

# High Performace Photovoltaic Modules

KNR-R-M 24 P 410 Series

410Watt

72 cell Module

Mono Crystalline Solar PV Modules

**KONARK PV Modules** are manufactured with the highest A grade materials and features best in class quality and performance. Our Meticulous product design and stringent process controlensures our modules deliver an exceptional high PV yield and stand the test of time.

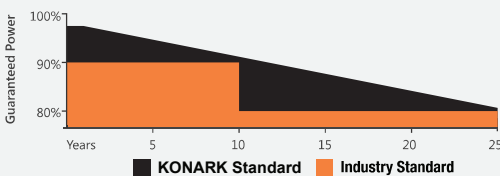
Excellent Module Efficiency  
**Upto 17.75%**

Product Warranty  
**5+5\* Years**

Positive Power Tolerance  
**Upto 5W\***

PID Resistant

## 25 Year Linear Warranty



## Qualifications & Certificates

IEC 61215, IEC 61730 -1 & 2, IEC 62804,  
IEC 61701, ISO 50001, ISO 18001  
ISO 9001,ISO 14001,BIS Registered\*

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**High Power Density**  
High conversion efficiency and more power output per square meter
- 

**Durability**  
Certified for Salt Mist Corrosion and PID Resistance
- 

**Advanced Glass**  
High-transmission glass that directs more light on the solar cells
- 

**Premium Quality**  
Built to the most stringent quality standards in the industry.



PID RESISTANT



LINEAR DEGRADATION



OUTPUT EL-TESTED



MINIMAL HOT-SPOT



CONTROLLED GOOD FLOW



HIGHER WEAK LIGHT PERFORMANCE



HIGH YIELD & +VE TOLREANCE



TIER 1 SUPPLIERS



CE  
RoHS  
COMPLIANT

## ELECTRICAL PERFORMANCE

### Electrical Parameters at Standard Test Conditions (STC)

#### Module Type

#### KONARK M24 P410

Models	P <sub>max</sub> (W)	V <sub>mp</sub> (V)	I <sub>mp</sub> (A)	I <sub>sc</sub> (A)	V <sub>oc</sub> (V)	Module Eff. (%)
KNR-R-M24 P410	410	41.8	9.82	10.59	49.9	20.2%

**STC:** 1000W/m<sup>2</sup> irradiance, 25°C module temperature, AM1.5g spectrum according to EN 60904-3.  
Average relative efficiency reduction of 3.0% at 200W/m<sup>2</sup> according to EN 60904-1. Electrical Parameters Tolerance: ±3%

## PACKAGING SPECIFICATIONS

Number of Modules Per Pallet	25 Nos
Pallet dimensions (L / W / H)	1995mm/1145mm/950mm
Weight Per Pallet	600Kg

## THERMAL CHARACTERISTICS

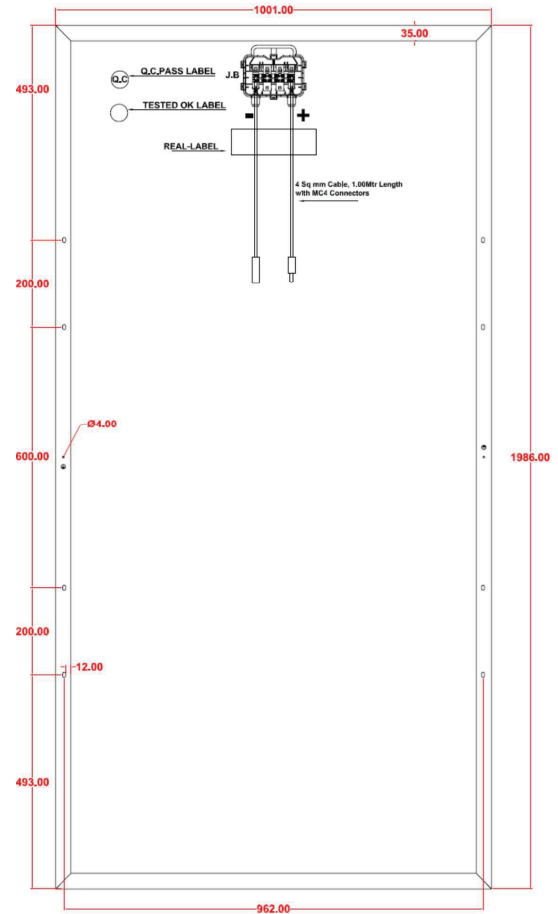
Nominal Operating Cell Temperature	NOCT	°C	46+/-2
Temperature Coefficient of P <sub>max</sub>	γ	%/°C	-0.42
Temperature Coefficient of V <sub>oc</sub>	β	%/°C	-0.34
Temperature Coefficient of I <sub>sc</sub>	α	%/°C	0.07

## OPERATING CONDITIONS

Maximum System Voltage	1000V <sub>dc</sub>
Maximum Series Fuse Rating	15.0 A
Limiting Reverse Current Rating	15.0 A
Operating Temperature Range (°C)	-40°C to 85°C
Maximum Static Load, Front	5400 Pa
Maximum Static Load, Back (e.g., wind)	2400Pa
Max. Hailstone Impact (diameter / velocity)	25mm / 23m/s

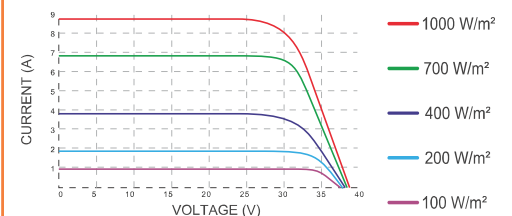
## MECHANICAL DATA

Cell Type	Mono or Mono PERC 156.75mm x 156.75mm or as applicable
Cell Arrangement	72 (6 X 12)
Dimensions (L / W / H)	1986mm / 1001mm / 35 or 40 mm or 1986mm/1001mm /35 or 40 mm
Weight	24.5Kg approx
Superstrate ( Glass )	3.2 mm -High Transmission Low-Iron Tempered Glass (AR Coated)**
Frame Material	Silver Anodized Aluminum Frame With Twin Wall Profile ( Black Optional)**
Cell Encapsulant	EVA (Ethylene Vinyl Acetate) - FC/UFC
Back Sheet	Composite Film - White (Black and Transparent Optional)**
Junction Box	IP 67 rated
Cable	1000 or 1200 mm / 4mm2
Connectors	2 Nos. Black MC4 Compatible Connectors
By- Pass Diodes	3 Pcs



Tolerance: ± 5 mm  
All Dimensions are in mm

### I-V Curve (for different Irradiances)



#### NOTE

- Due to constant product modifications **KONARK** reserves the right to amend the above specifications without prior notice. The Electrical data given here is for reference purpose only
  - For handling / installation instructions, refer **KONARK** Installation Manual . Please read **KONARK** warranty documents thoroughly
  - Please confirm your exact requirements with sales representative while placing your order. All dimensions have standard variation of 5 mm. Please confirm dimensions before placing order
- \*\* Black and Transparent back sheet and black frame module without IEC certification. 2.8 mm glass also available

Outer Dimensions can have a variance of 5mm