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Project:

**0360 Hampton Pools**  
High Street  
Hampton  
TW12 2ST

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Date:

**14/06/2024**

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Report:

**Planning Condition  
NS15 PV Panels**

Revision:

**0**

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WIMSHURST  
PELLERITI

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6 Putney Common, SW15 1HL

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**NS15 PV PANELS**

**Submission in response to Condition NS12 PV panels**

Prior to construction works commencing, plans, elevations and sections of the roof(s) showing the location of the proposed photovoltaic array(s) should be submitted for approval to the Local Planning Authority. The photovoltaic array(s) shall be implemented in accordance with the approved details and retained and properly maintained permanently thereafter. REASON: To safeguard the appearance of the completed development and to ensure that the development has an acceptable level of sustainability.

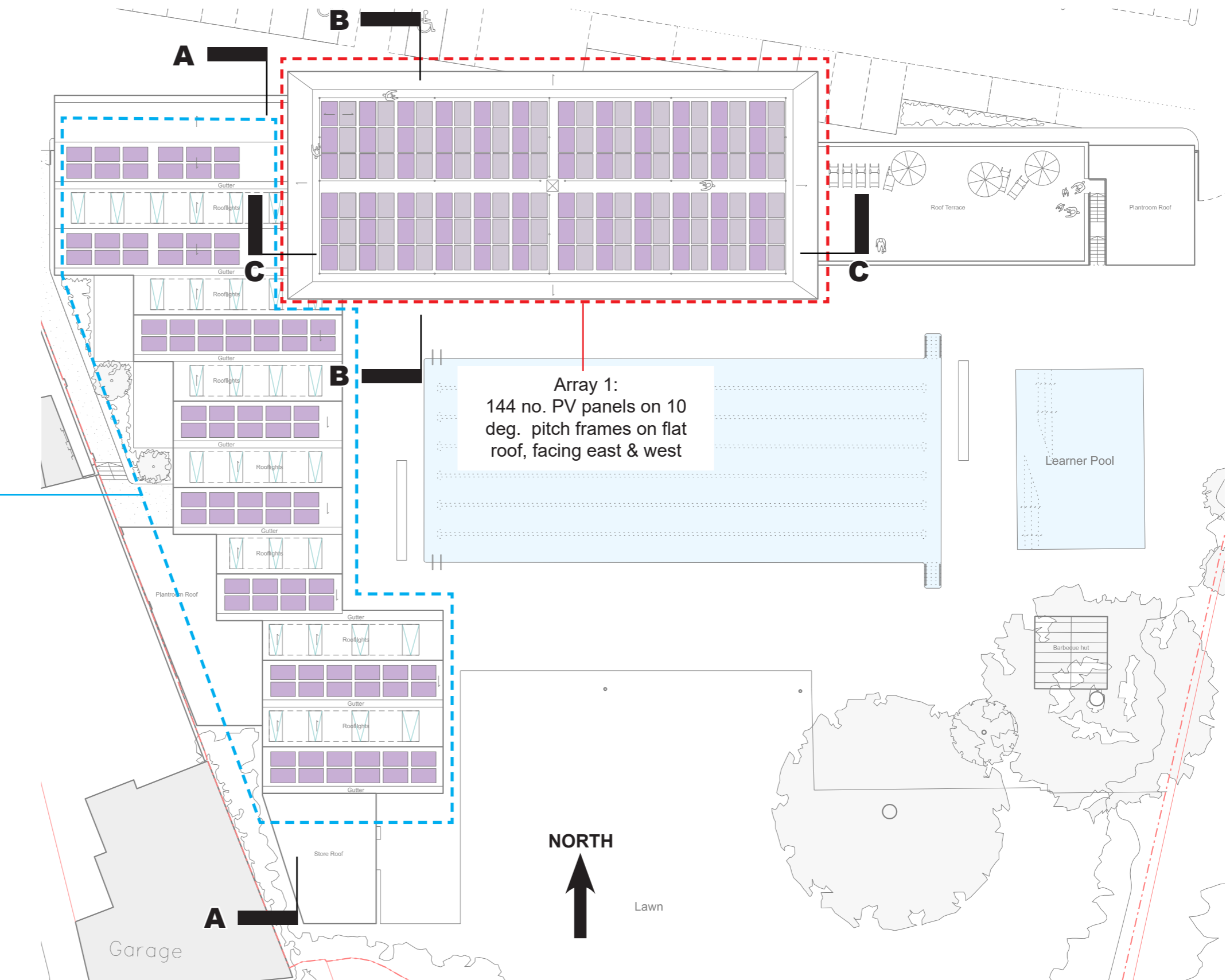
Array 2:  
90 no. PV panels on 17 deg. pitched roofs facing south

