


illuminate
USA

ILLUMINA 5

575~605M

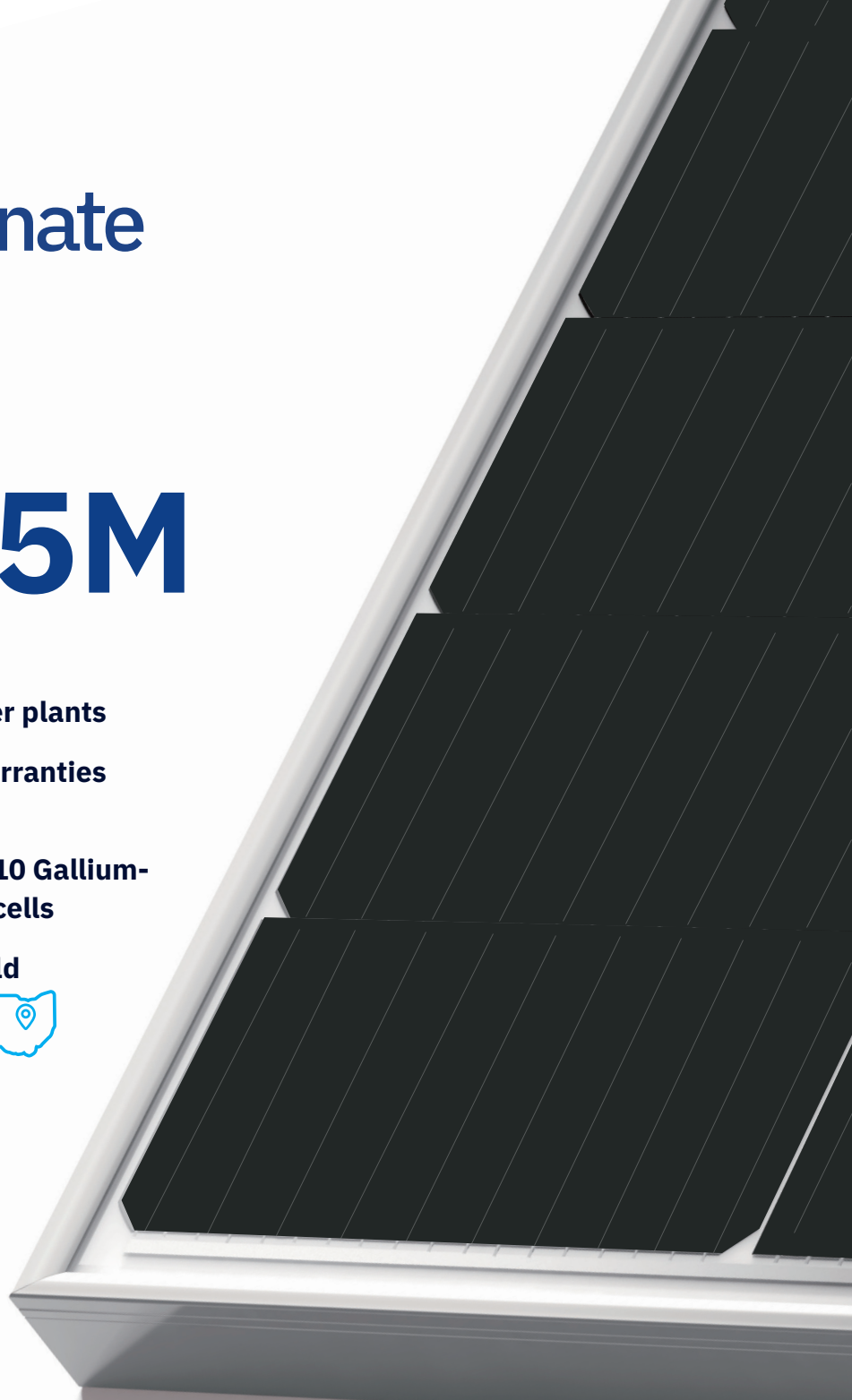
- The best solution for ultra-large power plants
- High-quality modules, testing and warranties ensure long term reliability
- Advanced module technology with M10 Gallium-doped wafer and 10-busbar half-cut cells
- Globally validated bifacial energy yield
- Assembled in Pataskala, Ohio, USA 



