Roof Integration Guide for Architects

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Volt is an integrated solar tile system designed for seamless installation with selected roof tiles. It replaces standard roof tiles with solar-generating equivalents, offering a sleek finish without surface-mounted panels. Two profiles are available: Planum (for terracotta) and Lodge (for concrete). Volt is suitable for both new builds and reroofing projects.

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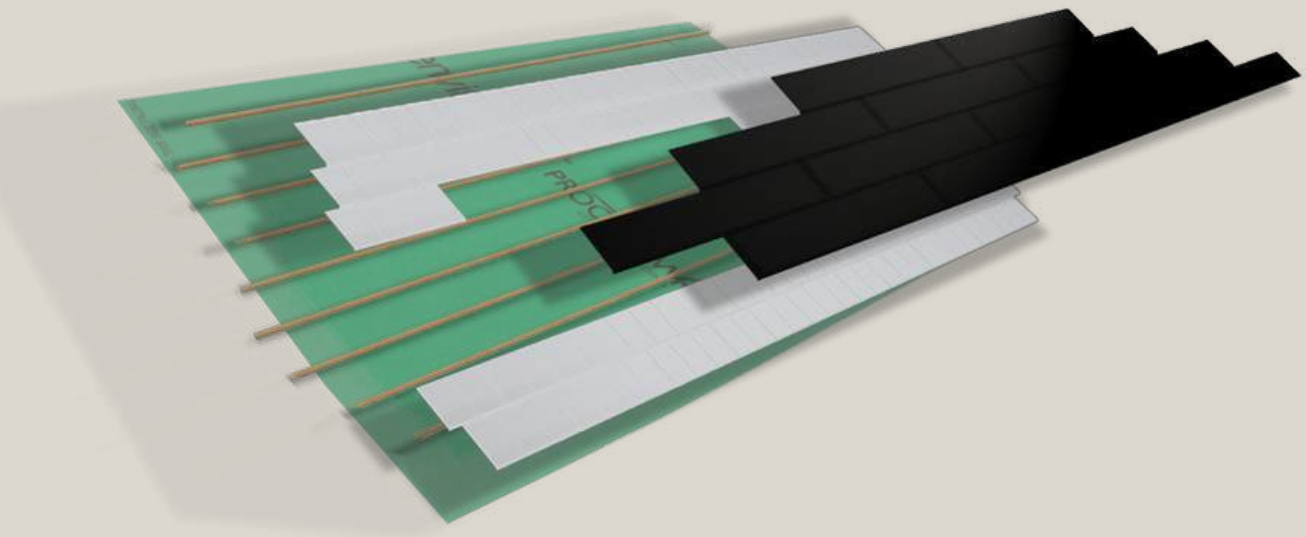
Installation
Method #01



Volt solar tiles install as part of the roof system, using simple tile replacement methods with standard roofing practices.

- **Installation type:** Integrated tile replacement
- **Mounting method:** Fix to standard tile battens
- **Flashing:** Not required – tiles function as part of the standard roof system
- **Setout & offset**: Batten spacing setout to Volt's requirements to ensure interlock between rows. Cross-bond offset, per roof tiles.

Roof Compatibility #02

PLANUM

- **Minimum roof pitch:** 15°
- **Compatible substrates:** All
- **Batten spacing:** 365mm (exact)
- **Batten size:** 25 × 25 mm, 38 × 38 mm, 25 x 50mm
- **Compatible tile ranges:** La Escandella Planum terracotta range

Roof Compatibility #02

LODGE

- **Minimum roof pitch:** 20° (*see below)
- **Compatible substrates and batten spacing:** 360mm (exact)
- **Batten size:** minimum 25 × 25 mm, maximum 45 × 45 mm
- **Compatible tile ranges:** Bristile Lodge concrete tiles — Prestige, Eton, Premiere

*20 degrees at 4500mm rafter lengths with an additional 2 degrees for every additional metre, per Bristile Roofing's technical documentation

