RUNERGY

HY-DH144N8

540-590W

22.8%	N-Type	144 Pieces
Max. Efficiency	**Bifacial** & Dual Glass	Half-Cell

High Conversion Efficiency

Module efficiency up to 22.8% based on N-Type wafer and advanced N-Type cell technology

Excellent Energy Yield

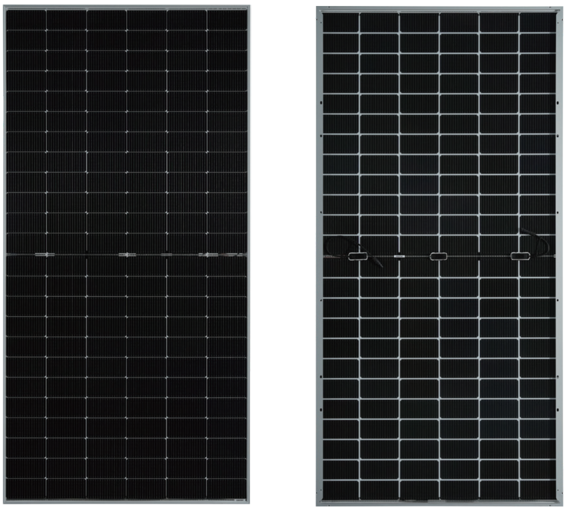
More power output in field operation due to better thermal behaviors, weak-light performance and bifaciality

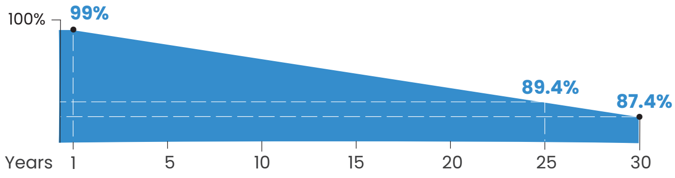
Outstanding Anti-degradation

Unsusceptible to LID, LeTID and less annual degradation due to special charateristics of N-Type

Quality Guarantee

High module quality ensures long-term reliability





Runergy N-Type Dual Glass Product Performance Warranty

- **12 Years** warranty for materials and workmanship
- **30 Years** warranty for extra linear power output
- 1st year <**1%**, annual degradation <**0.4%**

IEC61215 / IEC61730 / UL61730 / IEC61701 / IEC62716 / IEC60068 / ISO9001 / ISO14001 / ISO45001

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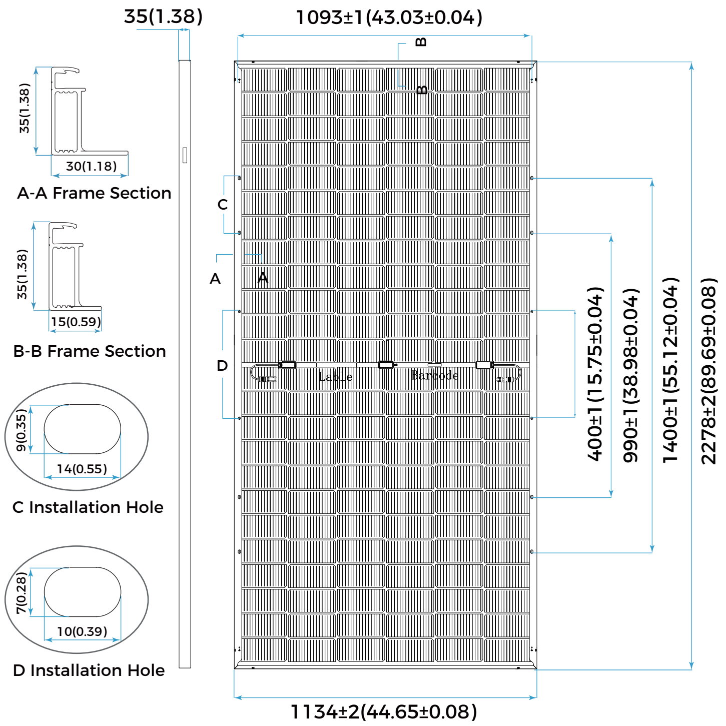
HY-DH144N8-540/590

Mechanical Parameters

Solar Cell	Mono N-Type 182mm
No. of Cells	144 (6 × 24)
Dimensions	2278 × 1134 × 35mm(89.69× 44.65 × 1.38in.)
Weight	32.7kg(72.09lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm² (IEC), 12 AWG(UL) +400/-200mm (+15.75/-7.87in.) or customized
Connector	QC4.10 plus, RY01 or similar
Front Cover	2.0mm (0.079in.)semi-tempered AR glass
Back Cover	2.0mm (0.079in.)semi-tempered glass
Container	31 pcs/Pallet, 558 pcs/40' HQ

