

UNI T

UE440T-54HBD

420-440W

**N-type TOPCon Bifacial Ultra black
Dual Glass Solar Module**



Positive power tolerance
(0-+5W) guaranteed



High module conversion efficiency
(up to 22.53%)



Slower power degradation
enabled by low LID Mono PERC technology: first year <1%,
0.40% year 2-30



Solid PID resistance
ensured by solar cell process optimization and careful
module BOM selection



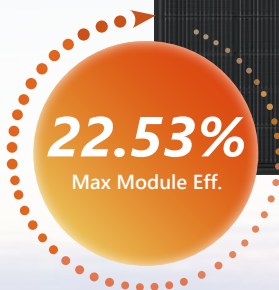
Reduced resistive loss
with lower operating current



Higher energy yield
with lower operating temperature



Reduced hot spot risk
with lower operating electrical design and lower operating
current



Quality Management System and Product Certification

IEC 61215, IEC 61730, UL 61730

ISO9001: 2015: ISO Quality Management System.

ISO14001: 2015: ISO Environmental Management System.

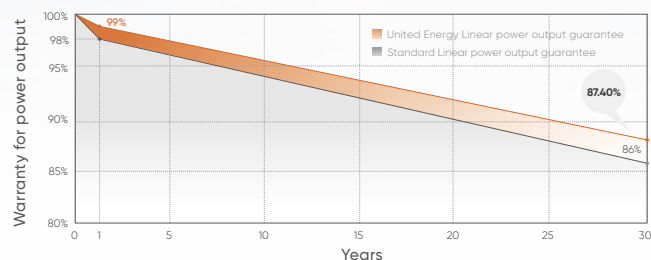
ISO45001: 2018: Occupation Health and Safety.

IEC62941: Guideline for module design qualification and type approval.

Quality Guarantee

15 year Materials Warranty

30 year Power Warranty



Electrical Parameters(STC*)

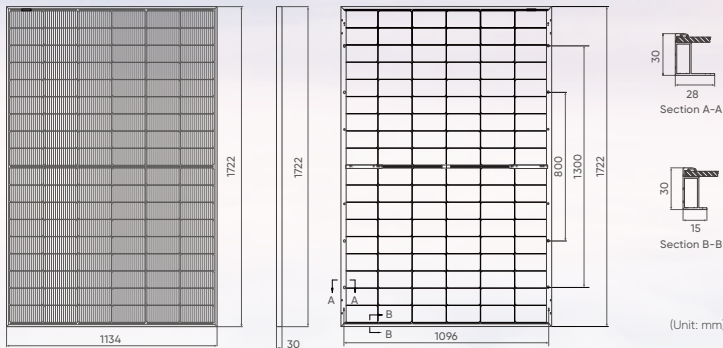
Module Type	420	425	430	435	440
Maximum power (Pmax/W)	420	425	430	435	440
Open Circuit Voltage (Voc/V)	38.49	38.73	38.96	39.20	39.44
Short Circuit Current (Isc/A)	13.99	14.06	14.13	14.20	14.27
Voltage at Maximum power (Vmpp/V)	31.63	31.84	32.04	32.25	32.45
Current at Maximum Power (Imp/A)	13.28	13.35	13.42	13.49	13.56
Module Efficiency(%)	21.51	21.76	22.02	22.28	22.53

Bifacial Output Rear side Power Gain

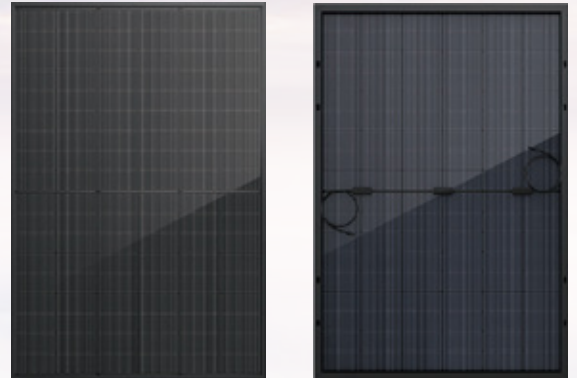
5%	Maximum power (Pmax/W)	441	446	452	457	462
	Module Efficiency STC (%)	22.58	22.85	23.12	23.36	23.63
15%	Maximum power (Pmax/W)	483	489	495	500	506
	Module Efficiency STC (%)	24.73	25.03	25.32	25.59	25.88
25%	Maximum Power (Pmax/W)	525	531	538	544	550
	Module Efficiency STC (%)	26.89	27.21	27.53	27.82	28.14

1. Standard Test Conditions [STC]: irradiance 1000W/m²; AM 1.5; ambient temperature 25°C according to EN 60904-3;
2. Tolerance of Pm: 0~+5W, Measuring uncertainty of power: ±3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: ±3%.

Design(mm)



Product Image



Design(mm)

Solar Cells	N-type Mono
No. of Cells	108 (6×18)
Dimensions	1722 × 1134 × 30mm
Weight	23.5kg
Glass	Front: 2.0mm coated semi-tempered glass; Back: 2.0mm semi-tempered glass
Frame	Anodized aluminium alloy
Junction Box	Ip68 rated (3 Bypass Diodes)
Output Cables	4mm ² , 300mm (+) / 300mm (-), Length can be customized
Connectors	Mc4 compatible
Mechanical load test	5400Pa
Packaging	36pcs/box, 936pcs/40'HQ

Operating Characteristics

Operating Module Temperature	-40°C to +85°C
Maximun System Voltage	1500V DC (IEC)
Maximun Series Fuse Rating	30A
Power Tolerance	0/+5W

Temperature Characteristics

Nominal Operating Temperature (NMOT)	45±2°C
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.045%/°C