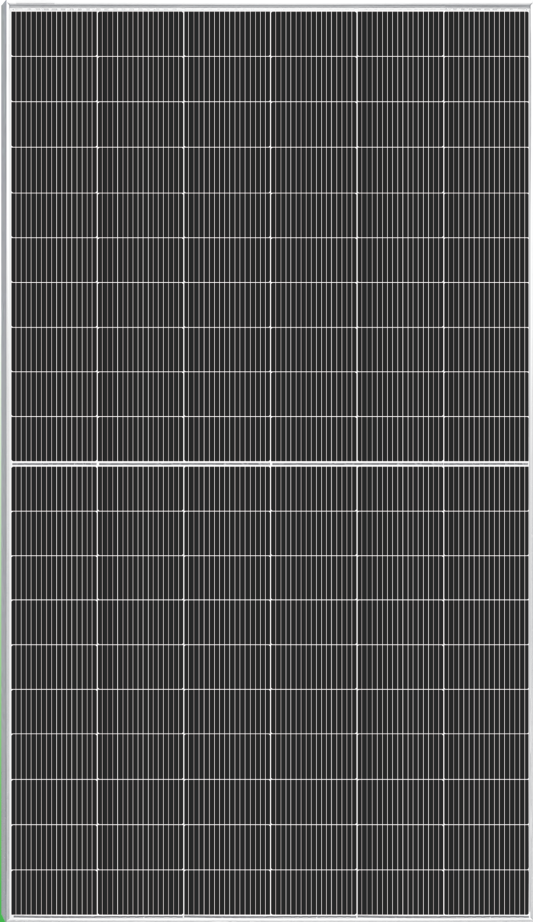




ALPHA N-Type High-Efficiency Module Specification

Monocrystalline 6X20 Solar Modules

475Wp~505Wp



Zero light-induced degradation



Better low light response



Additional power gain



The highest Mechanical Load Test in PV Industry



Better temperature coefficient



Lower LCOE



The toughest Salt Mist Test in PV Industry

Green Energy

Made in Taiwan



Sustainable Development



ALPHA N-Type High-Efficiency Module Specification

Monocrystalline 6X20 Solar Modules

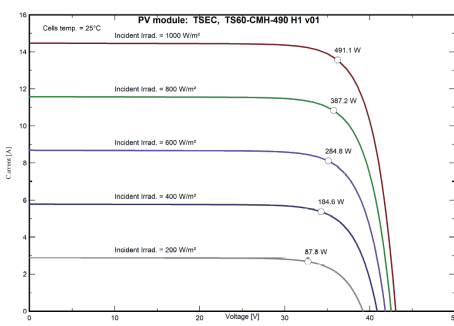
475-505Wp



Electrical Data								General Data	
Model Name		TS60-CMH-475 H1	TS60-CMH-480 H1	TS60-CMH-485 H1	TS60-CMH-490 H1	TS60-CMH-495 H1	TS60-CMH-500 H1	TS60-CMH-505 H1	
Max. power at STC	P _{max} W	475	480	485	490	495	500	505	Cell type
Max. power voltage	V _{mp} V	36.12	36.26	36.45	36.64	36.83	37.02	37.2	Monocrystalline N-Type solar cell
Max. power current	I _{mp} A	13.16	13.24	13.32	13.40	13.48	13.56	13.64	Cell per module
Open circuit voltage	V _{oc} V	42.54	42.73	42.92	43.11	43.3	43.49	43.68	Mono-crystalline silicon N-Type solar cell (120 pcs)
Short circuit current	I _{sc} A	13.83	13.92	14.01	14.1	14.19	14.28	14.37	Front
Module Conversion Eff.	%	22.0%	22.2%	22.4%	22.7%	22.9%	23.1%	23.4%	PV Coated glass
									Encapsulant Film
									Low water vapor transmission rate (WVTR) material
									Rear
									Backsheet (Inner side foil white)
									Frame
									Anodized aluminum silver
									Junction Box
									IP68
									Connector
									EVO-2 Compatible
									Cable
									1500mm / 12 AWG / 4mm ²

Temperature Coefficient				Operation Conditions		Module Dimensions and Weight	
Nominal Operating	NOCT	°C	45±2	Max. system voltage	1500V	Dimension	1908 x 1134 x 35 mm
Cell Temperature				Module fire resistance class	Class C	Weight	23.5 Kg
TC I _{sc}	α	%/ °C	0.045	Protection Class (IEC 61140)	Class II		
TC V _{oc}	β	%/ °C	- 0.25	Series fuse rating	30 A		
TC P _{max}	γ	%/ °C	- 0.29	Number of bypass diodes	3		
				Temperature range	-40 to +85°C		
				Max. mechanical load	5400 pa		
				* Please follow installation manual provided by TSEC			

IV Curve

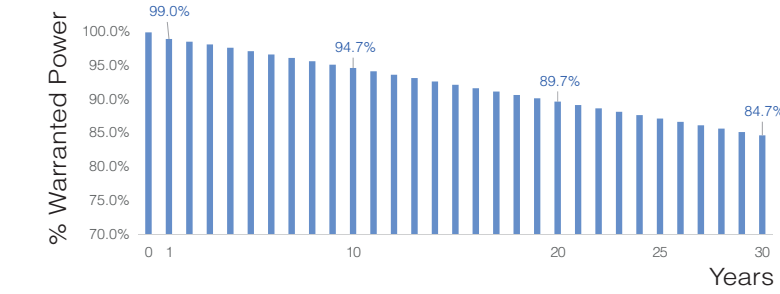
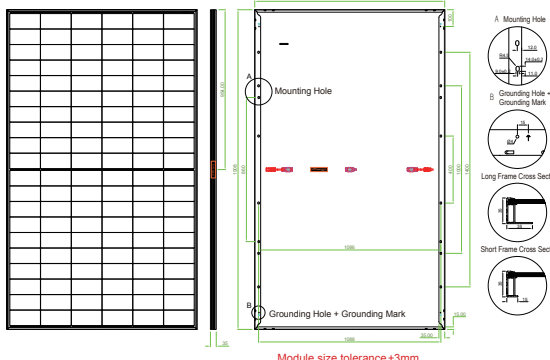


Certifications

- IEC 61215:2021、IEC 61730-1:2021 & IEC 61730-2:2021、UL 61730
- ISO 9001:2015 Quality management system
- ISO 14001:2015 Environmental management system
- ISO 45001:2018 Occupational health and safety management system



Engineering Drawing(mm)



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

Made in Taiwan * The information in this document is subject to change without notice * TSEC reserves the rights of final interpretation and revision of datasheet * Version : Rev.13, May 2025

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