

# WALKABLE PV FLOOR

## RENOVATION

Madrid's **Teatro Real**, one of Spain's most iconic cultural institutions, has taken a major step toward sustainability with the installation of **Onyx Solar's walkable photovoltaic flooring on its rooftop**. This innovative solution not only **generates clean energy** but also transforms former gravel-covered surfaces into accessible terraces for events and special gatherings.

With **over 1,200 m²** of photovoltaic pavement and **more than 2,000 crystalline silicon photovoltaic glass units** installed, this project demonstrates that renewable energy can be seamlessly integrated into historic buildings without compromising their architectural value. As a Cultural Heritage Site (BIC), the Teatro Real required a **balance between technological innovation and heritage preservation**, which has been key to the success of this installation.

The energy generated reaches **229 MWh per year**, significantly **improving the building's energy efficiency** and upgrading its certification from category D to A. Additionally, the Teatro Real has become **the first Cultural Heritage Site to receive the Energy Savings Certificate (CAE)** from the Ministry for Ecological Transition and Demographic Challenge, reinforcing its commitment to sustainability.

The modular design of the installation **respects the theater's original architecture**, ensuring the **seamless integration of photovoltaic glass** without altering its aesthetics. This project, carried out in collaboration with CÓDEC Obras, Servicios y Proyectos S.L., IDAE, the Madrid City Council, and the Ministry of Culture, strengthens the Teatro Real's leadership in adapting historical heritage to the energy needs of the 21st century.

### TECHNICAL DATA

Nominal Power (Wp/m²)	137 Wp/m²
Visible Light Transmittance (VLT)	0%
Solar Factor (g-value)	0%
U value (W/m²K)	5.2
U value (Btu/h ft² °F)	0.92



TEATRO REAL



TEATRO REAL  
MADRID, SPAIN

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CRYSTALLINE SILICON TECHNOLOGY



TECHNICAL DATA SHEET



The work carried out at the Theater is "an example of integration and architectural restoration in a historic monument"

General Directorate of Fine Arts



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