


illuminate
USA

ILLUMINA 5 540~560M

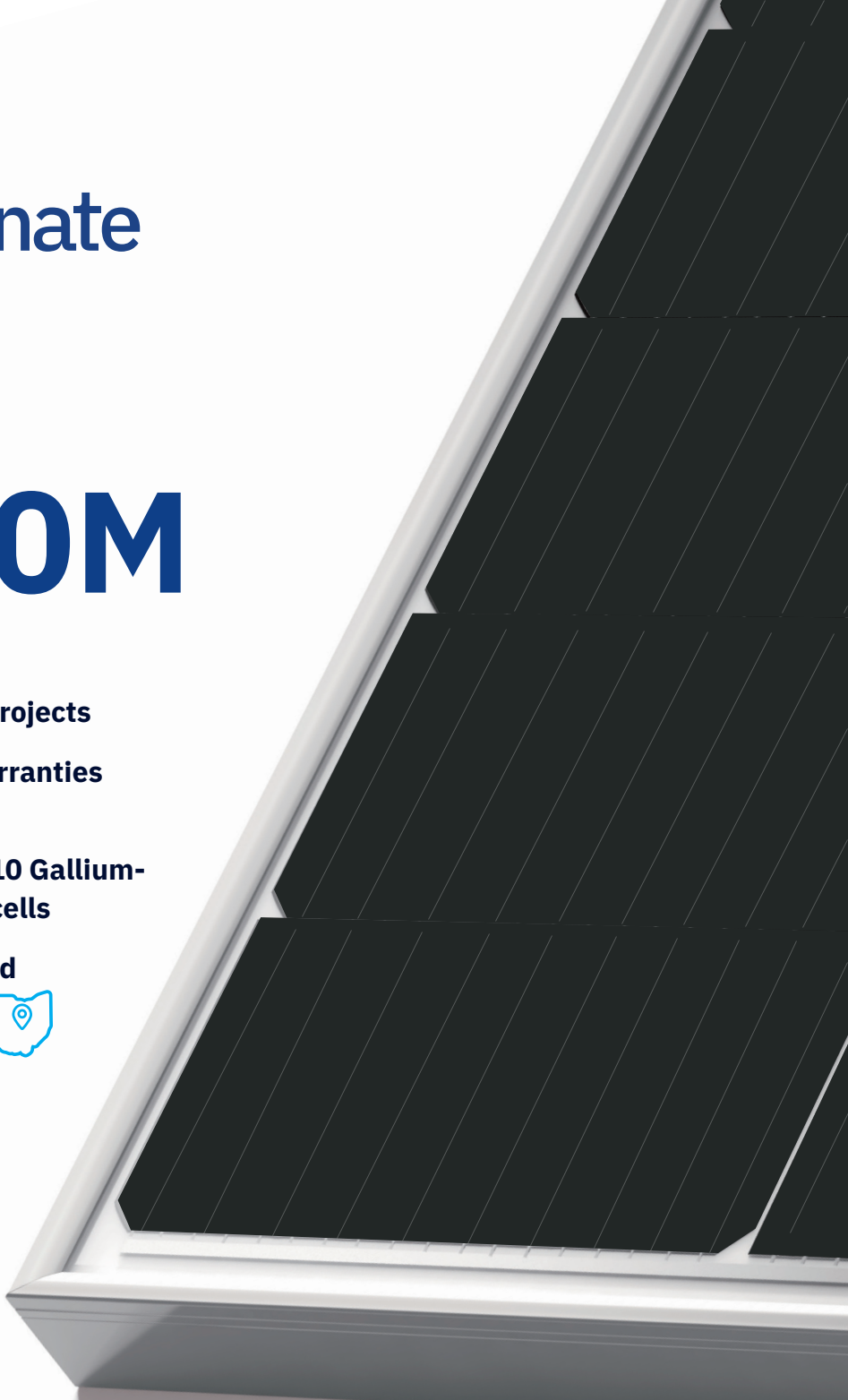
- The optimal solution for large utility projects
- High-quality modules, testing and warranties ensure long term reliability
- Advanced module technology with M10 Gallium-doped wafer and 10-busbar half-cut cells
- Globally validated bifacial energy yield
- Assembled in Pataskala, Ohio, USA 



12-year warranty
for materials and processing



30-year warranty
for extra linear power output



21.7%
MAX MODULE
EFFICIENCY

0~3%
POWER
TOLERANCE

<2%
FIRST YEAR
POWER DEGRADATION

0.45%
YEAR 2-30
POWER DEGRADATION

HALF-CELL
LOWER OPERATING
TEMPERATURE

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO 9001:2015 Quality Management Systems