Array 1:  
144 no. PV panels on 10 deg. pitch frames on flat roof, facing east & west

**APPLICANT RESPONSE:**

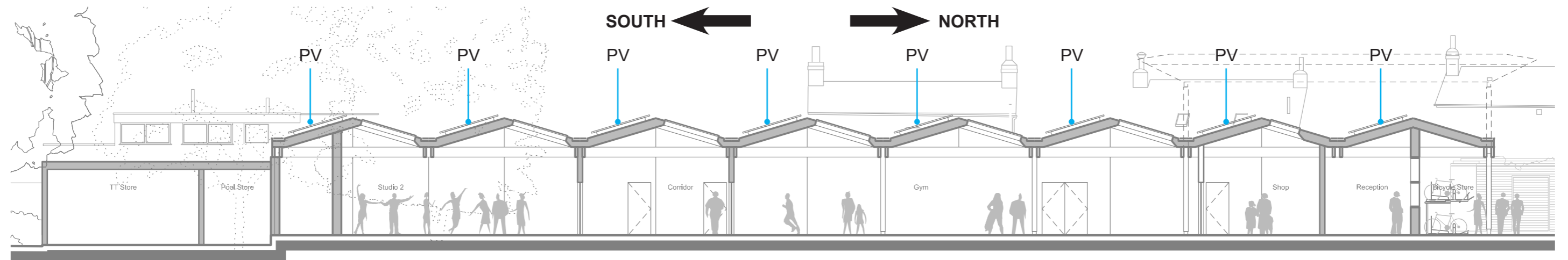
There are two types of PV arrays:  
1) On the new roof over the existing building  
2) On the new roof over the new gym & studio wing

The proposed PV panel specification is for 430W panels (see attached data sheet)

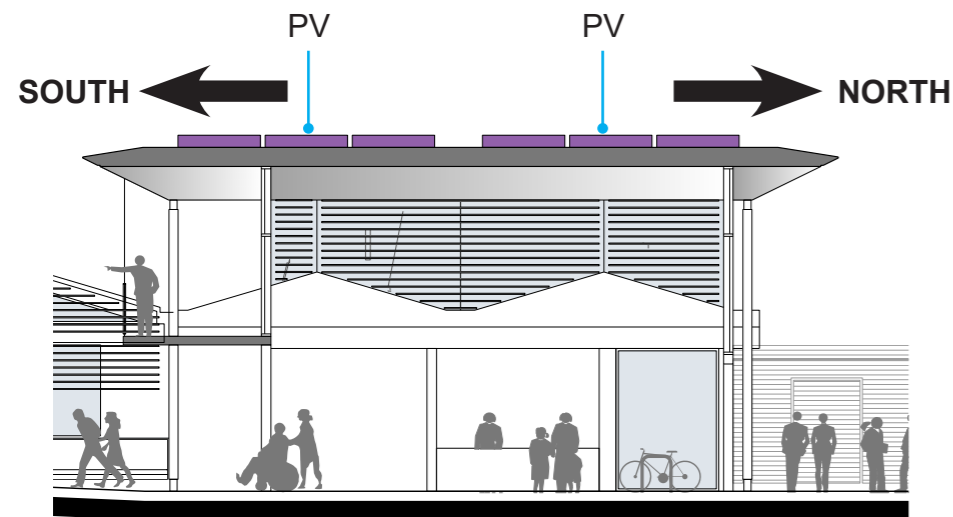


Roof Level Plan

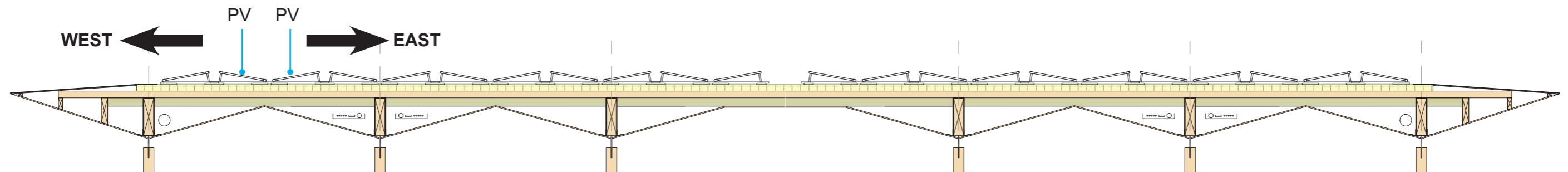
**NS15 PV PANELS**



Section A-A of Array 2: 90 no. PV panels on 17 deg. pitched roofs facing south



Section B-B of Array 1: 144 no. PV panels on 10 deg. pitch frames on flat roof, facing east & west