Tile & System Specifications #03

Planum

Tile size: 1907.5 × 443.1 × 47 mm

Exposed size: 1863 × 365 mm

Weight per tile: 13.8 kg

Max power output: 110 W

Efficiency: 16.3%

Tiles per kW: 9.1

Roof tile equivalent: 8 tiles

Per kW of System Size: 6m²

Coverage for 10kW System: 60m²

Lodge

Tile size: 1530 × 445 × 50.2 mm

Exposed size: 1498 × 360 mm

Weight per tile: 9.2 kg

Max power output: 105 W

Efficiency: 19.5%

Tiles per kW: 9.5

Roof tile equivalent: 5 tiles

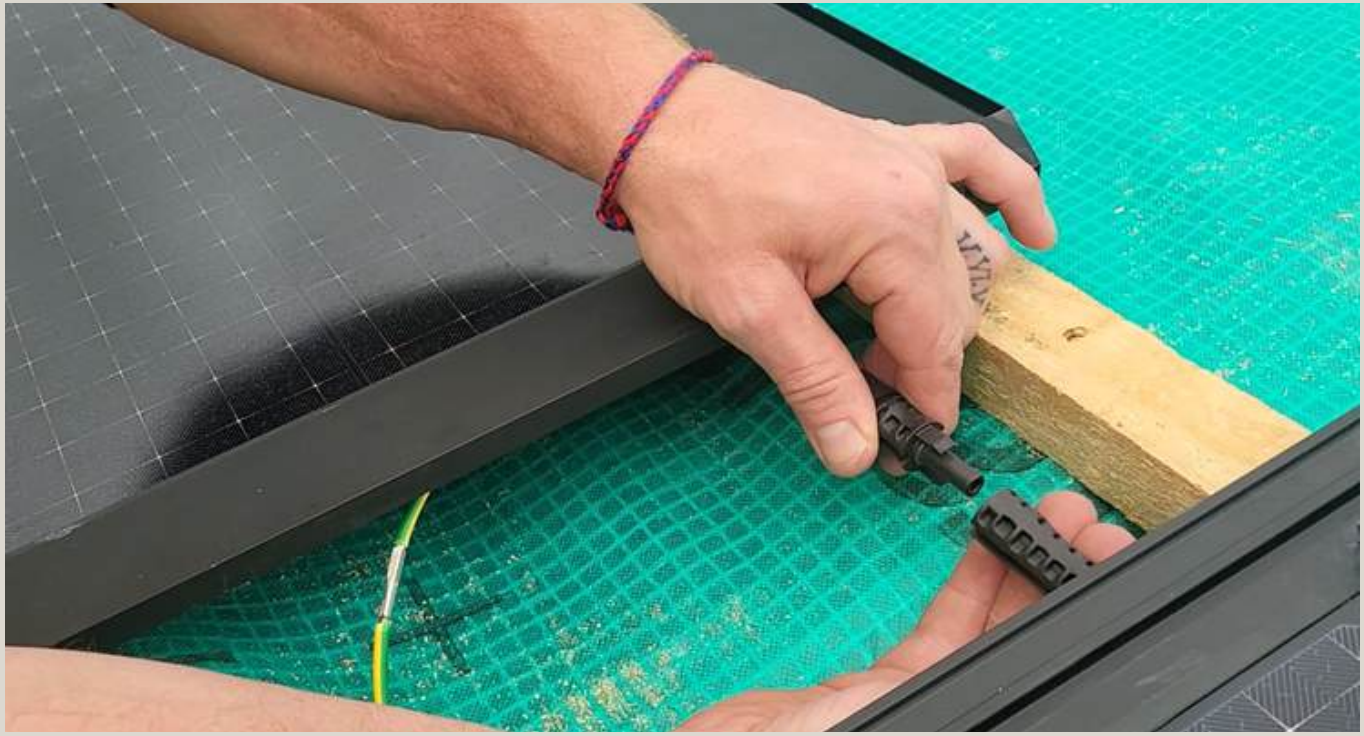
Per kW of System Size: 5.2m²

Coverage for 10kW System: 52m²

Electrical Integration #04

The solar tiles connect together using industry-standard MC4 connections, with integrated cable management for safe and compliant installation.

- **System connection:** MC4 to string inverter
- **Conduit routing & access:** Integrated cable containment
- **Switchboard provisions:** Standard PV setup
- **DC cabling & compliance:** Integrated cable containment, compliant with safety standards



Sarking & Insulation

- **Requirement:** A membrane is required
- **Recommendation:** Use a breathable membrane for best performance

Layout & Design Guidance

- **Standard layouts:** See examples (visuals provided separately)
- **Placement:** Keep clear of skylights, vents, and penetrations
- **Edge finishing:** Minimum 2 tiles from hips and valleys
- **Gutter & ridge:** Minimum 2 tiles from ridge; installation from the gutter permitted (first row)
- **Tile cutting:** Solar tiles cannot be cut. Only pre-sized units may be used. (Standard roof tiles may be cut as needed)

Project Coordination #05

- **Sequencing:** Roof tilers and Volt installers work in parallel. Volt tiles are installed after the roofing batten stage and before ridge capping.
- **Collaboration:** Coordination required between roofer and solar installer.
- **Lead times:** Allow 12 weeks for orders.
- **On-site handling:** Managed by Volt/Solar installers.

