



TYCO INTERNATIONAL

TRIUMPH OF TEAMWORK OVER
CHALLENGES OF INDUSTRIAL LED
LIGHTING PROJECT.

Dexeco
SOLUTIONS

ABOUT THE CLIENT

The recent energy-efficient lighting project at Tyco's new Main UK L&D Distribution Centre in Letchworth demonstrated Dextra Group's efficiency and speed in coordinating all departments from design, to testing, all the way through to delivery and installation support.

Tyco is currently the world's largest fire protection and security solutions provider with 57,000 employees operating in over 900 locations across 50 countries. Valued at over \$12 billion, the company delivers cutting-edge solutions to help over 3 million clients around the world "protect what matters most".

Following the £5 million regeneration of Letchworth's old power station, Tyco moved its Main UK Distribution Centre to a state-of-the-art 75,000 sq ft industrial unit in Letchworth. Being a high-profile business in the region, the move has helped maintain a healthy local economy and has generated more jobs within the North Hertfordshire area.



Dextra Group shares Tyco's "tradition of customised service and passion for technology and innovation" – a common ground which paved the way for a fruitful partnership in this project. Through various favourable connections within Tyco's supply chain, including Luke Holt from local distributors, Mech-Elec and Darren Head from R&H Electrical, Dexeco was chosen to provide a customised, high-performance and low-energy solution with intelligent controls. The lighting design would help the new facility to run in alignment with the company's Environmental Health and Safety management system, supporting its vision of Zero Harm to people and the environment.

THE BRIEF

From the start, Dexeco's level of transparency and open channels of communication throughout the design process forged a good working relationship with Tyco, as an ongoing dialogue ensured that all the company's needs regarding light levels and energy consumption were met with precision.

Overseeing the lighting procurement was Tyco's EHS Co-Ordinator, Neil McCarthy and Programmes Manager Andrew Townshend with whom the team was in close communication regarding factors such as: colour rendering and temperatures, lumen maintenance and life-expectancy of LEDs, driver and luminaire efficiency and much more. Emergency lighting, sensors and dimming controls were also to be provided to maximise safety and efficiency.

By the time Dexeco joined the project, Tyco was under an extremely tight schedule and strict budgetary constraints – leaving little time to complete the project. Due to its unrivalled UK delivery times owed to its vast design, testing and manufacturing capabilities, attentive customer service, and its own highly-responsive transport and logistics team, Dexeco was able to present a full design and quotation within merely 2 weeks and once the order was placed, all fittings were supplied in under 4 weeks .



THE SOLUTION

High-Level Sensor-Controlled Warehouse Lighting – Verteco LED.

The design objective for the production area was to provide optimal lighting conditions for technicians to build, assemble and inspect products effectively, whilst being able to adjust to natural daylight entering from the building's sky lights.

The Verteco LED was selected as primary high-level lighting for this section of the building, as it has a proven track-record as an industry leading energy-saving, sensor-controlled high-bay luminaire. Its international success is owed to combining excellent performance, simple installation, significant energy savings and fast payback rates, whilst offering a wide range of customisable options and optical control.

To achieve the required lux levels from elevated ceiling heights of 8m the luminaire was supplied in a high 26,400 lumen package from a range outputs (between 13,200lm and 32,000lm). Equipped with an Open Area optic, maximum coverage was achieved in each aisle with wider, and more cost-effective, luminaire spacings.

The problem met by many conventional high-bays is that at higher outputs they often produce significant amounts of glare, causing hazards and discomfort for warehouse staff – especially forklift drivers and machine operators.

The Verteco LED range solves the issue of balancing brightness and optical control by using mid-power LED boards to achieve the same light level as high-output LEDs but with minimal glare. Supported by high-transmission diffusers and a series of customisable optics (Open Area, High-Rack and Ultra-High Rack), the luminaire can then provide uniform coverage and tailored distributions to achieve the most effective task illumination, for a comfortable, productive and safe working environment.

High-quality LED sources are also a key asset for high-level applications as their long life-expectancy of a minimum of 50,000 operating hours, reduced lumen depreciation and rugged durability, minimise maintenance costs by eliminating the need for frequent lamp changes in hard to reach areas.

