

Creating solutions for vibrant and dynamic environments

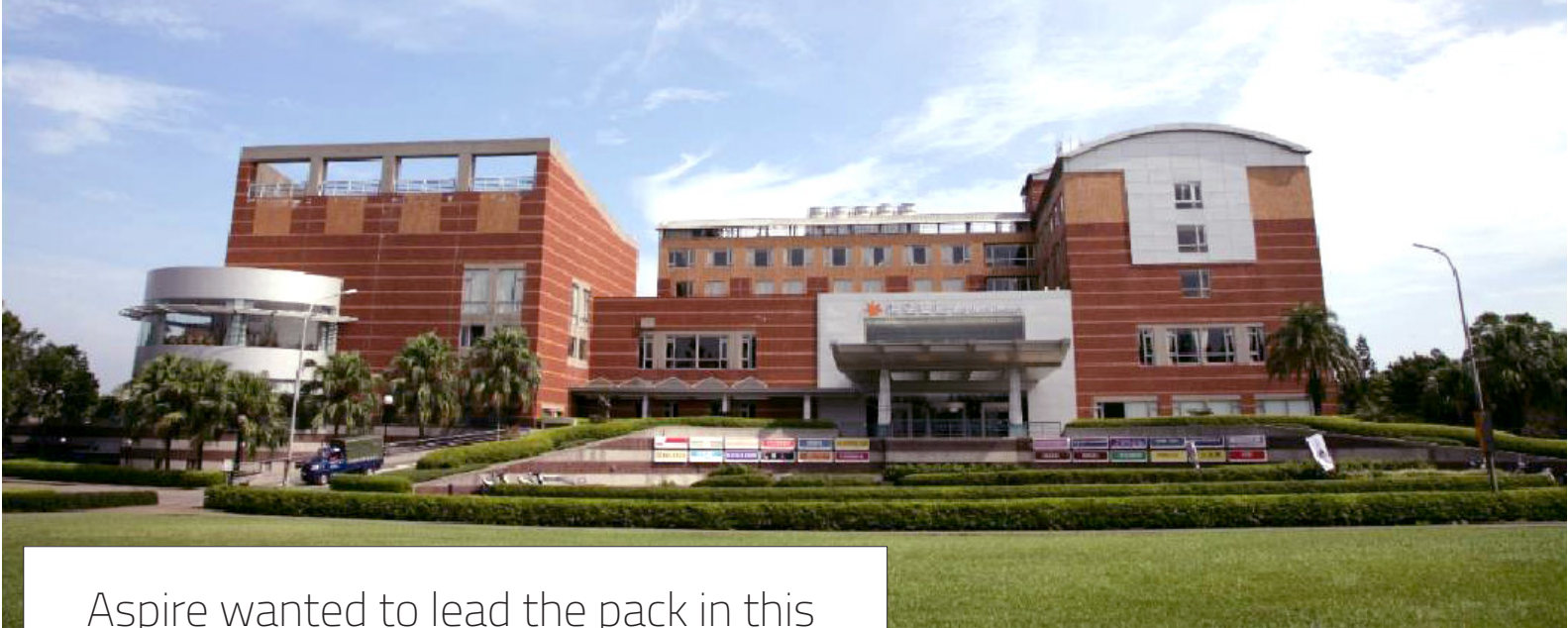


Case Study

ACER, ASPIRE RESORT

LOCATION_ Longtan, Taiwan

TECHNOLOGY_ Ursa Helios 100W



*photos from Aspire Resort

Aspire wanted to lead the pack in this environmentally friendly initiative.

THE CUSTOMER'S CHALLENGE

As a subsidiary of Acer and an "eco-green" resort dedicated to sustainability and reducing its carbon footprint, Aspire resort wished to cut energy use by updating its aging 400W mercury vapor lamps with more energy efficient lighting. Though built to the latest standards at inception, the mercury-vapor lamps lighting the indoor swimming facilities as well as the outdoor walkway were becoming outclassed by today's environmentally friendly LED lights built with ROHS compliant non-toxic materials. In addition, recent government policies in Taiwan aimed at phasing out mercury vapor lamps were starting to come into effect and Aspire wanted to lead the pack in this environmentally friendly initiative.

