



Sunlight Changes Everything

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ohoya Heliostat — Edge-AI Sun-Tracking Mirror System

Core System — ohoya Heliostat Base

Tracking	Two-axis closed-loop sun tracking; 540° azimuth, -90°...+90° elevation, < 0.05° repeatability
Mirror	Flat mirror, Ø 420 mm (Twist-Dock interchangeable) — Smart Diffusion Mirror optional via the Pro Module
AI processor	ESP32-S3 SoC (Xtensa LX7 dual-core, 240 MHz; FreeRTOS / ESP-DL)
Processing	100 % local control — no cloud, no account required
Power	Integrated LiFePO4 battery (~43 h autonomy); Base powered via a weatherproof IP44 USB-C adapter (15 V)
Motion drivers	TMC2209 multi-node stepper drivers
Housing	AlSi10Mg die-cast aluminium; height < 66 cm, base Ø 32 cm, ~16–18 kg
Weather protection	IP65 (design target), -20...+60 °C, ePTFE pressure-equalisation membrane; autonomous Storm-Park mode

Bundle — ohoya Heliostat Base + Pro Module

The Bundle is the Base plus the retrofittable Pro Module — the same heliostat with an upgraded mirror, finer light control, added sensing and solar self-charging.

Smart Diffusion Mirror	Adjustable scatter / beam ratio via app — from a sharp accent beam to soft ambient light (Twist-Dock, Ø 420 mm)
Edge-AI vision	WDR camera (~80° FOV) housed in the Pro Module mirror; MobileNet-SSD object detection, on-device inference only
Privacy	Mechanical privacy shutter (opens only while motors actively adjust); no image or face leaves the device
Glare safety	AMG8833 thermal array — firmware-independent hardware emergency-stop ($\Delta T \geq 4\text{ }^{\circ}\text{C}$); target PLc/SIL1
Light control	Finer, app-controlled diffusion and scene control
Power	100 % self-sufficient via an integrated 7 W solar module — no socket, no cabling
Includes	Everything in the Base, plus the retrofittable Pro Module

Connectivity & Control

App	Local network only — no cloud account required
Local API	REST API, 16 endpoints, LAN only, no account
Automation	Sunrise/sunset schedules, favourite spots / room presets, scenes
Glare response	Automatic mirror adjustment or stop in real time; mechanical privacy shutter
Updates	OTA via local network

Availability & Pricing

Base	€699 / \$749
Pro Module (retrofit)	€499 / \$549
Bundle (Base + Pro Module)	€1,099 / \$1,199
VIP (founding Bundle price)	€999 / \$1,099
Founders Reservation	Base €49 (final €599) · Bundle €99 (final €799). Fully creditable toward purchase, fully refundable; limited to 100 units.
Launch markets	Primary: United States (CA, TX, FL, AZ). Secondary: Australia & Southern Europe. Germany is not a primary launch market.

ohoya Core™ — Future Daylight-Transport System (not a current product)

ohoya Core™ is a separate, future add-on — it is not part of the Base or the Bundle, and is not yet for sale. It is a crowdfunding stretch goal.

What it is	A passive fibre-optic daylight-transport system that carries the heliostat's light around corners into rooms that have never had a window
How it works	Passive glass-fibre collector + dichroic (cold) mirror IR filter + a flexible glass-fibre bundle — no motor, no power and no control of its own
Output	3,000–6,000 lm at the indoor outlet
Status	Crowdfunding stretch goal — begins development and CE certification once the campaign reaches €1.5 M, community-funded

Development Status

- Proof-of-Light — complete: functional wood/aluminium prototype with precise sun tracking and first public demos.
- Current — Certification & EN 62471: photobiological-safety pre-testing and AlSi10Mg series housing (Berlin).
- Next gate (G1): DVT prototype in the AlSi10Mg housing at MotionLab Berlin — outdoor validation, target TRL ≥ 5.
- Jan–Feb 2027: global crowdfunding campaign and founding-member reservations.
- Apr–May 2027: series production and first deliveries (delivery target Q2/2027).

The ohoya Heliostat is in pre-series development. Specifications for glare protection and safety classes are development goals and are tested under EN 62471 before public marketing. Well-being statements are general and are not medical claims.