

# INE-MONO-8MA 430-450

ENDURING HIGH  
PERFORMANCE



#### LOW ELECTRICITY GENERATION COSTS

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 20.7%.



#### INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



#### ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology<sup>1</sup>, Hot-Spot Protect and Traceable Quality.



#### EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400Pa) and wind loads (2400Pa).



#### A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance warranty.



#### STATE OF THE ART MODULE TECHNOLOGY

INE combines cutting edge cell separation and innovative wiring with INE Technology.

#### THE IDEAL SOLUTION FOR:



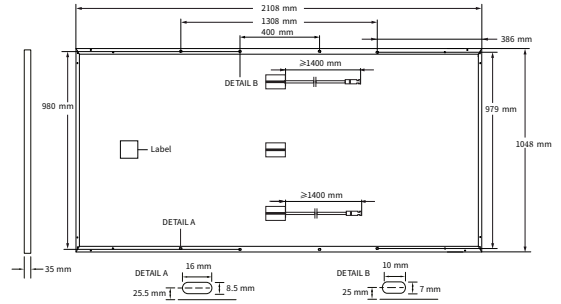
Rooftop arrays on commercial/industrial buildings



Ground-mounted solar power plants

## MECHANICAL SPECIFICATION

|              |   |
|--------------|---|
| Format       | 2108mm×1048mm×35mm  |
| Weight       | 24.5kg  |
| Front Cover  | 3.2mm Anti-reflective,<br>AR Coated and Heat Tempered Solar Glass |
| Back Cover   | Composite film  |
| Frame        | Silver Anodized Aluminium Alloy(Black Available)                  |
| Cell         | 6*24 Mono PERC 166*83mm solar half cells                          |
| Junction box | IP 68 rated   |
| Cable        | Photovoltaic Technology cable 4.0mm <sup>2</sup>                  |
| Connector    | MC4 Compatible  |



## ELECTRICAL CHARACTERISTICS

| ELETRICAL DATA @NOCT  |               | INE-430-8MA | INE-435-8MA | INE-440-8MA | INE-445-8MA | INE-450-8MA |
|---|---------------|-------------|-------------|-------------|-------------|-------------|
| MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> (POWER TOLERANCE +5 W / -0 W) |               |             |             |             |             |             |
| Power at MPP  | $P_{MPP}$ (W) | 430         | 435         | 440         | 445         | 450         |
| Short Circuit Current   | $I_{SC}$ (A)  | 11.24       | 11.31       | 11.39       | 11.46       | 11.53       |
| Open Circuit Voltage  | $V_{OC}$ (V)  | 48.8        | 49          | 49.2        | 49.4        | 49.6        |
| Current at MPP  | $I_{MPP}$ (A) | 10.66       | 10.74       | 10.82       | 10.9        | 10.98       |
| Voltage at MPP  | $V_{MPP}$ (V) | 40.3        | 40.5        | 40.7        | 40.8        | 41          |
| Efficiency  | $\eta_m$ (%)  | 19.8        | 20          | 20.2        | 20.5        | 20.7        |

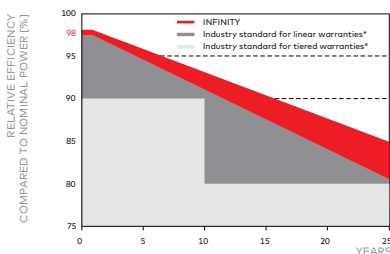
STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.  
Average efficiency reduction of 4.5% at 200W/m<sup>2</sup> according to EN 60904-1

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT

|                       |               |      |      |      |      |      |
|-----------------------|---------------|------|------|------|------|------|
| Power at MPP          | $P_{MPP}$ (W) | 325  | 329  | 333  | 336  | 340  |
| Short Circuit Current | $I_{SC}$ (A)  | 9.05 | 9.11 | 9.17 | 9.23 | 9.28 |
| Open Circuit Voltage  | $V_{OC}$ (V)  | 46.1 | 46.3 | 46.4 | 46.6 | 46.8 |
| Current at MPP        | $I_{MPP}$ (A) | 8.54 | 8.61 | 8.68 | 8.73 | 8.8  |
| Voltage at MPP        | $V_{MPP}$ (V) | 38   | 38.2 | 38.4 | 38.5 | 38.7 |

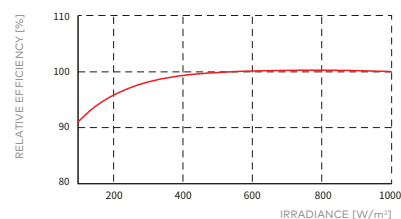
NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

## KTECH PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.54% degradation per year. At least 93.1% of nominal power up to 10 years. At least 85% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the INE sales organisation of your respective country.



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000W/m<sup>2</sup>).

## TEMPERATURE COEFFICIENTS

|                                      |                |       |                                      |               |       |
|--------------------------------------|----------------|-------|--------------------------------------|---------------|-------|
| Temperature Coefficient of $I_{SC}$  | $\alpha$ [%/K] | +0.04 | Temperature Coefficient of $V_{OC}$  | $\beta$ [%/K] | -0.27 |
| Temperature Coefficient of $P_{MPP}$ | $\gamma$ [%/K] | -0.36 | Nominal Module Operating Temperature | NMOT [°C]     | 43±3  |

## PROPERTIES FOR SYSTEM DESIGN

|                             |               |                      |   |               |
|-----------------------------|---------------|----------------------|---|---------------|
| Maximum System Voltage      | $V_{SYS}$ [V] | 1500 (IEC)/1500 (UL) | PV module classification                        | Class II      |
| Maximum Reverse Current     | $I_R$ [A]     | 20                   | Fire Rating based on ANSI/UL 1703               | C/TYPE 2      |
| Max. Design Load, Push/Pull | [Pa]          | 3600 /1600           | Permitted Module Temperature on Continuous Duty | -40°C - +85°C |
| Max. Test Load, Push/Pull   | [Pa]          | 5400 /2400           |   |               |

**Note:** Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

## KTECH SOLAR CO.,LTD

ADD No.8-1, Yan Feng Road, Huishan, Wuxi, Jiangsu, China 214000 | EMAIL sales@ktechsolar.com

WEB www.ktechsolar.com

**KTECH**<sup>TM</sup>SOLAR