Power Beyond Solar

The World Leading PV and Smart Energy IoT Total Solution Provider

Trina Solar
Official Website

Vertex Product
information

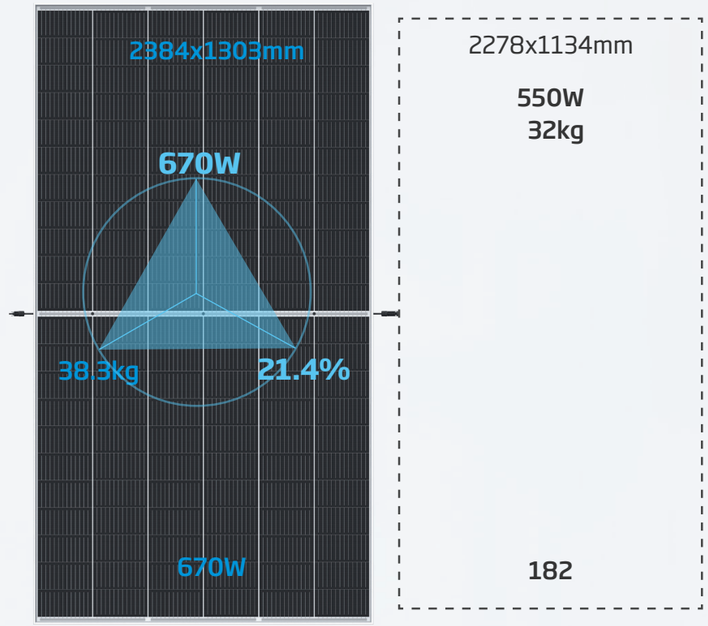
For more information regrading Vertex module,
please follow our social media accounts or
scan the QR codes to visit us at our website.

Vertex 670W+

HIGH EFFICIENT COST-SAVING

1.21 ¢US/W BOS reduction

Contents



Vertex 670W module size : 2384x1303x33mm
Weight: 38.3kg (Bifacial)

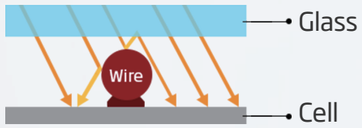
	182-P	**210-P**
Module power (W)	550	665 (Main power output)
Module efficiency	21.29%	21.4%
Module weight（kg）	32	38.3
Module length（mm）	2278	2384
Module width（mm）	1134	1303
Module area（m2）	2.58	3.1
Short-circuit current-Isc(A)	14.01	18.50
Open-circuit voltage-Voc(V)	50.11	46.1
Module per container(pcs)	720	594

Most advanced technology

Advanced 210 Technology Platform

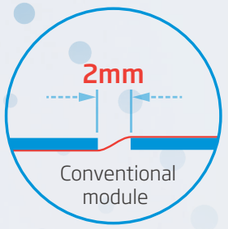
The most advanced silicon product in photovoltaic industry

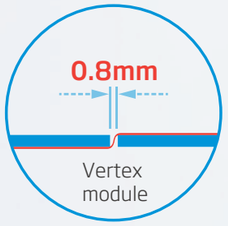
Multi-busbar Technology



Multi-busbar technology,improving optical utilization rate with higher electricity performance

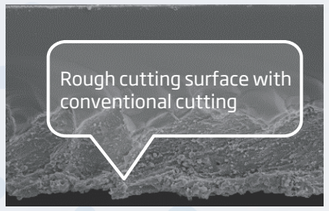
High-density Interconnection(HDI) Technology



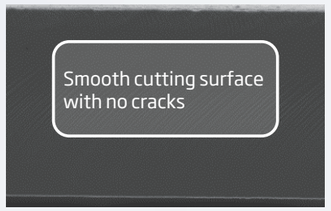


High density encapsulation technology, optimizing power output with good balance between reliability and efficiency, module efficiency increase 0.2~0.3%

Non-destructive Cutting(NDC) Technology



Cross-section from conventional cutting

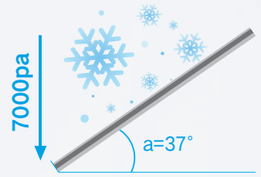


Cross-section from NDC

Achieving better cell strength, lower micro-cracks risk for better product reliability

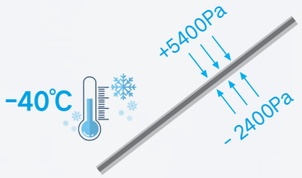
Mechanical Load Performance of Modules

Non-uniform snow-load test

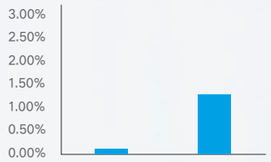


Module: Vertex 670W bifacial, dual-glass;
Test result: The test data demonstrate the critical snow-load of Trina Solar's five modules exceeded 6,600 Pa, getting up to 7,000Pa,equivalent to the pressure generated by 2.8 meters of snow, the power degradation of module was just 0.56%.

