

Façade with dynamic LED lighting recreating the sea, the river and the dunes dynamics

Tróia Design Hotel

GOALS

Set in the Troia Resort complex and classified as a National Interest Project (PIN), the Tróia Design Hotel is a luxurious hotel, facing Troia Resort Marina, cleverly integrated between the sea and the river. In the 2009 edition of the “Óscares do Imobiliário” (Real State Oscars) was distinguished as best tourism building, where the innovative and efficient architectural lighting played a major role.

The hotel stands out by its undulating and dynamic light facade, inspired by the surrounding ambiance of the sea, river and dunes.

The primary goal of the outside lighting system was to create a dynamic facade, which would allow an abstract representation of multiple images in a flexible way, where colour manipulation. The system developed by ARQUILED, allows to reproduce about 3 billion colours, offering a virtually infinite range of options.

Indoor, there was also the concern to provide the hotel with a system that would simultaneously allow maximizing comfort and energy efficiency.

Project implemented in 2009.



INSTALLED SOLUTION

The complexity of the undulating system of the facade required that ARQUILED develop and customize the lighting system for this structure, which was composed of ARQUILINE RGB 1 LED strips, applied to the ARQUITRACK profile, calendared in two axes to shape the architecture's facade.

In total, approximately 900 meters of this LED system were installed, which contains about 56.000 Osram's LED power top LEDs, interconnected by 16 QUADRANT splitters, a product line also developed by ARQUILED.

One of the major challenges of this project was to ensure that the profile and the LED were calendared exactly in the same angles of the facade glass supports. The implementation of the DMX network with 7.000 meters of cable was also complex, requiring a detailed study to assure that there were no signal

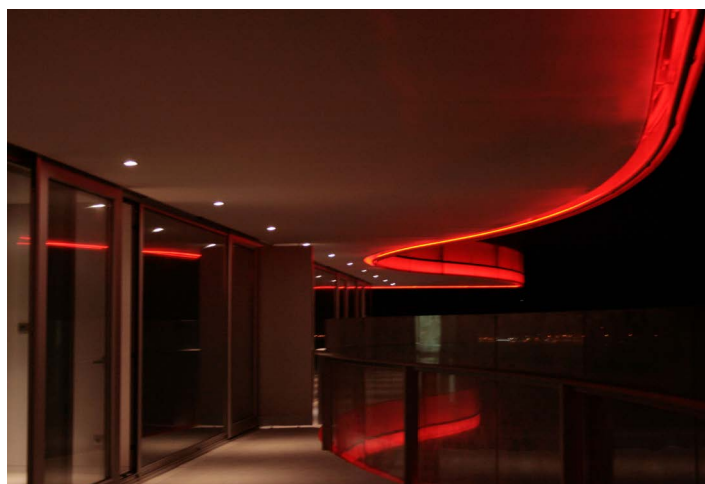
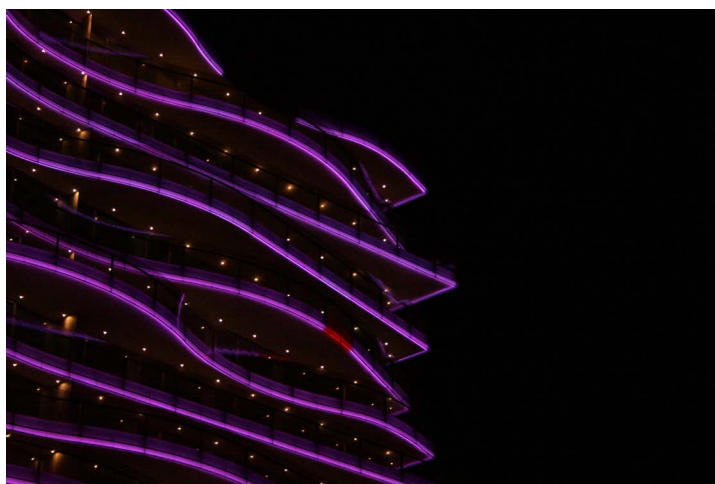
faults as well as response times of each RGB driver.

The system command is carried out through the control of 120 constant voltage ARQUIDRIVER TC 360 DMX drivers from ARQUILED through a FSK (Frequency Shift Keying) system developed by ARQUILED.

The system command is carried out through the control of 120 constant voltage ARQUIDRIVER TC 360 DMX drivers from ARQUILED through a FSK (Frequency Shift Keying) system developed by ARQUILED.



Indoor, all rooms and apartments were equipped exclusively with ARQUILED LED lighting, having installed 4.000 ARQUISLOT 6 adjustable spots with 7.2 W, allowing the customer to choose the lighting level of their preference at any time.



BENEFITS

The facade of the Tróia Design Hotel has a sophisticated lighting system that allows image customization in full harmony with the sea, the river and the dunes where it is set and can adjust colour and brightness according with each season, cultural events or other venues, casting the building image on the horizon.

The lighting system implemented in the rooms and apartments, let alone savings of 171.2 kW compared to traditional lighting with equivalent illuminance.

ARQUILED

ARQUILED is a general LED lighting manufacturer, specialized in professional luminaires for street lighting, systems and services.

Headquartered in Mora-Alentejo, is a Portuguese industrial company, pioneering the market since 2005, that designs and develops its own products and solutions.

ARQUILED is committed to develop smart management solutions focused on reducing energy consumption and decarbonization, contributing to sustainable urban clusters.

Arquiled, Projectos de Iluminação, S.A.

T: +351 217 971 964

E: sales@arquiled.com

Arquiled Colombia S.A.S

T: +571 756 00 96

E: info@arquiled-light.com.co

Cofinanciado por:



2018, ARQUILED, PROJECTOS DE ILUMINAÇÃO, SA

All rights reserved.

All trademarks are property of ARQUILED, PROJECTOS DE ILUMINAÇÃO, SA.