





REC N-PEAK BLACK SERIES

PREMIUM FULL BLACK MONO N-TYPE SOLAR PANELS WITH WORLD-CLASS PERFORMANCE



MONO N-TYPE: THE MOST EFFICIENT C-SI TECHNOLOGY



NO LIGHT INDUCED DEGRADATION



SUPER-STRONG FRAME UP TO 7000 PA SNOW LOAD



IDI E

FLEXIBLE INSTALLATION OPTIONS



IMPROVED PERFORMANCE IN SHADED CONDITIONS



GUARANTEED HIGH POWER OVER LIFETIME

325 WP

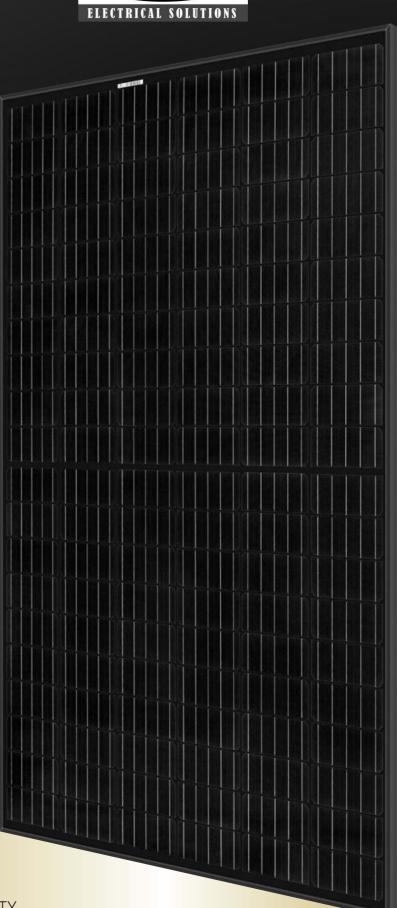
POWER

25

YEAR PRODUCT WARRANTY

25

YEAR POWER WARRANTY



GENERAL DATA

1675±2.5 [65.94 ±0.1] 28 [1.1] 910 [35.8] 382.5 [15.05] 1000 [39] + 997±2.5 [39.25 ±0.1] $6.6\pm0.2 [0.26\pm0.08]$ 956 [37.64] 11±0.2 $[0.43 \pm 0.8]$ 20.5±0.5 [0.7] $[0.78 \pm 0.08]$ 1200 [47] 171 600 ±1 [23.6 ±0.04] 22.5 [0.9] 45 [1.5] 30 [1.18]

Measurements in mm [in]

ELECTRICAL DATA @ STC	Product code*: RECxxxNP Black			
Nominal Power - P _{MPP} (Wp)	310	315	320	325
Watt Class Sorting - (W)	-0/+5	-0/+5	-0/+5	-0/+5
Nominal Power Voltage - V _{MPP} (V)	33.6	33.9	34.2	34.4
Nominal Power Current - I _{MPP} (A)	9.24	9.31	9.37	9.46
Open Circuit Voltage - V _{oc} (V)	40.2	40.5	40.8	41.0
Short Circuit Current-I _{SC} (A)	10.01	10.09	10.18	10.27
Panel Efficiency (%)	18.6	18.9	19.2	19.5

Values at standard test conditions (STC: air mass AM1.5, irradiance 1000 W/m², temperature 25°C), based on a production spread with a tolerance of $V_{OC} \& I_{SC} \pm 3\%$ within one watt class. *Where xxx indicates the nominal power class (P_{MPP}) at STC above

ELECTRICAL DATA @ NMOT	Product code*: R	Product code*: RECxxxNP Black		
Nominal Power - P _{MPP} (Wp)	234	238	241	245
Nominal Power Voltage - V _{MPP} (V)	31.1	31.4	31.7	31.9
Nominal Power Current - I _{MPP} (A)	7.51	7.56	7.62	7.69
Open Circuit Voltage - V _{oc} (V)	37.3	37.5	37.8	38.0
$ShortCircuitCurrent-I_{SC}(A)$	8.01	8.07	8.14	8.22

Nominal module operating temperature (NMOT: air mass AM1.5, irradiance 800 W/m², temperature 20°C, windspeed 1 m/s)

* Where xxx indicates the nominal power class (P_{MPP}) at STC above.

120 half-cut mono c-Si n-type cells Cell type: 6 strings of 20 cells in series 3.2 mm solar glass with Glass: anti-reflection surface treatment Backsheet: Highly reflective and resistant polymeric construction (black) Frame: Anodized aluminum (black) 3-part, 3 bypass diodes, IP67 rated Junction box: in accordance with IEC 62790 Cable: 4 mm² solar cable, 1.0 m + 1.2 m in accordance with EN 50618 Stäubli MC4 PV-KBT4/KST4 (4 mm²) Connectors: in accordance with IEC 62852

IP68 only when connected

Made in Singapore

MECHANICAL DATA

Origin:

Dimensions 1675 x 997 x 30 mm $1.67 \, \text{m}^2$ Area: 18 kg Weight:

MAXIMUM RATINGS	
Operational temperature:	-40 +85°C
Maximum system voltage:	1000 V
Design load (+): snow Maximum test load (+):	4666 Pa (475 kg/m²)* 7000 Pa (713 kg/m²)*
Design load (-): wind Maximum test load (-):	1600 Pa (163 kg/m²)* 2400 Pa (245 kg/m²)*
Max series fuse rating:	25 A
Max reverse current:	25 A

Calculated using a safety factor of 1.5 *See installation manual for mounting instructions

	TEMPERATURE RATINGS *	
<u>4</u> 5	Nominal Module Operating Temperature:	44°C (±2°C)
1.9	Temperature coefficient of P_{MPP} :	-0.35 %/°C
69	Temperature coefficient of V _{oc} :	-0.27 %/°C
3.0	Temperature coefficient of I _{SC} :	0.04%/°C
22	*The temperature coefficients stated a	are linear values

CERTIFICATIONS















WARRANTY

25 year product warranty

25 year linear power output warranty, maximum degression in performance of 0.5% p.a., giving 86% at end of year 25.

See warranty conditions for further details

take way take-e-way WEEE-compliant recycling scheme

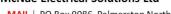
ELECTRICAL SOLUTIONS

McNae Electrical Solutions Ltd

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LOW LIGHT BEHAVIOUR Typical low irradiance performance of module at STC % Rel. Efficiency Irradiance (W/m²)



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