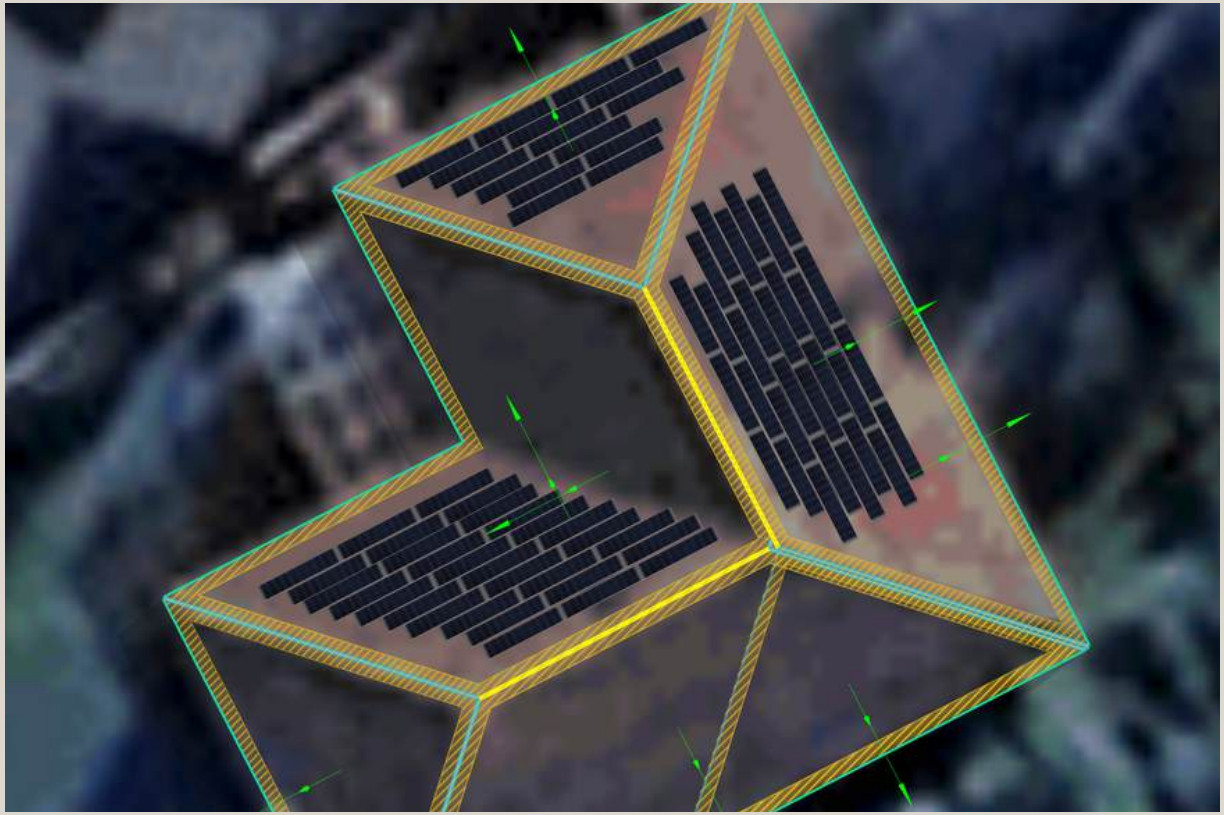
Warranty & Compliance #06

Volt tiles are backed by long-term warranties and certified to meet international performance, safety, and compliance standards.