Unit: mm(inch)



Operating Parameters

Max. System Voltage	DC 1500V（IEC/UL）
Operating Temperature	-40˚C ~ +85˚C(-40℉ ~ +185℉)
Max. Fuse Rating	30A
Frontside Max. Loading	5400Pa(112lb/ft²)
Backside Max. Loading	2400Pa(50lb/ft²)
Bifaciality	80%±10%
Fire Resistance	UL Type 29

Electrical Characteristics - STC

Irradiance 1000 W/m², cell temperature 25 ˚C, AM1.5, , Test uncertainty for Pmax: ±3%

Maximum Power at STC (Pmax/W)	590	585	580	575	570	565	560	555	550	545	540
Power Tolerance (W)	0 ~ +5										
Optimum Operating Voltage (Vmp/V)	44.43	44.22	44.04	43.83	43.62	43.43	43.25	43.06	42.87	42.68	42.49
Optimum Operating Current (Imp/A)	13.28	13.23	13.17	13.12	13.07	13.01	12.95	12.89	12.83	12.77	12.71
Open Circuit Voltage (Voc/V)	52.37	52.16	51.97	51.74	51.52	51.31	51.11	50.90	50.69	50.48	50.27
Short Circuit Current (Isc/A)	13.89	13.85	13.80	13.75	13.70	13.65	13.60	13.55	13.50	13.45	13.40
Module Efficiency	22.8%	22.6%	22.5%	22.3%	22.1%	21.9%	21.7%	21.5%	21.3%	21.1%	20.9%

Electrical Characteristics - NMOT

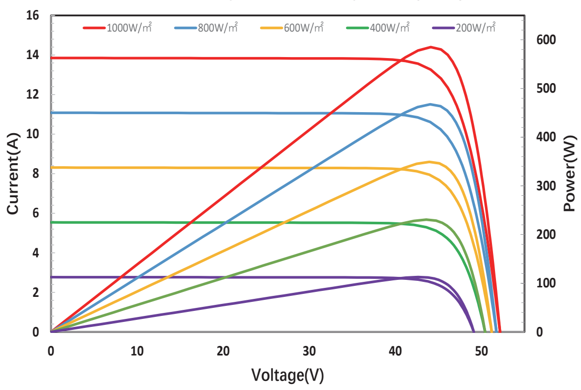
Irradiance 800 W/m², ambient temperature 20 ˚C, AM1.5, wind speed 1 m/s.

Maximum Power at NMOT (Pmax/W)	451.9	448.1	444.2	440.4	436.6	432.7	429.0	425.1	421.3	417.4	413.6
Optimum Operating Voltage (Vmp/V)	42.54	42.34	42.17	41.97	41.77	41.58	41.41	41.23	41.05	40.87	40.68
Optimum Operating Current (Imp/A)	10.62	10.58	10.53	10.49	10.45	10.41	10.36	10.31	10.26	10.21	10.17
Open Circuit Voltage (Voc/V)	50.14	49.94	49.76	49.54	49.33	49.13	48.94	48.74	48.54	48.33	48.13
Short Circuit Current (Isc/A)	11.20	11.16	11.12	11.08	11.04	11.00	10.96	10.92	10.88	10.84	10.80

Rearside Power Gain (Reference to 585W Front)

Rearside Power Gain	5%	15%	25%
Maximum Power (Pmax/W)	614	673	731
Optimum Operating Voltage (Vmp/V)	44.22	44.32	44.32
Optimum Operating Current (Imp/A)	13.89	15.18	16.50
Open Circuit Voltage (Voc/V)	52.16	52.26	52.26
Short Circuit Current (Isc/A)	14.54	15.90	17.28
Module Efficiency	23.8%	26.1%	28.3%

Current-Voltage & Power-Voltage Curve (585W)



Temperature Characteristics

Nominal Module Operating Temperature	42 ± 2 ˚C
Nominal Cell Operating Temperature	45 ± 2 ˚C
Temperature Coefficient of Pmax	-0.29%/˚C
Temperature Coefficient of Voc	-0.25%/˚C
Temperature Coefficient of Isc	0.045%/ ˚C

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Specifications included in this datasheet are subject to change without notice.