Photon AC - Technical Specification Sheet

Hybrid AC/DC Solar Air Conditioner - 18,000 BTU

This hybrid air conditioning system prioritizes solar power during the day and automatically switches to the grid at night or during low sunlight, ensuring uninterrupted comfort and significant energy savings.

No battery or inverter is required.

Key Features & System Advantages

- **7-Year Unit Warranty:** Industry-leading protection for your investment.
- **Dual Power Supply:** Seamlessly integrates AC (grid) and DC (solar) power.
- **High-Efficiency DC Operation:** The unit operates internally on DC power. When connected to the home grid (AC), it automatically converts AC to DC, which is significantly more efficient than traditional AC motors.
- **Plug-and-Play Installation:** Simplified setup with solar connector terminals; no separate solar controller or inverter needed.
- **Intelligent Power Management:** Automatically selects between solar and grid power.
- **Advanced Compressor:** GMCC Rotary DC Inverter (Model KSN140D21UFZ).
- **Smart Control:** Wi-Fi App (iOS/Android) and Voice Command support.
- **Eco-Friendly:** Uses R32 refrigerant.
- **T3 Climate Type:** Designed for tropical climates; operational in temperatures up to 58°C.

Performance Specifications

Specification	Value
Rated Cooling Capacity	17,060 BTU/h
Rated Heating Capacity	17,060 BTU/h
EER (Cooling)	12.19 BTU/W
COP (Heating)	12.64 BTU/W
Dehumidification Capacity	1.9 L/h

Climate Type	T3 (Tropical)

Power System

Specification	Value
AC Power Supply	208-240V / 1Ph / 50-60Hz
DC Power Supply (Solar)	80V - 380V
Solar Power Current	< 12 A
Recommended Solar Array	(4-5) × 450W Panels (Series Connection)
Rated Cooling Power Input	1400 W
Rated Heating Power Input	1350 W
Rated Cooling Current	6.2 A
Rated Heating Current	6.0 A
Max Input Power	1700 W
Max Input Current	9 A

Physical Specifications

Indoor Unit

Specification	Value
Dimensions (W×H×D)	1080 × 327 × 227 mm
Packing Dimensions	1150 × 405 × 310 mm
Net / Gross Weight	13 kg / 16 kg
Air Flow (Hi/Mi/Lo)	1200 / 970 / 630 m^3/h
Noise Level	49 dB(A)

Fan Motor	DC / ZKFP-30-8-125 (1200 r/min)

Outdoor Unit

Specification	Value
Dimensions (W×H×D)	820 × 600 × 300 mm
Packing Dimensions	925 × 650 × 410 mm
Net / Gross Weight	37 kg / 41 kg
Noise Level	57 dB(A)
Fan Motor	ZKFN-56-8-1 (56W)

Refrigerant, Piping & Installation Kit

Specification	Value
Refrigerant Type	R32
Refrigerant Charge	1250 g
Pipe Connections (Gas/Liquid)	12.7 mm (1/2") / 6.35 mm (1/4")
Max Design Pressure	4.15 / 1.15 MPa
Refrigerant Oil	440 ml
Included Copper Pipe Length	3.5 m
Included Connection Wire	4.5 m
Drain Pipe Size	16.9 mm × 2000 mm