - 440P12                       | INA SUPS - 1150P12                     | INA SUPS - 2500P24                      |
|------------------|--|---|--|---|
| Input            | Main wide ups mode voltage range                                     | 90 ~ 300 ± 10 VAC                       | 90 ~ 295 ± 10 VAC                      | 90 ~ 295 ± 10 VAC                       |
|                  | Main ups mode voltage range  | 180 ~ 265 ± 10 VAC                      | 180 ~ 265 ± 10 VAC                     | 180 ~ 265 ± 10 VAC                      |
| Output           | Rated voltage (backup mode)  | 220 VAC ±10%                            | 230 VAC ±10%                           | 230 VAC ±10%                            |
|                  | Max input solar pv (v)   | 21 V                                    | 21 V                                   | 50V                                     |
|                  | Max pv watt wp   | 150 Wp                                  | 800 Wp                                 | 1600 Wp                                 |
| Solar            | Voltage (voc)  | 19~21 V                                 | 19~25 V                                | 38 ~ 50                                 |
|                  | Voltage (vmp)  | 17 V                                    | 17-19 V                                | 34 ~ 39                                 |
|                  | Max pv charging current (a)  | 9A                                      | 50 A                                   | 50 A                                    |
| Battery          | Capacity   | 40Ah - 100 Ah                           | 40Ah-250Ah                             | 100Ah-250Ah                             |
| Settable options | Battery charging current (mains mode) (a) (on/off switch any postion | 8 A (default) / 6 AMPS                  | 20/15(DEFAULT)/10/5/0 AMPS             | 20/15(DEFAULT)/10/5/0 AMPS              |
|                  | Ups/wups mode selection (on/off Switch any position)                 | WUPS(default) 90V TO 300V               | WUPS(default) 90V TO 295V              | WUPS(default) 90V TO 295V               |
|                  | Priority selection (on/off switch any Position)                      | Grid(default)/Solar/User1/User2/ Normal | Grid(default)/Solar/User1/User2/Normal | Grid(default)/SOLAR/User1/User2/ Normal |
|                  | Battery type selection (on/off switch On position only)              | Tubular(default)/LA/Li-ion              | Tubular(default)/LA/Li-ion             | Tubular(default)/LA/Li-ion              |
|                  | Battery low setting per battery)                                     | 11/10.8 /10.5( based on load )          | 11/10.8/10.5(default) V                | 11/10.8/10.5(default)V                  |
|                  | (on/off switch off position only)                                    |   |  |   |

# SOLAR CHARGE CONTROLLER

122410 – ECO

| Parameters              | 122410-ECO                       |
|-------------------------|----------------------------------|
| System voltage          | 12/24V                           |
| PV Rating Max           | 300 W (24V Battery)              |
| Boost Voltage           | 14.1V±0.2V                       |
| Float Voltage           | 13.6V±0.2V                       |
| Low Voltage             | 10.0V±0.2V                       |
| Max Solar Input voltage | 15 -25V (12V Battery)            |
| Max Solar Input voltage | 30V -50V                         |
| Efficiency              | ≥97%                             |
| Charging Current        | 10Amp ± 0.5Amp                   |
| Absorption period       | Up-to 30Min based on battery DOD |



## EXCELLENCE IS A VIRTUE FOR TEAM INA SOLAR!

INA Solar has created a benchmark and established a goodwill that resonates with the essence of our solar industry. INA Solar has won over 40 international and national awards for its amazing contribution to the solar energy sector.



Excellence In Solar Panel Manufacturing By  
Radio City Rajasthan Radiance Award - 2022



Best Employer  
By Employers Association of Rajasthan - 2022



Distinguished Entrepreneur Award  
In MSME Category By PHDCCI - 2022



The Fastest Growing Module Manufacturer  
For the State of Rajasthan" Award  
By EQ International - 2022



Excellence In Solar Panel Manufacturing  
By Radio City Business Titans Award,  
Dubai - 2022



Leader In Renewable Energy In  
Rajasthan Award By IIAA - 2022



YOUTH ICON BY FORTI  
2021



Rajasthan Industrial Icon  
BY THE TIMES OF INDIA - 2021

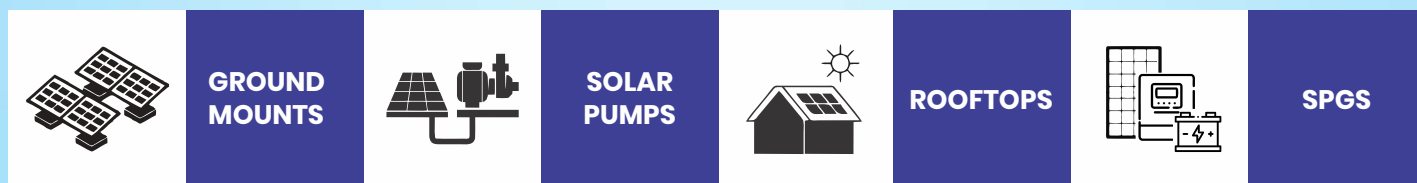




# MAJOR PROJECTS ACROSS INDIA



## OUR OFFERINGS ACROSS SEGMENTS



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\*Specification are subject to change without prior notice due to constant improvement in design & technology.