

Dialight DuroSite® Series LED Lighting

Olympus KeyMed cuts carbon and lighting costs with LED solution

UK-based at Southend-on-Sea and employing over 1,000 people, Olympus KeyMed is a wholly-owned subsidiary of Olympus Corporation, Japan. As such it is an important part of the global Olympus network, with specific responsibility for the development and manufacture of medical equipment and industrial products for distribution world-wide.



Olympus KeyMed warehouse lit by metal halide on left and then by LED on right.

The lighting challenge

Olympus KeyMed's Southend-on-Sea facility comprises warehousing and manufacturing with sheet metal as well as a paint shop. Here it not only produces medical and industrial products, but it is also the sole UK point of importation and distribution of all Olympus products. "Our target is to reduce CO2 emissions in the company by 50% by 2020 in both our buildings and our products," explains Chris Owen, Olympus KeyMed's Environmental & Improvement Engineer, "so that boosted our decision to change to a more energy efficient lighting solution. With over 100 metal halide high bay lights across our 3,380 square metre facility, we found that the 400W high bays were actually operating at 440W and accounting for 10% of our total energy usage."

Chris also found that the metal halide high bays were lasting two years at best or 15,000 hours on average, though replacement cycles could be shorter as a result of heat generated and accumulation of dirt. Additionally there was the ongoing chore of inspecting for failed lights and servicing those that had failed.

The lighting solution

After researching the LED market, and with the recommendation of energy consultants Interior Control Ltd., Chris looked at LED technology specialist Dialight's energy efficient lighting solutions. He was immediately attracted by their five-year continuous performance guarantee and very low wattage which would enable him to comfortably recoup all of his cost through energy savings made within the guarantee period.

"It's a no-brainer," he said, "as these lights will actually last much longer than the guarantee period; so as a real bonus we will have no maintenance chore, or cost, ever again – really excellent! It's no wonder that the decision to purchase Dialight's LED lighting flew past our executive committee. With Dialight's 40 year LED experience and proven quality there was no other product which came close for price and durability."

The outcome

Mounted at a height of 12 ms, the metal halide high bays were replaced one-for-one with Dialight DuroSite® 150W LED High Bays. Significantly this led to the discovery that the actual consumption of the LED High Bay lights including drivers was 5-10% less than the expected 150W – an additional energy saving bonus while maintaining the same light level but immediately reducing energy usage by over 68%. As a result, Olympus is now on target to cut carbon emissions by 85 tonnes per year.

In the manufacturing side of the business the lighting runs 24 hours/5.5 days a week, while in logistics it runs 14 hours/5 days a week and Chris Owen is already considering introducing PIRs/Lux sensor control in both to deliver further energy and carbon reductions. He is also working hard with Interior Control Ltd to install Dialight's LEDs on the exterior of the building both in the car park and pathways, as with PIR control these can also have excellent pay back periods of less than 4 years.

Re-strike time had been an issue in all areas with the metal halide lights, especially in the inspection area, so low level fluorescents had been installed as back-up to avoid production downtime. With the instant-on ability of the LED High Bays these back-up lights can now be taken out. Chris is particularly pleased to note that the addition of some extra LED high bays in the inspection area has delivered a massive improvement and increased the lux level from 1,800 to a mighty 5,000.

About Interior Control Ltd

UK based Interior Control Ltd is an experienced professional team of engineers, designers, environmentalists and process improvement practitioners, providing energy metering and saving solutions that include LED lighting. They are proud to be an official agent for the Dialight range of industrial LED lighting products. More information about the company and their product range can be found at www.interiorcontrol.co.uk Carlton House, Gwash Way, Ryhall Road, Stamford, PE9 1XP. 01780 753316

Installation Snapshot

- 3,380 square metres
- Number of fixtures – 100+
- Replaced – 400W metal halide
- Mounting height – 12 metres
- Energy reduction – 68%
- CO2 reduction – 85 tonnes per annum
- Watts/sqm reduced by 68%

Dialight LED Benefits

- 5 year warranty
- maintenance free
- 70% lumen maintenance after 100,000 hours
- 77l/w certified
- Significant energy savings
- Instant on/off
- Superior light quality
- IP66 rated to withstand dust and moisture
- Polycarbonate glaze
- No hazardous substances

Dialight reserves the right to make changes at any time in order to supply the best product possible.

The most current version of this document will always be available at: www.dialight.com/news/details/olympus-keymed_Case_Study