ITEM OPPORTUNITY SYNOPSIS

Scouting Number:	2024-002
Name of the item to be scouted:	Solar Module
State item to be used in:	New Hampshire
Describe the Item:	
Please describe the item application/the end use of the item.	Photovoltaic Solar Module solar panels should have properties similar to those in the provided example of the Q-Cells product, the Q.Peak Duo XL-G10 panels
Supplier Information:	
Type of Supplier Being Sought (select from the list below):	
Manufacturer	x
Contract Manufacturer	
Distributor	
Other (Please Specify)	
Reason for Scouting Submission (select from the list below)	
2nd Supplier	
Price	
Re-Shore	
Past supplier no longer available	
New Product Startup	
BABA	x
Other (Please Specify)	
Summary of Technical Specifications and Performance Requirements:	
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Manufacturing of monocrystalline solar cells, thermally pre-stressed glass and framed with anodised aluminum
Provide dimensions / size / tolerances / performance specifications of the item	96.9" x 44.6" x 1.38" - 76.9lb -
List required materials needed to make the product, including materials of product components, if applicable	Glass, aluminum, monocrystalline photovoltaic cells
Are there applicable certification requirements?	
Yes	x
No	
Please explain:	BABA
Are there any applicable regulations that apply to the production of this item?	
Yes	x
No	
Please explain:	BABA
Are there any other standards / requirements?	
Yes	x
No	
Please explain:	Must be tier 1 bankable (https://www.renvu.com/Tier-1-Somust be tier 1 bankable (https://www.renvu.com/Tier-1-Solar-Panels-List-2023)
Additional Comments:	
Additional technical comments:	solar panels should have properties similar to those in the provided example of the Q-Cells product, the Q.Peak Duo XL-G10 panels
Volume and Pricing:	
Estimated Potential Business Volume (i.e. #units per day, month, year):	TBD
Estimated Target Price/Unit Cost Information:	$180ea
Delivery Requirements:	
When is it needed by? (Immediate, 30 days, 6 months, etc.)	Immediate
Describe packaging requirements (i.e. individually/group packaging, etc.)	none
Where will this item be shipped?	New Hampshire
Additional Comments:	
Is there other information you would like to include?	

Q.PEAK DUO XL-G10 SERIES

475 - 490 Wp | 156 Cells
21.2 % Maximum Module Efficiency

MODEL Q.PEAK DUO XL-10.3 / BFG

6 busbar
cell technology

12 busbar
cell technology

Bifacial energy yield gain of up to 20 %

Bifacial Q.ANTUM solar cells with zero gap cell layout make efficient use of light shining on the module rear-side for radically improved LCOE.

Low electricity generation costs

Q.ANTUM DUO Z combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology for higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 21.2%.

A reliable investment

Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty[1].

Enduring high performance

Long-term yield security with Anti LeTID Technology, Anti PID Technology[2], Hot-Spot Protect.

Frame for versatile mounting options

High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (2400 Pa).

Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behavior.

[1] See data sheet on rear for further information.
[2] APT test conditions according to IEC/TS 62804-1:2015 method B (–1500 V, 168 h) including post treatment according to IEC 61215-1-1 Ed. 2.0 (CD)

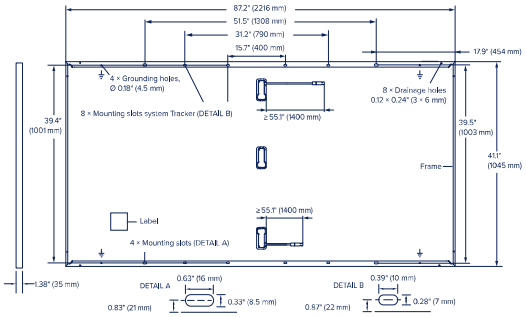
The ideal solution for:

Ground mounted
solar panels

Q.PEAK DUO XL-G10 SERIES

Mechanical Specification

Format	87.2 in × 41.1 in × 1.38 in (including frame) (2216 mm × 1045 mm × 35 mm)
Weight	64.2 lbs (29.1 kg)
Front Cover	0.08 in (2.0 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08 in (2.0 mm) semi-tempered glass
Frame	Anodized aluminum
Cell	6 × 26 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 55.1 in (1400 mm), (−) ≥ 55.1 in (1400 mm)
Connector	Stäubli MC4, Stäubli MC4-Evo2, Hanwha Q CELLS HQC4, IP68