In terms of lighting controls, the Verteco LED's integral Reacta 14 sensor and DSI dimming controls provided daylight and presence detection to boost the installation's energy efficiency by a potential 20%, whilst maintaining optimal light levels throughout the day. The integral sensor also avoids any complex interlink communication wiring and the programming is all done from the REA-AP remote control with a range of 25m.

Rapid installation also allowed the luminaire to keep within the total budget for the project, as its practical back flap and unique slide-out mounting brackets offer a simple and accessible method of mounting to trunking with no need to remove reflectors.



Low-Level Storage / Picking Area (Above & Below Mezzanine) – Ecopack LED

The Ecopack LED batten luminaire offered a simple and energy-efficient solution for the low-level storage and picking area. In addition to the low-maintenance and energy saving properties of LED, the luminaire saved Tyco more money in terms of installation, with its practical two-part construction with separate gear spine and one piece clip-in gear tray and diffuser, keeping the whole process quick and cost-effective.

The versatile luminaire was supplied in a lumen output of 6,300, in a 1500mm length, to provide optimal coverage and visual clarity for staff. The EPK LED is also available in a range of dimming options which are compatible with standalone sensors from Dexasor's Reacta range to maximise energy savings with each installation. Integral emergency packages and a range of optics providing open area or narrow distributions, allow for an effective alternative to trough or high-rack reflectors typically found in conventional fluorescent lighting.



THE SOLUTION

On-Site Service Repair Centre – Impervia LED.

The efficient, IP65-rated Impervia LED recessed luminaire was installed in the service repair centre due to its robust steel housing and injection moulded ABS frame offering protection from dirt, dust and water ingress, as well as light impact that may occur during testing procedures.

The luminaire's high-quality and reliable Lumileds LEDs offer the benefits of long life and low-maintenance of LED, whilst its advanced optic panel provides excellent diffusion but allowing up to 93% light transmission. At a 4500lm capacity, the Impervia LED ensured that task visibility was amply met whilst maintaining maximum visual comfort.

The versatile luminaire is available in a wide range of lumen outputs of between 3,500lm and 15,200lm in 3 different body sizes, and can be supported by a range of standalone sensor, dimming and emergency options with suitability for both lay-in or pull-up installation. This gives designers the flexibility to tailor each installation to suit specific lighting and spatial requirements.

The LED products featured in this project were provided with integral emergency where applicable, a 4000k (C84) colour temperature and a minimum Colour Rendering Index of 80 upon Tyco's specific request. All luminaires were offered with Dextra Group's comprehensive 5-year warranty for additional peace of mind and support beyond purchase.



CUSTOMER FEEDBACK

"Here at Tyco we excel in always trying to reduce our carbon footprint, and the impact our business has on the environment. During our recent relocation project in Letchworth, we had the opportunity to work with a blank canvas, and utilise this opportunity to install best practices from day one, in a brand new building.

Throughout the planning, design and negotiation process, Dexeco were always available to help and support us in any way they could, attending site on several occasions to oversee this project, which was invaluable.

The project itself allowed us to install low energy lighting, throughout the warehouse, that would allow us at least a 15 – 20% reduction in energy consumption through lighting alone.

Against some market competitors they gave us significantly faster estimated delivery times, and a cost saving, even with the fact there were additional light fittings on the project design plan. This in turn making the work areas more evenly lit, and making it a more comfortable and safer place to work.

The technical team carried out some intensive testing on the light fittings we chose, to confirm if they were compatible with our new heating system, ensuring that the equipment could work in close proximity to the heating ducts without affecting the sensors of the light fitting.

The issue of Dextra being relatively closer to us made a big difference in our decision making, as we knew the support would be on hand, should it be required.

Our decision making cannot be questioned, as throughout the whole project from start to finish, the help, support, technical knowledge and professionalism shown to us by Dextra was faultless. To this day we are still in contact with them and as we move forward as a company, their installation and marketing strategies are being delivered globally throughout Tyco, so we can share our experience with all of our colleagues around the world.

I would wholeheartedly recommend Dextra to any company that are looking to install a high quality lighting system in their workplace, and thank Dextra for allowing us a visit of their Drone Technician Harry, who came to site and took some incredible footage of our site. This too has been distributed globally throughout Tyco, and has received glowing reports."

Neil McCarthy, EHS Co-Ordinator at Tyco

FEATURED PRODUCTS



VERTECO LED



IMPERVIA LED



ECOPAK LED



PROTEC LED