Detailed roof section C-C of Array 1: 144 no. PV panels on 10 deg. pitch frames on flat roof, facing east & west



SOLAR'S MOST TRUSTED



# REC ALPHA<sup>®</sup> PURE-R SERIES

## DATASHEET



COMPACT PANEL SIZE

9 A MODULE CURRENT  
COMPATIBLE WITH MLPE

430 W<sub>P</sub>  
20.7 W/FT<sup>2</sup>



ELIGIBLE



LEAD-FREE  
ROHS COMPLIANT

EXPERIENCE



PERFORMANCE



# REC ALPHOX<sup>®</sup> PURE-R SERIES

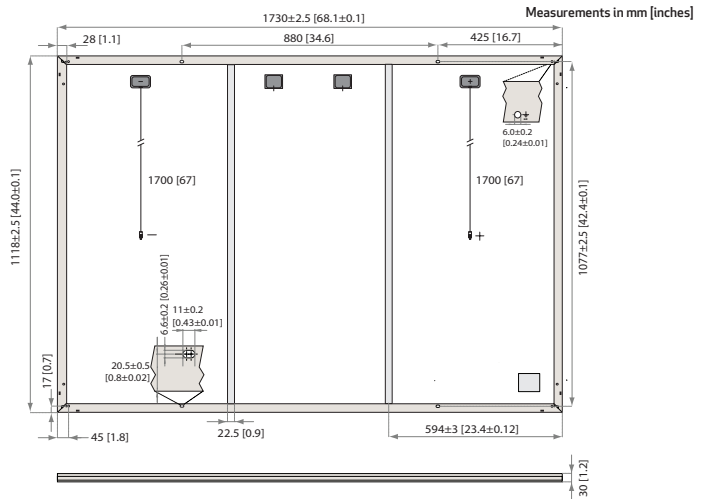
## DATASHEET



SOLAR'S MOST TRUSTED

### GENERAL DATA

Cell Type	80 half-cut bifacial REC heterojunction cells, with lead-free, gapless technology
Glass	0.13 in solar glass with anti-reflective surface treatment in accordance with EN12150
Backsheet	Highly resistant polymer (Black)
Frame	Anodized aluminum (Black)
Junction Box	4-part, 4 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790
Connectors	Stäubli MC4 PV-KBT4/KST4 (12AWG) in accordance with IEC 62852, IP68 only when connected
Cable	12 AWG solar cable, 66.9 in + 66.9 in in accordance with EN50618
Dimensions	68.1 x 44 x 1.2 in (20.8 ft <sup>2</sup> )
Weight	47.4 lb
Origin	Made in Singapore



### ELECTRICAL DATA

PRODUCT CODE\*: RECxxxAA Pure-R

	400	410	420	430
Power Output - P <sub>max</sub> (W <sub>p</sub> )	400	410	420	430
Watt Class Sorting - (W)	0/+10	0/+10	0/+10	0/+10
Nominal Power Voltage - V <sub>MPP1</sub> (V)	48.8	49.4	50.0	50.5
Nominal Power Current - I <sub>MPP</sub> (A)	8.20	8.30	8.40	8.52
Open Circuit Voltage - V <sub>OC</sub> (V)	58.9	59.2	59.4	59.7
Short Circuit Current - I <sub>SC</sub> (A)	8.80	8.84	8.88	8.91
Power Density (W/ft <sup>2</sup> )	19.2	19.7	20.2	20.7
Panel Efficiency (%)	20.7	21.2	21.8	22.3

STC

	305	312	320	327
Power Output - P <sub>max</sub> (W <sub>p</sub> )	305	312	320	327
Nominal Power Voltage - V <sub>MPP</sub> (V)	46.0	46.6	47.1	47.6
Nominal Power Current - I <sub>MPP</sub> (A)	6.64	6.70	6.80	6.88
Open Circuit Voltage - V <sub>OC</sub> (V)	55.5	55.8	56.0	56.3
Short Circuit Current - I <sub>SC</sub> (A)	7.11	7.16	7.2	7.24