12-year warranty
for materials and processing



30-year warranty
for extra linear power output



21.6%
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

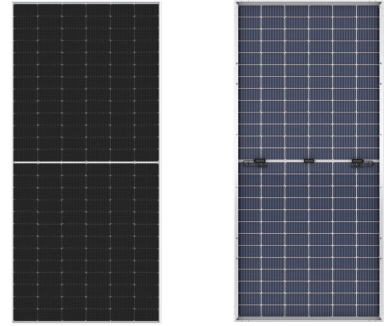
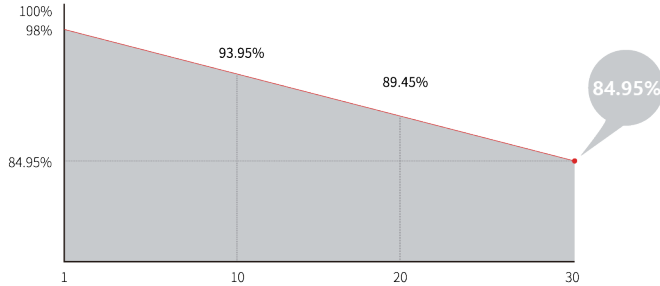
ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories



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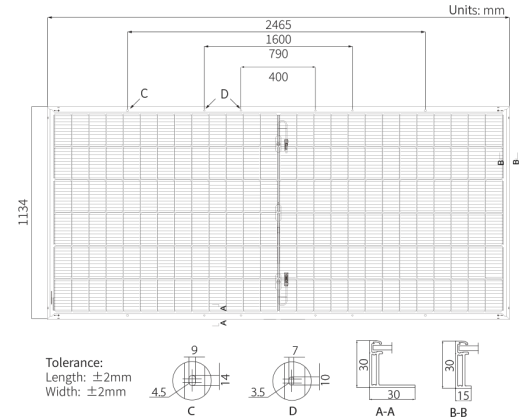
Illumina Performance Warranty

30-Year Power Warranty



Mechanical Parameters

Cell Orientation	156 (2x78)
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	35.3kg (77.8lbs)
Dimension	2465X1134X30mm
Packaging	36 pcs per pallet / 144 pcs per 20' GP / 504 pcs per 53' DV (USA only)



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	IL5-78HBD-575M		IL5-78HBD-580M		IL5-78HBD-585M		IL5-78HBD-590M		IL5-78HBD-595M		IL5-78HBD-600M		IL5-78HBD-605M	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	575	430.5	580	433.9	585	437.3	590	441.0	595	444.7	600	448.5	605	452.2
Open Circuit Voltage (Voc/V)	53.3	50.12	53.45	50.26	53.60	50.40	53.75	50.54	53.90	50.68	54.05	50.82	54.20	50.96
Short Circuit Current (Isc/A)	13.72	11.07	13.78	11.12	13.84	11.17	13.89	11.21	13.96	11.27	14.03	11.33	14.09	11.37
Voltage at Maximum Power (Vmp/V)	44.78	41.79	44.94	41.93	45.10	42.07	45.25	42.21	45.39	42.35	45.53	42.48	45.67	42.61
Current at Maximum Power (Imp/A)	12.84	10.30	12.91	10.35	12.98	10.40	13.04	10.45	13.11	10.50	13.18	10.56	13.25	10.61
Module Efficiency (%)	20.5		20.7		20.9		21.1		21.3		21.5		21.6	

Electrical Characteristics with different rear side power gain (reference to 595W front)

Pmax/W	Voc/V	Isc/A	Vmp/V	Imp/A	Pmax gain
625	53.90	14.66	45.39	13.77	5%
655	53.90	15.36	45.39	14.42	10%
684	54.00	16.05	45.49	15.08	15%
714	54.00	16.75	45.49	15.73	20%
744	54.00	17.45	45.49	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. (IL20251205)