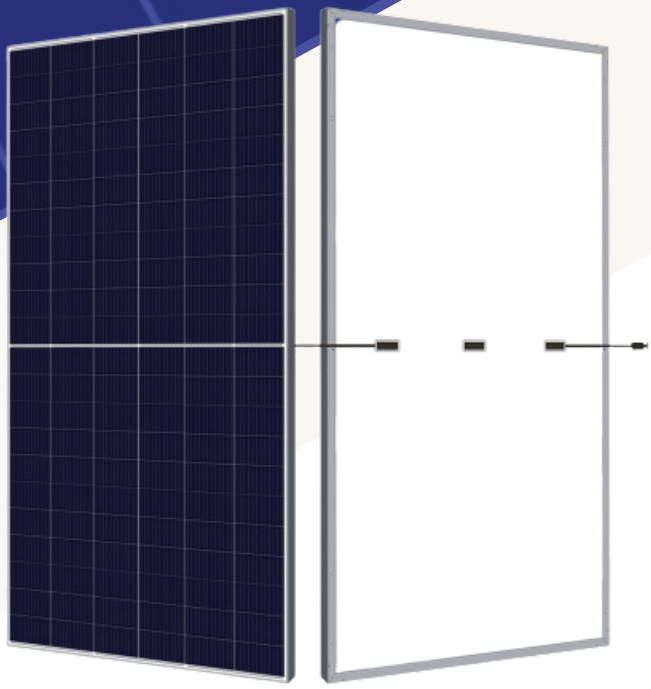
PERCMAX

HIGH PERFOMANCE MONOCRYSTALLINE P.E.R.C MODULE

144



TM - 455/475M-144HC

144 CELL
Mono PERC Module

455 - 475Wp
Power Output Range

1500VDC
Maximum System Voltage

21.90%
Maximum Efficiency

KEY SALIENT FEATURES

- Industry leading lowest thermal co-efficient of power
- Industry leading 15 years product warranty
- Excellent low irradiance performance
- Excellent PID resistance
- Positive power tolerance of 0~+5%
- Fully automated production at all stages
- Fully Reduced power loss by minimizing the effect of shadow shading (9 - 18 Busbar)
- European Warranty & After - Sales Service

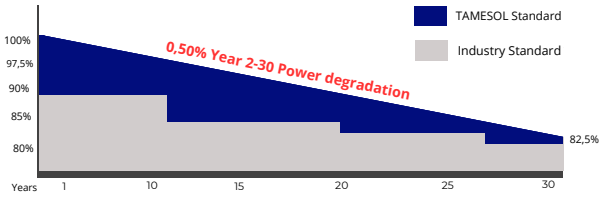
TAMESOL BUILDING A GREEN FUTURE S.L

TAMESOL is a global provider of high-efficiency PV panels with a 10GW annual production capacity and a 100% automated production line, innovating state-of-the-art products for over 15 years. Our panels have been installed in more than 50 countries, with over 20 million panels already connected to the grid.

Tel : **+34 872 222 388**
E - mail: **info@tamesol.com** Website: **www.tamesol.com**

LINEAR PERFORMANCE WARRANTY

15 year Product Warranty / 30-Year Linear Power Warranty



TAMESOL 15 YEARS

Since 2007, building a green future

PERCMAX

TM-455/475M-144HC

21,90%	0 - 5%	2,0%	0,50%	PERC CELL
MAX MODULE EFFICIENCY	POWER TOLERANCE	FIRST YEAR POWER DEGRADATION	YEAR 2-30 POWER DEGRADATION	Lower operating temperature

ELECTRICAL CHARACTERISTICS

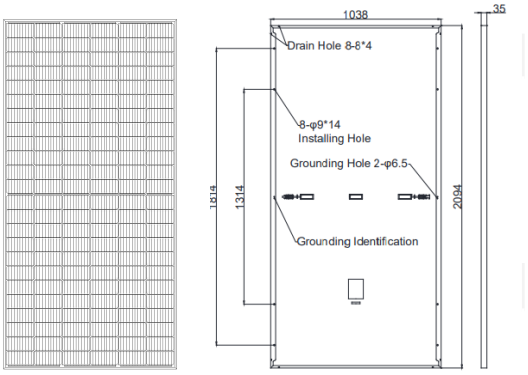
STC: AM1.5 1.000W/m2 NOTC: AM1.5 800W/m2 20º 1 m/s Test uncertainty for Pmax +-3%

Module type	TM - 455M-144HC		TM - 460M-144HC		TM - 465M-144HC		TM - 470M-144HC		TM - 475M-144HC	
Testing condition	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC
Maximum Power (Pmax/w)	455	332.4	460	336.2	465	340	470	343.9	475	347.7
Open Circuit Voltage (Voc/V)	50.10	46.08	50.39	46.60	50.68	46.86	50.96	47.12	51.25	47.38
Short Circuit Current (Isc/A)	11.37	9.19	11.40	9.22	11.43	9.25	11.47	9.27	11.47	9.30
Voltage at Maximum Power (Vmp/V)	42.41	38.71	42.76	39.00	43.10	39.29	43.44	39.58	43.78	39.87
Current at maximum Power (Imp/A)	10.73	8.59	10.76	8.62	10.79	8.65	10.82	8.69	10.85	8.72
Module Efficiency (%)	20,90%		21,20%		21,40%		21,60%		21,90%	

MECHANICAL PARAMETERS

Cell Orientation	single crystal PERC166x83mm (144 pieces)
Junction Box	IP68, three diodes
Output Cable	4.0mm² , 300mm
Glass	3.2mm tempered coated glass, low iron
Frame	Anodized aluminum alloy frame
Weight	23.3kg
Dimensión	2094*1038*30/35mm
Packaging	31/33/36 pcs*pallet / 682/ 726/ 792 *40HQ

PHYSICAL CHARACTERISTICS



OPERATING PARAMETERS

Operational Temperature	-40ºC - +85ºC
Power Output Tolerance	(0, +5%)
Voc and Isc Tolerance	±5%
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	20 A
Nominal Operating Cell Temperature	45±2ºC
Protection Glass	Class Ⅱ
Fire Rating	Class C

MECHANICAL LOADING

Front Side Maximum Static Loading	5400 PA
Rear Side Maximum Static Loading	2400 PA
Hailstone Test	Diameter 25mm, impact speed 23m/s

TEMPERATURA RATINGS (STC)

Temperature Coefficient of Isc	+0.05%/ºC
Temperature Coefficient of Voc	-0.28%/ºC
Temperature Coefficient of Pmax	-0.36%/ºC

PACKING MANNER

Container	40ft(HQ)
Number of modules per container	682/ 726/ 792
Number of modules per pallet	31/ 33/ 36
Number of pallets per container	22

TAMESOL Authorized Solar Dealer

Note: The specifications are obtained under the Standard Test Conditions (STCs): 1000 W/m2 solar irradiance, 1.5 Air Mass, and cell temperature of 25°C. The NOCT is obtained under the Test Conditions: 800 W/m2, 20°C ambient temperature, 1m/s wind speed, AM 1.5 spectrum.
Please contact **info@tamesol.com** for technical support. The actual transactions will be subject to the contracts. This parameter is for reference only and it is not a part of the contracts. The specifications are subject to change without prior notice.