

CCTV SOLAR POWER SUPPLY SYSTEM

CCTV Solar Power Supply System

Model CS8040 (80W45AH12.8V)

CS8040 | 80W45Ah 576Wh Solar Power System

The CS8040 80W Solar Power System is equipped with a 45Ah (576Wh) LiFePO₄ battery, providing reliable and stable off-grid power for small outdoor applications.

Designed with a compact structure for easy installation, it is ideal for powering CCTV cameras, 4G routers, and remote monitoring devices. Built for durability and long-term performance, the system ensures continuous and uninterrupted power supply in areas without grid access.

Perfect for residential, garden, and small-scale surveillance or monitoring applications.

Features

- Solar-Powered & Plug-and-Play – No external power required; install anywhere with stable, reliable output.
- Durable & Safe Design – Anti-microcrack, low internal loss, high safety, and low-temperature performance.
- Flexible & Easy Installation – U-shaped clamps; compatible with various poles; no drilling required.
- Remote Monitoring Support – RS485 communication for easy system management.
- Smart Energy Management – Automatically optimizes power generation and storage for maximum efficiency.
- IP65 Battery Protection – Fully weatherproof for outdoor installation.
- High-Quality Materials – Corrosion-resistant frame, stainless steel screws, and waterproof connection cables.
- Anti-Vibration Structure – Reduces impact on optical instruments and video image quality in pole/tower setups.

Specification

CS8040 (45Ah12.8V 576Wh)

Solar Panel Spec

STC peak power	80W (single piece)
Module packaging	Tempered glass/EVA/cell/EVA backplane
Solar silicon crystal	Mono-crystalline silicon
Crystalline silicon characteristics	High efficiency of strong light conversion
Cell size and quantity	210*52.5/36
Maximum output power	80W
Maximum operating voltage	21.1V
Maximum operating current	4.10A
Open circuit voltage	24.0V
Short circuit current	4.59A
Tolerance	3%
Maximum system open circuit voltage	1000V
Solar Panel Dimensions	670mm*700mm*25mm
Product weight	3.415KG
Operating temperature range	-40~85°C
Relative humidity	< 90%
Frame thickness	0.88MM

Battery Spec

Solution	MPPT (input maximum power tracking algorithm), constant voltage output
Battery capacity	12.8V/45AH (576WH)
Charging indication	LED status indicator
Input interface	Photovoltaic aviation plug
Output interface	DC5.5mm diameter standard male plug, 2-way output
Output voltage	12V±50mV
Output current	≤3A±50mA (total of two outputs)
Discharge utilization	≤90%
Operating temperature	Charging: 0~45°C; Discharging: -10~55°C (accuracy: ±1°C)
Over-current protection	>4A (over-current protection for more than 3 seconds, green light flashes)
Overcharge and over-discharge protection	Over-discharge protection: <10V; Over-charge protection: >14.6V (accuracy: ±0.1V)
Output short circuit protection	Green light flashes, green light stays on after short circuit is removed
RS-485 communication	Output power, voltage, current and other information according to customer needs

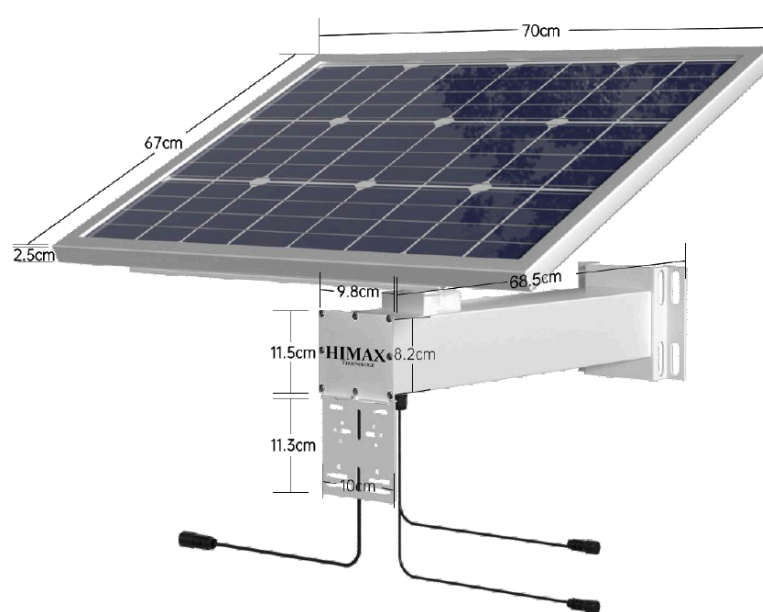
Storage temperature	-20~35°C
Battery case Dimensions	IP65; 650mm*98mm*82mm
Product capacity	20%-30%
Battery material	Lithium iron phosphate/LifePO4 battery

Battery Life

Shelf Life (Power Off State)	Up to 2 years (No output after shutdown; self-discharge rate approx. 3%-5% per month under normal conditions)
Standby Time (No Load, Powered On)	Approx. 25 days (At normal temperature conditions)
Operating Time (With Load)	Approx. 1-2 days (Room temperature, no solar charging, with typical mobile CCTV camera load)
Recharge Time (0-100%)	Approx. 1 day under standard conditions (30W solar panel, 4-5 peak sunlight hours per day, normal temperature)

All-in-One Package

Size	730*710*225MM
Weight (Include bracket and accessories)	16.45KG
Content	1* Solar Panel I 1* Battery case(Inside with battery) with DC output connectors I 1* Bracket for Solar panel &Battery case I 1* U Shape mount for Pole installation I 1* Screws pack I 1* QIG
Certificate	CE, MSDS, UN38.3, DGM, Sea Transportation Certificate



Widely Used Applications

The Solar Power Supply system is widely used in various outdoor surveillance and communication applications, including:

- CCTV surveillance systems
- Solar-powered security and monitoring systems
- 4G/5G wireless routers and communication devices
- Remote and off-grid monitoring stations
- Road and traffic surveillance projects
- Construction site security systems
- Farms, plantations, and agricultural monitoring
- Industrial and perimeter security applications
- Smart city and infrastructure projects



Source notes

The source datasheet states a recharge time of approximately 1 day with a 30W solar panel. This reference condition does not match this model's solar-panel rating; the recharge time for this model is pending manufacturer confirmation.

The source dimension drawing and specification table contain inconsistent measurements. The source drawing and tabulated dimensions are retained pending manufacturer confirmation.



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