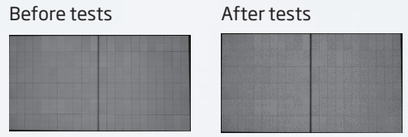
Extreme low-temperature test



power degradation



No variation in electroluminescence(EL)



Hail test

Trina test

35mm

IEC standard

25mm

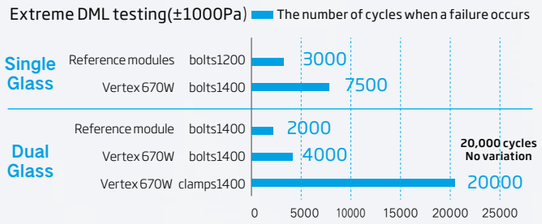
Single glass (hail test)

IEC standard		Trina test results	
Hail size	Power degradation	Hail size	Power degradation
25mm	< 3%	35mm	0.17%

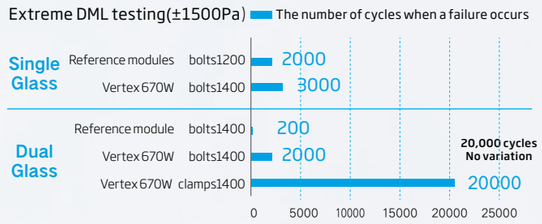
Dual glass (hail test)

IEC standard		Trina test results	
Hail size	Power degradation	Hail size	Power degradation
25mm	< 3%	35mm	0.53%

Rigorous dynamic mechanical load test



Test results: The appearance of the Vertex 670W module remained intact after 20,000 cycles based on the standard load of 1,000 Pa, the power degradation was 0.1%.



Test results: The number of failure cycles at 1500Pa is less than 1000Pa, but the Vertex 670W still showed excellent performance.

Wind tunnel test

Wind rating	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Wind speed	0.0-0.2	0.3-1.5	1.6-3.3	3.4-5.4	5.5-7.9	8.0-10.7	10.8-13.8	13.9-17.1	17.2-20.7	20.8-24.4	24.5-28.4	28.5-32.6	32.7-36.9	37.0-41.4	41.5-46.1	46.2-50.9	51.0-56.0	56.1-61.2

Test results: The 210 Vertex 670W module remains intact when wind speed reached 62.6m/s(225.4km/h or 140mph), which is equivalent to the low end of a Category 4 hurricane on the Staffir-Simpson scale.

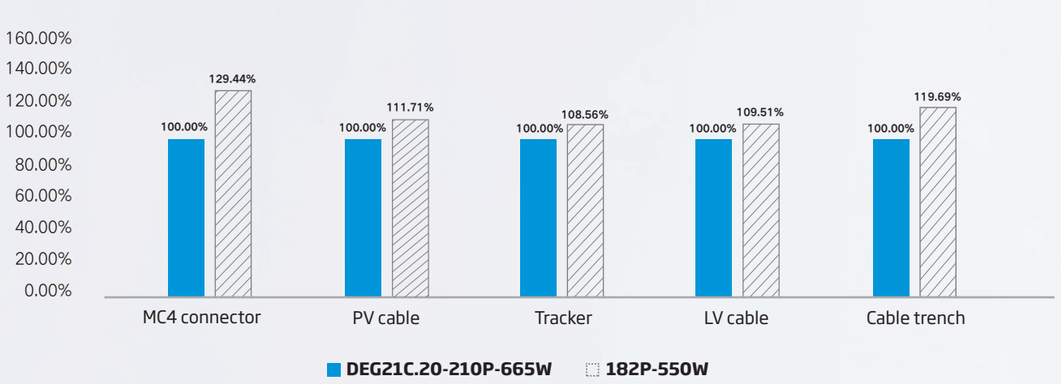
Ground-mounted power station BOS Cost Reduction 1.2¢US/W

Case study

Location: Brazil

Project Capacity: 3.2MW

BOS Comparison



	210P-665W	182P-550W
BOS $	0.1549	0.1670
BOS Gap $	-0.0121	BL

LCOE Comparison

Module type	210P-665W	182P-550W
LCOE ($/kWh)	0.03622	0.03677
LCOE Gap	-1.51%	BL

Vertex