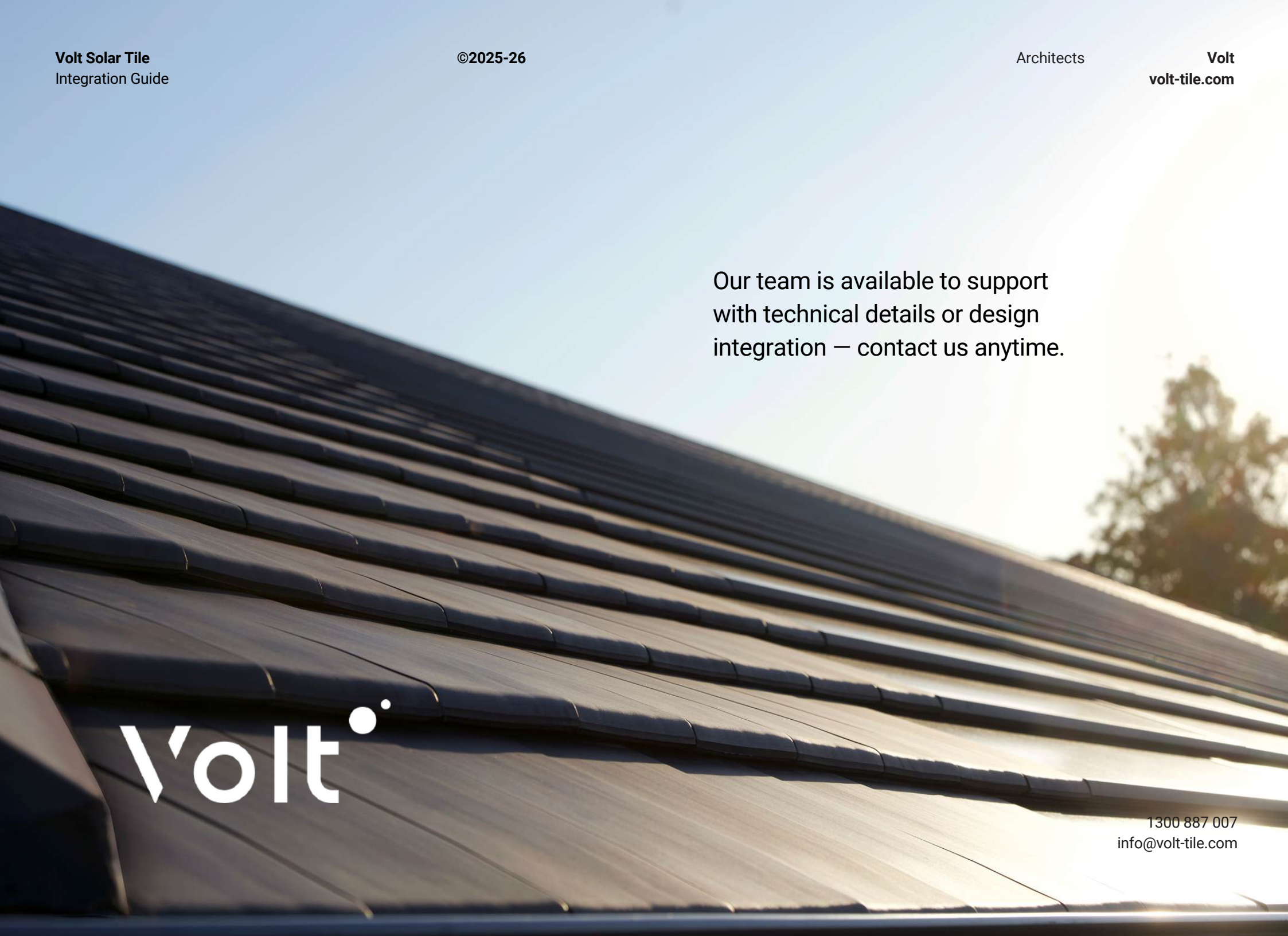
- **Product warranty:** 25 years (performance), 10 years (product)
- **Standards compliance:**
  - IEC 61215 — PV module performance & reliability
  - IEC 61730 — PV module safety
  - AS 5033 — Australian PV array installation requirements
  - CEN/TR 15601 — Resistance to wind-driven & deluge rain for discontinuously laid roof elements
  - CEC accredited — Australian Clean Energy Council approval
  - CE mark — EU safety & quality compliance
- **Fire rating:** Class C

Visual References & Diagrams #07

- Group solar tiles together in continuous blocks, rather than scattering them across the roof.
- Align solar tile rows with the roof plane edges (hips, valleys, ridges, and gutters) to maintain clean lines.
- Keep a minimum of two full tiles' clearance from hips, valleys, and ridges.
- Start and finish solar tile rows in line with standard roof tile courses for a consistent appearance.
- Ensure arrays are symmetrical and balanced across each roof plane where possible.
- Use standard roof tiles to fill gaps and frame the array so the transition appears seamless.
- Ensure cross-bond where each row is offset by multiples of half a roof tile.



Comparison view: Visual side-by-side of Volt solar tiles vs. traditional solar panels for scale and aesthetics.



Our team is available to support with technical details or design integration — contact us anytime.

Volt

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