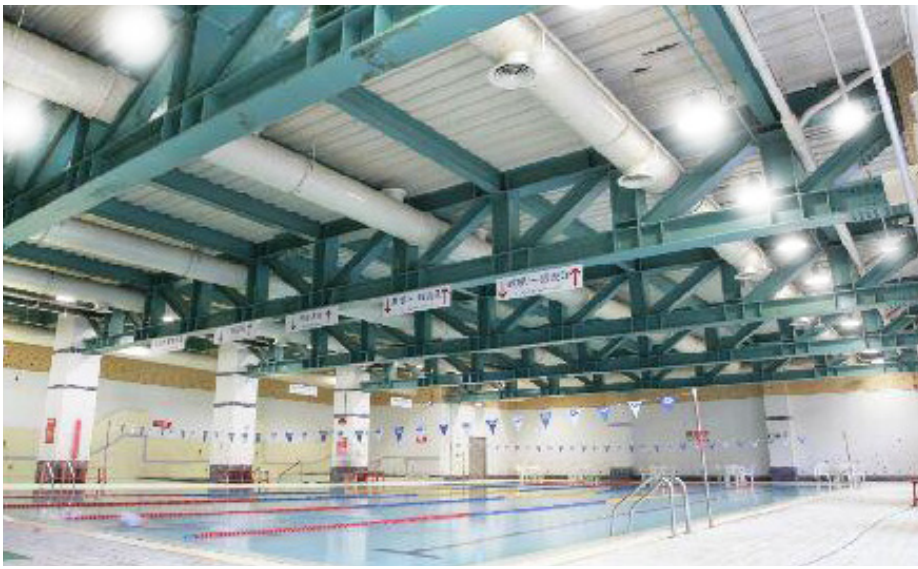
Aspire Resort saw that it was time to revamp its aging lighting system and lower its carbon foot print. Upgrading to LEDs also made financial sense. The resort knew that a new LED based lighting system would cost money up front but would pay for itself over time with much lower running costs.

THE SOLUTION

As part of its sustainability initiative, aspire Resort replaced 32 aging 400W Mercury- Vapor High Bay lamps within its indoor swimming pool and spa facilities as well as 17 exterior lamps lighting its landscaped walkway. The company looked at various LED lighting companies but int the interest of minimizing power usage without sacrificing light quality, chose Ursa Lighting's Helios 100 series LED fixtures. Known for cutting edge lighting quality technologies, Ursa's Helios series uses DBR Flip Chips with wireless bonding to optimize light production and thermal efficiency.

Lighting quality and intensity have been improved compared to normal wire-bonded LEDs where wires on the top create lighting shadows and cause uneven light projection.





THE SOLUTION CONT'D

Cooling performance is also increased as the heat generating electrodes are located at the bottom of the chip closest to the thermally conductive MCPCB layer, instead of on top of the chip far away from the heatsink. In addition to this "flip chip" design, the LED chips used by Helios series use low temperature direct bonding to improve surface contact between the LED and substrate for optimal thermal efficiency.

THE RESULTS

By replacing its existing lighting with Ursa Helios 100 series, Acer Aspire Resort was able to achieve an incredible 300% improvement in lighting efficiency, reducing its lighting energy consumption. Air conditioning cost in the summer were also reduced, as the cool COB LEDs dissipate less heat than legacy mercury vapor lamps. Aspire Resort estimated that annual lighting related energy were upwards of 33,000 Kilo Watt hours each year.

Using the Helios 100 series with a 4000L color temperature, the Aspire Resort achieved there incredible efficiency gains while improving its light quality. The Helios 100 series customized for the Aspire Resort had a large 70 x 70 mm surface area that produced high quality, even illumination.

Having seen large improvements in energy efficiency at its indoor swimming pool and spa facilities and outdoor walkway with Ursa's technology, Aspire is now planning a larger scale indoor lighting revamp of its entire facilities.

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