ISO 14001:2015 Environmental Management Systems

ISO 45001: 2018 Occupational Health and Safety Management Systems

IEC 62941:2019 Terrestrial Photovoltaic (PV) Modules - Quality System for PV Module Manufacturing

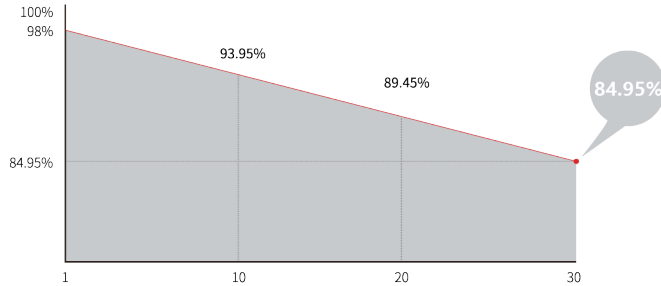
ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories



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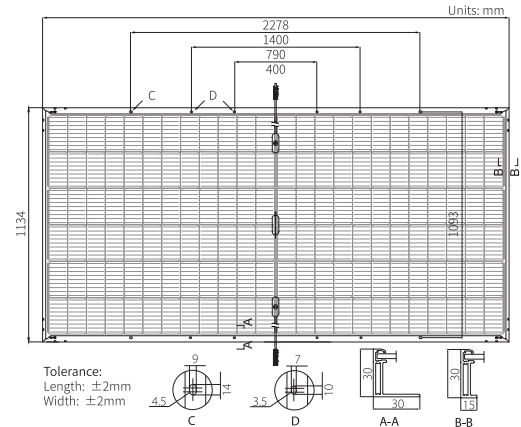
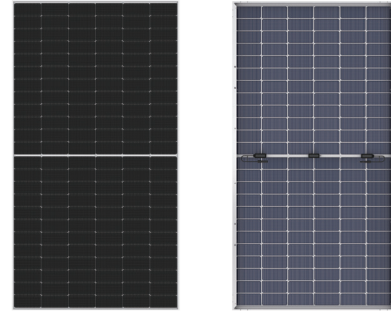
Illuminate Performance Warranty

30-Year Power Warranty



Mechanical Parameters

Cell Orientation	144 (6X24)
Junction Box	IP68, three diodes
Output Cable	4mm ² , +400, -200mm/±1400mm; length can be customized
Glass	Dual glass, 2.0+2.0mm heat-strengthened glass
Frame	Anodized aluminum alloy frame
Weight	31.8kg (70.1lbs)
Dimension	2278X1134X30mm
Packaging	576pcs per 40' HC



Electrical Characteristics

STC: AM1.5 1000W/m² 25° C

NOCT: AM1.5 800W/m² 20°C 1m/s

Test uncertainty for Pmax: ±3%

Module Type	IL5-72HBD-540M		IL5-72HBD-545M		IL5-72HBD-550M		IL5-72HBD-555M		IL5-72HBD-560M	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	540	403.6	545	407.4	550	411.1	555	414.8	560	418.6
Open Circuit Voltage (Voc/V)	49.50	46.54	49.65	46.68	49.80	46.82	49.95	46.97	50.10	47.11
Short Circuit Current (Isc/A)	13.85	11.17	13.92	11.23	13.99	11.29	14.05	11.34	14.10	11.38
Voltage at Maximum Power (Vmp/V)	41.65	38.86	41.80	39.00	41.95	39.14	42.10	39.28	42.25	39.42
Current at Maximum Power (Imp/A)	12.97	10.39	13.04	10.45	13.12	10.51	13.19	10.56	13.26	10.62
Module Efficiency (%)	20.9		21.1		21.3		21.5		21.7	

Electrical Characteristics with different rear side power gain (reference to 550W front)

Pmax/W	Voc/V	Isc/A	Vmp/V	Imp/A	Pmax gain
578	49.80	14.68	41.95	13.77	5%
605	49.80	15.38	41.95	14.43	10%
633	49.90	16.08	42.05	15.08	15%
660	49.90	16.78	42.05	15.74	20%
688	49.90	17.48	42.05	16.39	25%

Operating Parameters

Operational Temperature	-40°C ~+85°C
Power Output Tolerance	0~3%
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Bifaciality	70±5%
Fire Rating	UL type 29, IEC Class C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.265%/°C
Temperature Coefficient of Pmax	-0.340%/°C

Specifications included in this datasheet are subject to change without notice. Illuminate USA reserves the right of final interpretation. (IL20251204)