

SkyHawk R-type Module Specification
Monocrystalline 6X20 Solar Modules for Rooftop Type
182mm / M10 Solar Cell

450Wp / 455Wp



The highest Mechanical Load Test in PV Industry



Better LCOE



Improved module power output performance by reducing module working temperature



Advanced Non-Destructive Cutting Technology



World's best PID resistant



Multi Busbar Technology



The toughest Salt Mist Test in PV Industry

Green Energy

Made in Taiwan



Sustainable Development



SkyHawk R-type Module Specification(182mm / M10 Solar Cell) Monocrystalline 6X20 Solar Modules for Rooftop Type 435-465Wp



Electrial Data

Model Name	TS60-BMH-435 H1	TS60-BMH-440 H1	TS60-BMH-445 H1	TS60-BMH-450 H1	TS60-BMH-455 H1	TS60-BMH-460 H1	TS60-BMH-465 H1		
Max. power at STC	Pmax	W	435	440	445	450	455	460	465
Max. power voltage	Vmp	V	33.71	33.86	34.01	34.16	34.31	34.46	34.61
Max. power current	Imp	A	12.93	13.01	13.11	13.20	13.29	13.38	13.47
Open circuit voltage	Voc	V	40.75	40.90	41.05	41.20	41.35	41.50	41.65
Short circuit current	Isc	A	13.38	13.45	13.56	13.66	13.76	13.88	13.96
Module Conversion Eff.	%		20.1%	20.4%	20.6%	20.8%	21.1%	21.3%	21.5%

* Under Standard Test Condition(1,000W/m²,25°C,AM 1.5): Power Tolerance ±3%
* Module Conversion Eff. (%) = [Max power at STC(w) / ((Solar Module Area(m²) x 1000 (w/m²))] x 100%

Temperature Coefficient

Nominal Operating	NOCT	°C	45±2
Cell Temperature			
TC Isc	α	%/°C	+0.06
TC Voc	β	%/°C	-0.27
TC Pmax	γ	%/°C	-0.35

Operation Conditions

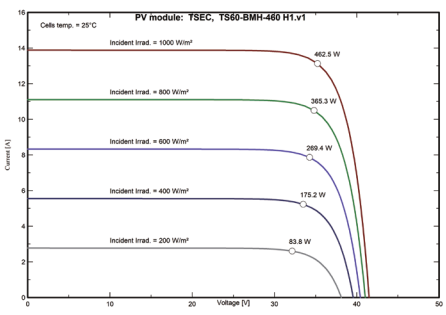
Max. system voltage	1500V
Module fire resistance class	Class C
Protection Class (IEC 61140)	Class II
Series fuse rating	25 A
Number of bypass diodes	3
Temperature range	-40 to +85°C
Max. mechanical load	7100 pa(front side) 5400 Pa(rear side)

* Please follow installation manual provided by TSEC

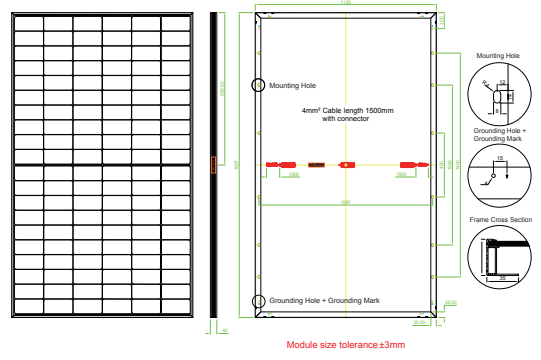
General Data

Cell type	M10 Monocrystalline
Cell per module	Mono-crystalline silicon solar cell (120 pcs)
Front	Low-iron tempered glass
Encapsulant Flim	Ethylene Vinyl Acetate(EVA)
Rear	Composite film
Frame	Anti-Salt Mist aluminum (silver/black)
Junction Box	IP68
Connector	EVO-2 Compatible
Cable	1500mm / 4mm ²

IV Curve

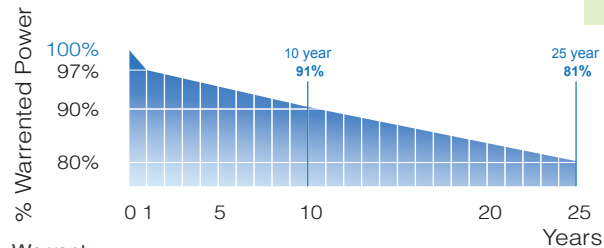


Engineering Drawing(mm)



Certifications

- IEC 61215:2016 · IEC 61730-1:2016 & IEC 61730-2:2016
- ISO 9001:2015 Quality management system
- ISO 14001:2015 Environmental management system
- ISO 45001:2018 Occupational health and safety management system



- Warranty
- 12-year materials and workmanship warranty
 - 25-year linear power warranty

Module Dimensions and Weight

Dimension	1907 x 1133 x 40 mm
Weight	24.5 Kg

TSEC Corporation