NMOT

Values at standard test conditions (STC: air mass AM1.5, irradiance 1000 W/m<sup>2</sup>, temperature 77°F (25°C)), based on a production spread with a tolerance of P<sub>max</sub>, V<sub>OC</sub> & I<sub>SC</sub> ±3% within one watt class. Nominal module operating temperature (NMOT: air mass AM1.5, irradiance 800 W/m<sup>2</sup>, temperature 68°F (20°C), windspeed 3.3 ft/s (1 m/s)). \*Where xxx indicates the nominal power class (P<sub>max</sub>) at STC above.

### MAXIMUM RATINGS

Operational Temperature	-40 °F - 185 °F
System Voltage	1000 V
Maximum Test Load (front)	+7000 Pa (146 lb/ft <sup>2</sup> )
Maximum Test Load (rear)	-4000 Pa (83.4 lb/ft <sup>2</sup> )
Max Series Fuse Rating	25 A
Max Reverse Current	25 A

\* See installation manual for mounting instructions.  
Design load = Test load / 1.5 (safety factor)

### TEMPERATURE RATINGS\*

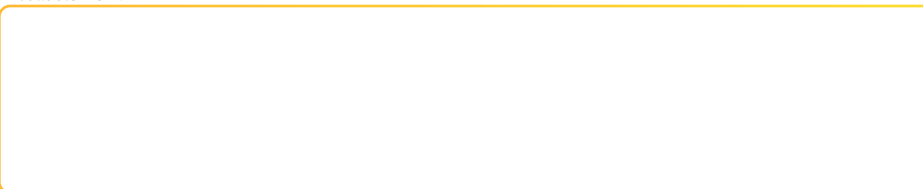
Nominal Module Operating Temperature	44 °C ± 2 °C
Temperature coefficient of P <sub>max</sub>	-0.24% / K
Temperature coefficient of V <sub>OC</sub>	-0.24% / K
Temperature coefficient of I <sub>SC</sub>	0.04% / K

\*The temperature coefficients stated are linear values

### DELIVERY INFORMATION

Panels per Pallet	33
Panels per 40 ft GP/high cube container	858 (26 Pallets)

Available from:



Founded in 1996, REC Group is an international pioneering solar energy company dedicated to empowering consumers with clean, affordable solar power. As Solar's Most Trusted, REC is committed to high quality, innovation, and a low carbon footprint in the solar materials and solar panels it manufactures. Headquartered in Norway with operational headquarters in Singapore, REC also has regional hubs in North America, Europe, and Asia-Pacific.

### CERTIFICATIONS

IEC 61215:2021; IEC61730:2016; UL61730	
ISO 11925-2	Ignitability (EN 13501-1 Class E)
IEC 62716	Ammonia Resistance
IEC 61701	Salt Mist (SM6)
IEC 61215:2016	Hailstone (35mm)
UL 61730	Fire Type 2
IEC 62321	Lead-free acc. to RoHS EU 863/2015
ISO 14001; ISO9001; IEC45001; IEC62941	



Declare.

Living building challenge compliant

Take-e-way WEEE-compliant scheme

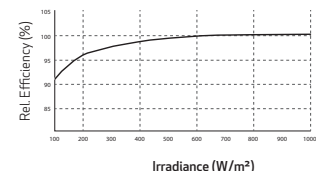
### WARRANTY

	Standard	REC ProTrust	
Installed by an REC Certified Professional	No	Yes	Yes
System Size	All	<25 kW	25-500 kW
Product Warranty (yrs)	20	25	25
Power Warranty (yrs)	25	25	25
Labor Warranty (yrs)	0	25	10
Power in Year 1	98%	98%	98%
Annual Degradation	0.25%	0.25%	0.25%
Power in Year 25	92%	92%	92%

The REC ProTrust Warranty is only available on panels purchased through an REC Certified Solar Professional installer. Warranty conditions apply. See [www.recgroup.com](http://www.recgroup.com) for more details

### LOW LIGHT BEHAVIOR

Typical low irradiance performance of module at STC:



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www.recgroup.com



Specifications subject to change without notice.

Ref: PM-DS-12-06-Rev-4-3-2024