Electrical Characteristics

POWER CLASS			475		480		485		490	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / −0 W)				BSTC*		BSTC*		BSTC*		BSTC*
Minimum — Power at MPP[1]	P_{MPP}	[W]	475	519.6	480	525.0	485	530.5	490	536.0
Minimum — Short Circuit Current[1]	I_{SC}	[A]	11.08	12.12	11.12	12.17	11.16	12.21	11.20	12.26
Minimum — Open Circuit Voltage[1]	V_{OC}	[V]	53.15	53.34	53.39	53.58	53.63	53.82	53.86	54.06
Minimum — Current at MPP	I_{MPP}	[A]	10.55	11.54	10.59	11.58	10.63	11.63	10.67	11.67
Minimum — Voltage at MPP	V_{MPP}	[V]	45.03	45.02	45.33	45.32	45.63	45.62	45.93	45.92
Minimum — Efficiency[1]	η	[%]	≥ 20.5		≥ 20.7		≥ 20.9		≥ 21.2	

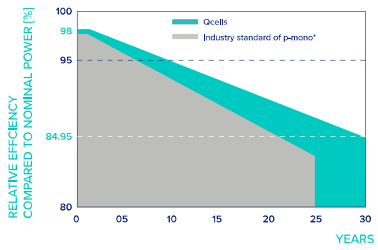
Bifaciality of P_{MPP} and I_{SC} 70 % ± 5 % • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

[1]Measurement tolerances P_{MPP} ±3 %; I_{SC}, V_{OC} ±5 % at STC: 1000 W/m²; *at BSTC: 1000 W/m² + φ × 135 W/m², φ = 70 % ± 5 %, 25 ± 2 °C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]						
Minimum — Power at MPP	P_{MPP}	[W]	357.6	361.4	365.1	368.9
Minimum — Short Circuit Current	I_{SC}	[A]	8.92	8.96	8.99	9.02
Minimum — Open Circuit Voltage	V_{OC}	[V]	50.27	50.49	50.72	50.95
Minimum — Current at MPP	I_{MPP}	[A]	8.30	8.34	8.37	8.40
Minimum — Voltage at MPP	V_{MPP}	[V]	43.06	43.35	43.63	43.92

[2]800 W/m², NMOT, spectrum AM 1.5

Qcells PERFORMANCE WARRANTY

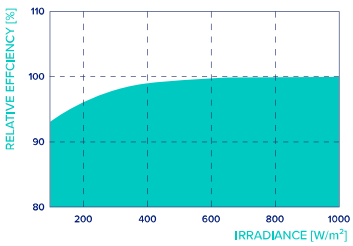


At least 98 % of nominal power during first year. Thereafter max. 0.45 % degradation per year. At least 93.95 % of nominal power up to 10 years. At least 84.95 % of nominal power up to 30 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organisation of your respective country.

*Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	−0.27
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.34	Nominal Module Operating Temperature	NMOT	[°F]	109 ± 5.4 (43 ± 3 °C)

Properties for System Design

Maximum System Voltage	V_{SYS}	[V]	1500	PV module classification	Class II
Maximum Series Fuse Rating		[A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 29[4]
Max. Design Load, Push / Pull[3]		[lbs / ft²]	75 (3600 Pa) / 33 (1600 Pa)	Permitted Module Temperature on Continuous Duty	−40 °F up to +185 °F (−40 °C up to +85 °C)
Max. Test Load, Push / Pull[3]		[lbs / ft²]	113 (5400 Pa) / 50 (2400 Pa)		

[3] See Installation Manual

[4] New Type is similar to Type 3 but with metallic frame

Qualifications and Certificates

Quality Controlled PV - TÜV Rheinland; UL 61730, CE-compliant, IEC 61215:2016, IEC 61730:2016, U.S. Patent No. 9,893,215 (solar cells)

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Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.

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