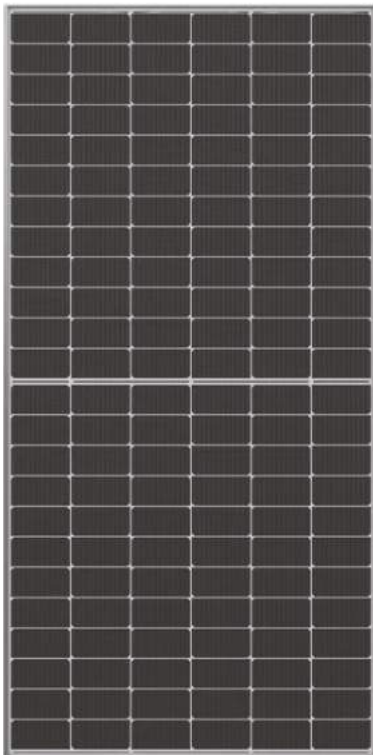


INE-MONO-8MA 430-450

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 Technology¹, 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:



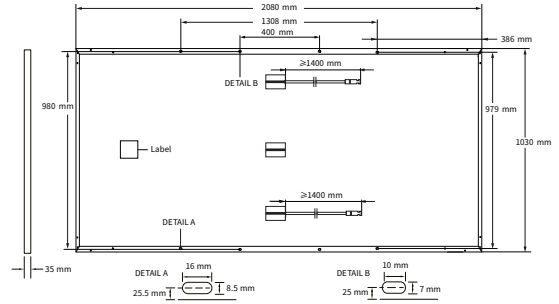
Rooftop arrays on commercial/industrial buildings



Ground-mounted solar power plants

MECHANICAL SPECIFICATION

Format	2080mm×1030mm×35mm
Weight	24.5kg
Front Cover	3.2mm Anti-reflective, 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 ²
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 ¹ (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	η_m (%)	19.8	20	20.2	20.5	20.7

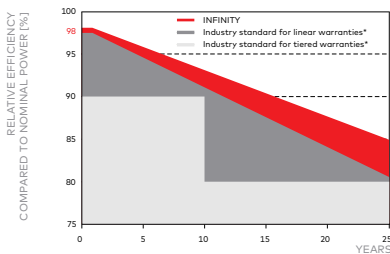
STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.
Average efficiency reduction of 4.5% at 200W/m² according to EN 60904-1

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

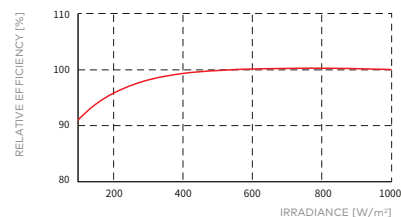
NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

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/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α [%/K]	+0.04	Temperature Coefficient of V_{OC}	β [%/K]	-0.27
Temperature Coefficient of P_{MPP}	γ [%/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.

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