

# Dialight's DuroSite™ Series LED Lighting Fixtures

Global logistics provider sees payback from LEDs in just over a year

Global logistics provider Kuehne + Nagel is committed to offering robust, sustainable and innovative supply chain solutions that continually reduce impact on the environment. Operating over 100 warehouses across the UK, the company recognised an opportunity to radically reduce its energy consumption by replacing the current lighting at its Minworth facility near Birmingham with a more energy efficient technology. In selecting LED technology as the solution, this facility was able to cut its energy needs and achieve additional savings on maintenance as well as vastly improving the quality of light for its workers.



Dialight's DuroSite™ Series LED High Bay Fixtures Installed in Kuehne + Nagel's Minworth warehouse

## The lighting challenge

Kuehne + Nagel's Minworth facility consists of two warehouses with a linking area jointly covering 20,000 square metres. The older of the two buildings was fitted with 136 x 250W high pressure sodium lamps (HPS), the newer facility with 100 x 400W HPS and the linking bay with a few metal halides.

Engineering Manager Kevin Greene explains the lighting challenge: "Overall we wanted to save energy, but we also wanted to improve light quality. We found that the 250W HPS did not provide sufficient light quality in the older warehouse, which is why we moved to 400W HPS in the newer warehouse. However, they were actually averaging about 280W and 430W of power respectively. Also, sodium lights are not very effective at night and make it hard for the workers to read labels."

He adds:

"In our warehouses, the sodium lights are running 24/7 and need changing every 20,000 hours. A scissor lift is required to reach them at 13 metres, which involves considerable cost, inevitable work interruption, and there is the additional problem of dealing with hazardous waste when you dispose of them. There were plenty of reasons to look for a more efficient lighting solution."

## About Kuehne + Nagel

With more than 58,000 employees at 900 locations in over 100 countries, the Kuehne + Nagel Group is one of the world's leading logistics companies. Its strong market position lies in the seafreight, airfreight, contract logistics and overland businesses, with a clear focus on providing IT-based supply chain management services.

## Installation Snapshot

- ▷ Two warehouses jointly covering 20,000 sqms/220,000 sqft
- ▷ Number of LED fittings – 126
- ▷ Replaced – 250W and 400W HPS with 150W LED High Bay
- ▷ Illuminance level – 150 lux
- ▷ Mounting height – 13 ms/43'
- ▷ Energy saving –555,735 kWh, saving over £42,000 annually
- ▷ Carbon reduction – 271 tonnes annually
- ▷ Average w/sqm reduced from 3.85 to 1.05
- ▷ Payback period of 1.1 years

## Why Kuehne + Nagel chose Dialight

After trialling some LED light fittings at several locations, Kevin Greene selected Dialight's DuroSite™ Series LED High Bay fittings for the two Minworth warehouses, installing 63 x 150W LED High Bays in each with three to a row compared to five HPS lights. "The reason we chose Dialight is the length of time that the company has been in the market, whereas many of their competitors are relatively new. With the LED High Bay we have a very robust unit containing no hazardous



Kuehne + Nagel's Minworth warehouse with 150W Dialight DuroSite LED High Bays in the foreground and 400W HPS fixtures behind.

materials that offers a 60,000 hour lifespan and is warranted by a well established company. Not only does it remove the maintenance and the disposal problem, it's also a very workable light, perfect for reading labels. We allowed a few extra fittings to avoid shadows and the light clarity experience is brilliant."

The LED lighting in fact delivers a CRI of 72 compared to around 20 for HPS lighting out of a total scale of 100, so although the lux level of 150 remains very similar the lighting quality has vastly increased

## Energy savings

Greene points out additional benefits:

"Although we installed light-saving devices with the sodiums, there was a 5-10 minute lag-time between switching them on and off, so we weren't realising any particular benefit. The switching off also shortens the life of the lamps, but LEDs come on instantly and have no issues at all with switching."

## About Dialight

Dialight plc (LSE: DIA.L) is leading the lighting revolution for industrial users across the world. Applying leading edge LED technology it produces high-specification, retro-fittable lighting fixtures designed for industrial, commercial, hazardous location, transportation and infrastructure applications to vastly reduce maintenance, save energy, improve safety and ease disposal. Versions of these high specification luminaires are also produced for more general industrial and outdoor situations. The company is headquartered in the UK with operations in the USA, UK, Denmark, Germany, Australia and Mexico.

## Dialight's range of Durosite™ Series LED Lighting Fixtures



DuroSite™ LED High Bay



DuroSite™ LED Low Bay



DuroSite™ Wallpack / Bulkhead



DuroSite™ LED Area Light



DuroSite™ LED Area Light

## Typical applications

- ▷ Warehouse
- ▷ Manufacturing
- ▷ Food Processing
- ▷ Cold Storage
- ▷ Canopy
- ▷ Gymnasium
- ▷ Conference Centres
- ▷ Floodlighting

## Dialight LED benefits

- ▷ 5 year warranty = maintenance free
- ▷ 80% lumen maintenance after 60,000 hours
- ▷ Up to 79 lm/w
- ▷ Significant energy savings
- ▷ Instant on/off
- ▷ Superior light quality
- ▷ IP66 rated to withstand dust and moisture
- ▷ Polycarbonate lens
- ▷ No UV or IR
- ▷ No hazardous substances
- ▷ Temperature compensation technology for long life

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

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