CASE STUDY








# Vodacom

## – innovative and dramatic lighting project on show

When one of South Africa's largest telecommunications providers Vodacom needed a new operations centre to meet the demands of its rapidly expanding subscriber base and workforce, the development project also provided the perfect backdrop for an innovative and dramatic lighting project.

A major part of the development project was the construction of a massive, dynamic lightwall constructed of glass panels, which encircle the modular building in Cape Town.

PHILIPS

dynalite

# Client requirements

The brief was to create an innovative and dynamic lightwall that would operate from sunset to sunrise. A major specification of the project was to ensure the LED fixtures could not be seen through or reflected in the glass panels.

The lighting also had to be energy-efficient in keeping with Vodacom's commitment to minimising its carbon footprint.

> "The development of a new operations centre for Vodacom provided the perfect backdrop for an innovative and dramatic lighting project that has become iconic in Cape Town."

# The Philips Dynalite solution

Tesla Automation, the Philips Dynalite VAR in South Africa, worked with one of the country's leading LED manufacturers to design the custom fixture to illuminate the lightwall. Philips Luxeon Rebel LED units form the basis of the fixture and were mounted behind the glass panels.

This was particularly challenging because the Luxeon LEDs are a very powerful light source so the positioning of the fixtures was critical to achieve the right result.

The design of the lightwall panel was a process of trial and error. Tesla Automation made several different diffuser designs and fitted them to a mock-up of the panel and mounting box. It was then a matter of mounting the LED fixture in a variety of positions before arriving at the optimum arrangement.

## Trialled and chosen

Originally, Tesla proposed a multi-directional design for the dynamic movement of the light to create the effect of the computer game Tetris. While this concept was spectacular, it proved too expensive for the client.

The final design allows horizontal movement of the colour changes from left to right and right to left or from the centre outwards. While the fixtures allow a full palette of colours to be displayed, the colours are restricted to the red and white corporate colours of Vodacom's new owner, Vodafone.

Timing throughout the project was also an important factor from ensuring that all 500 fixtures were ready on time to assembling the lightwall once the outer walls of the refurnished building were rendered and painted. The wall was painted while to maximise the reflection off the walls and through the glass panels.

> "Operating from sunset to sunrise, the dynamic display of the Luxeon fixtures is coordinated by Philips Dynalite LED controllers installed in 37 distribution boards mounted outside the building."

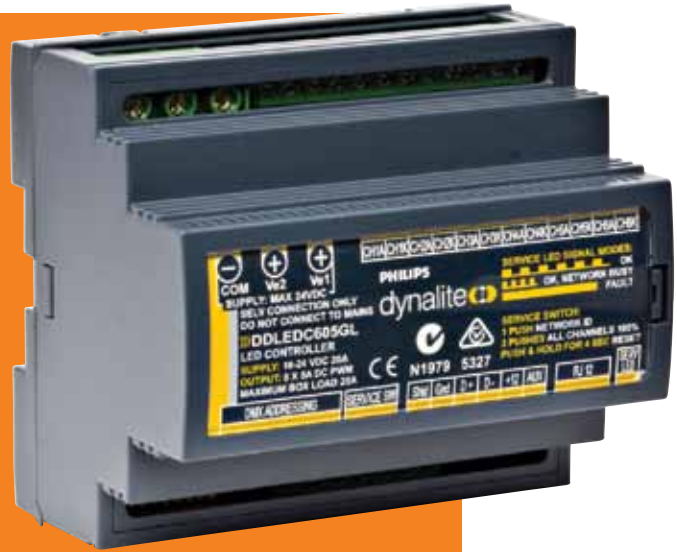

# Products and technology used

The massive glass panels that form the lightwall measure three metres by two metres.

The light wall is not integrated with other building services and is controlled by a single computer inside the building and a Philips Dynalite time clock.

Operating from sunset to sunrise, the dynamic display of the Luxeon fixtures is coordinated by Philips Dynalite LED controllers installed in 37 distribution boards mounted outside the building. The system also features a manual override control.

Importantly, the LED modules used for the lightwall are ultra-efficient colour rendering units that complement the energy-efficient design of the building. LED lighting and occupancy detectors have been installed in all corridors.




# Key client benefits

## A bright future

Tesla's innovative lightwall was the first use of exterior LEDs on such a large scale in South Africa and today it has become an iconic landmark which continues to generate a great deal of interest throughout the South African construction and design industries.

Tesla's revolutionary approach to the design and discreet installation of the lightwall has ensured that Vodacom's operations centre will long remain a landmark building.

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