



Case Study

235 kWp Lightweight Solar System at Australia National Maritime Museum

System Size

235 kWp

Modules

813 x SMD290M-6x10DW

Location

Sydney, Australia

Date

August, 2019

Installation Method

Quick-Bonding

Project Application

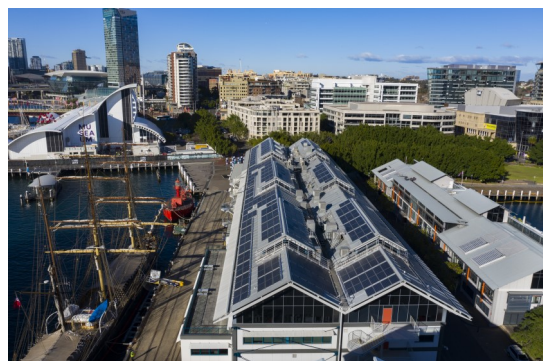
Lightweight Metal Roof

ABOUT SUNMAN

Sunman Energy is a technology company founded by a group of industry veterans delivering the future of Solar. Through the research and development of composite materials, Sunman has successfully commercialized the world's first glass-free, lightweight and flexible Panel – eArc. Replacing glass completely, eArc brings solar power to markets and applications scenarios that were previously impossible.

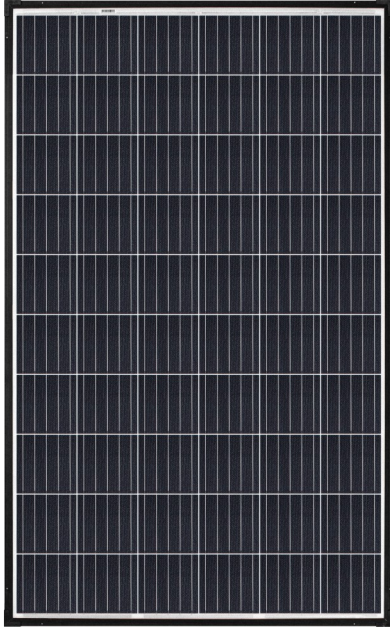
THE PROJECT

In August 2019, Australia National Maritime Museum (ANMM) unveiled the largest lightweight solar system of the Southern Hemisphere. Positioned in Sydney's iconic Darling Harbour, ANMM has been looking to install solar since 2015. However, the museum's slender metal roof could not take the weight of a conventional glass solar system. In addition, the roof could not be penetrated, making a traditional solar installation further unfeasible. After discovering Sunman's lightweight glass-free solar solution - eArc, ANMM was able to breathe new life into the project.



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SMD290M-6x10DW

ULTRA-LIGHT

Standard 60 cell glass solar panels weigh 19 kilograms. SMD290M-6x10DW weighs only 5.6 kg, 70% lighter.

FAST-INSTALLATION

Bonding panels to the roof significantly shortens the installation process and eliminates the need for mounting hardware

RELIABLE PERFORMANCE

Over a 9 month monitoring period, the system has delivered \$58,000 in electricity bill savings for the Australian National Maritime Museum.

DURABLE

eArc is the first glassless module to pass the same durability tests as conventional glass modules, including IEC 61215:2016, IEC61730:2016 and UL1703 (USA).

eArc has also passed PID, salt mist and ammonia corrosion tests

eArc MODULES

eArc is the world's first glassless solar module. An innovation combining proven crystalline silicon solar cells with Sunman's patented composite material, eArc has the same durability and robustness of conventional glass modules.

The SMD series is equipped with a 5.6 mm ultra-thin aluminum frame. SMD can be installed via quick-bonding or mechanical fixing, making it suitable for a variety of low load and impenetrable roofs.

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SUNMAN
Lightweight Solar Pioneer