



Remark: customized frame color and cable length available upon request

TOPCon 199R2

645-665W

STM-645-665/144-R2

Higher power output **23.8%** up to



PID Resistance



Low-light Performance



Severe Weather Resilience



Durability Against Extreme Environmental Conditions



12
YEARS

12-year Warranty for Materials and Processing

30
YEARS

30-year Warranty for Extra Linear Power Output

ISO 9001:2015
ISO 14001:2015
ISO 45001:2018
GB/T 29490-2013



Packaging(pcs/40HQ container)	13 meter semi hanging	Dimensions	Weight
31/496pcs 37/592pcs	31/620pcs 37/740pcs	2465x1134x35(30)mm	30kg±3%

MECHANICAL SPECIFICATION				OPERATING PARAMETERS			
Cell	N-type mono-crystalline			Maximum System Voltage	1500VDC		
No.of cells	144(6x24)			Operating Temperature	-40°C~+85°C		
Cable Length	300mm(+)/300mm(-)			Maximum Series Fuse	30A		
Cable Cross Section Size	4mm ² (IEC)			Maximum StaticLoad,Front	5400Pa(112lb/ft ²)		
Junction Box	IP68,3 diodes			Maximum StaticLoad,Back	2400Pa(50lb/ft ²)		
Connector	MC4 Compatible			Safety Class	Class II		
STC:AM1.5 1000W/m ² 25°C NOCT:AM1.5 800W/m ² 20°C 1m/s				Test Uncertainty for Pmax ±3%			

Module Type	STM-645/144-R2		STM-650/144-R2		STM-655/144-R2		STM-660/144-R2		STM-665/144-R2	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power(Pmax/W)	645	489	650	493	655	496	660	500	665	504
Open Circuit Voltage(Voc/V)	56.35	53.53	56.52	53.69	56.69	53.86	56.86	54.02	57.03	54.18
Short Circuit Current(Isc/A)	14.54	11.74	14.6	11.79	14.66	11.83	14.72	11.88	14.78	11.93
Voltage at Maximum Power(Vmp/V)	46.76	44.65	46.93	44.81	47.1	44.97	47.27	45.13	47.44	45.29
Current at Maximum Power(Imp/A)	13.80	10.95	13.86	10.99	13.92	11.04	13.98	11.08	14.04	11.13
Module Efficiency(%)	23.10		23.30		23.40		23.60		23.80	

TEMPERATURE RATINGS		ADDITIONAL VALUE	
Normal Operating Cell Temperature(NOCT)	45±2°C	99%	
Temperature Coefficient of Isc	+0.045%/°C	87.4%	
Temperature Coefficient of Voc	-0.275%/°C	(years)	
Temperature Coefficient of Pmax	-0.350%/°C	1 10 20 30	

I-V CURVE(STM-645-665/144-R2)

