

ELECTRICAL CHARACTERISTICS

2×54 cells

Model of modules	TS-BBT54(430)		TS-BBT54(435)		TS-BBT54(440)		TS-BBT54(445)		TS-BBT54(450)	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Peak power - P_{mp} (W)	430	329	435	333	440	337	445	340	450	344
Open circuit voltage - V_{oc} (V)	38.78	37.13	38.97	37.31	39.16	37.49	39.35	37.67	39.54	37.85
Short circuit current - I_{sc} (A)	13.72	11.06	13.80	11.12	13.88	11.18	13.96	11.24	14.04	11.30
MPP voltage - V_{mp} (V)	32.85	31.45	33.03	31.62	33.21	31.79	33.39	31.96	33.57	32.13
MPP current - I_{mp} (A)	13.09	10.47	13.17	10.53	13.25	10.59	13.33	10.65	13.41	10.71
Module efficiency - η_m (%)	22.0		22.3		22.5		22.8		23.0	

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C, Spectra at AM1.5

NMOT (Nominal Module Operating Temperature): Irradiance 800W/m², Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/s

ELECTRICAL CHARACTERISTICS WITH DIFFERENT POWER BIN (REFERENCE TO 13.5% IRRADIANCE RATIO)

Peak power - P_{mp} (W)	476	482	488	493	499
Open circuit voltage - V_{oc} (V)	38.78	38.97	39.16	39.35	39.54
Short circuit current - I_{sc} (A)	15.20	15.29	15.38	15.47	15.56
MPP voltage - V_{mp} (V)	32.85	33.03	33.21	33.39	33.57
MPP current - I_{mp} (A)	14.50	14.59	14.68	14.77	14.86
Irradiance ratio (rear/front)	13.5 %				

STRUCTURAL CHARACTERISTICS

Module dimension (L*W*H)	67.80 x 44.65 x 1.38 inch (1722 x 1134 x 35 mm)
Weight	46.30 lbs (21.0 kg)
Number of cells	108 cells
Cell	N-type monocrystalline (M10)
Glass	Tempered, 32 mm AR, High transmittance, Low iron
Backsheet	Transparent black mesh backsheet
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Output wire	4.0 mm ²
Wire length (including Connector)	(+): 400 mm, (-): 200 mm or Customized Length
Connector	MC4 - EVO2
Packing specification	31 pcs/Pallet; 806 pcs/40'HQ

OPERATING PARAMETERS

Power tolerance (W)	(0,+5)
Maximum system voltage (V)	1500
Maximum rated fuse current (A)	30
Current operating temperature (°C)	-40~+85 °F (-40~+85 °C)
Bifaciality	80±10 %

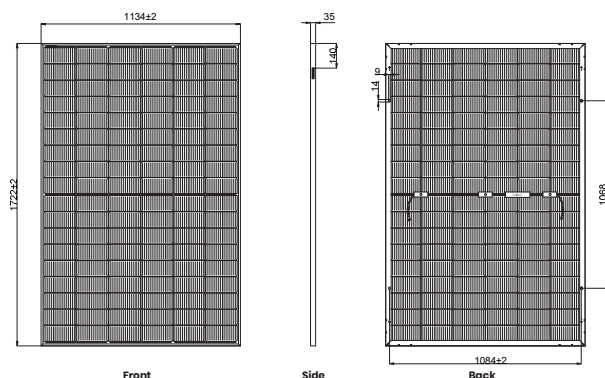
MECHANICAL LOADING

Front side maximum static loading (Pa)	5400
Rear side maximum static loading (Pa)	2400
Hailstone test (mm)	35

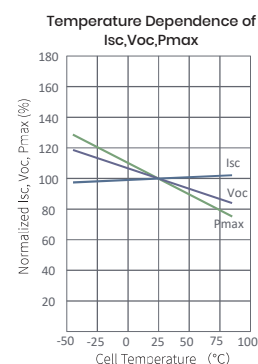
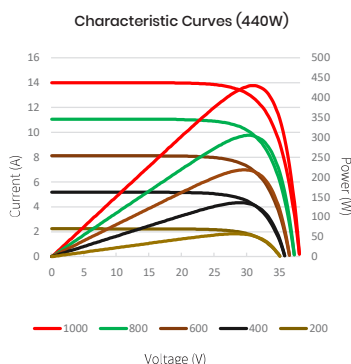
TEMPERATURE RATINGS

Temperature coefficient (P_{max})	-0.29 %/K
Temperature coefficient (V_{oc})	-0.28 %/K
Temperature coefficient (I_{sc})	+0.04 %/K
Nominal Module Operating Temperature	109.4±35.6 °F (43±2 °C)

MODULE DIMENSIONS (MM)



* The unmarked tolerance is ±1 mm
Length shown in mm



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