



EPM TECHNOLOGY

LEADING TECHNOLOGY
MANUFACTURER INVESTS IN THE
FUTURE WITH LED.

Dexeco
SOLUTIONS

ABOUT THE CLIENT

Dexeco's precision-engineered LED products have helped leading technology composites manufacturer EPM: Technology, to fulfil a striking futuristic vision for its £6m factory in Derbyshire. The new installation has not only minimised the building's energy consumption but has demonstrated the company's commitment to cutting-edge technology.



As the official suppliers for prestigious clients within the motorsports, aerospace and defence industries, EPM's stance on procuring technology for its own headquarters, left no room for compromise. Following an "explosion of growth", the company needed to make a confident statement with the inauguration of its new factory, projecting an image that would impress its high-profile clientele and attract further business. At 60,000 sq ft, it now stands as the one of the biggest purpose-built composites factories in the country. This is where EPM's relationship with Dextra Group began; one based on pursuing the highest manufacturing standards in the U.K whilst pushing technological boundaries with every step.



THE BRIEF

Fellow U.K manufacturer, Dexeco was required to produce a bespoke lighting solution merging the ultra-modern aesthetics of a high-tech engineering business with maximum energy efficiency. Company owner and CEO, Greg Mulholland, was determined to adopt a common theme across the entire premises, evoking the clinical precision of EPM's products.

The design concept was inspired by visions of the future, with clean, sharp lines emulating the technological allure of Formula 1.

With a deliberate minimalist style, the building aims to celebrate the efficiency and technological edge of EPM's products. This approach was maintained from the "Infinity" corridor through to the laminating shops & autoclave area, showing consistency in product and brand-identity.

From the outset, Mr. Mulholland recognised the advantages of high-quality LED sources, offering the longest lifespan and lowest maintenance available today. LED is undeniably the most efficient, environmentally and financially sustainable alternative in lighting. To amplify the benefits of this groundbreaking technology, Dextra Group continuously develops advanced optic and sensor technology, making sure each installation stands the test of time. The government has also encouraged investment in LED in all sectors through tax incentives such as the Carbon Reduction Commitment.



MAIN ENTRANCE AND INFINITY CORRIDOR – PROTEC LED

First impressions are vital for any business. That is why the attractive Protec LED downlight was chosen to enhance areas where visiting clients are received, such as the entrance and reception area and the main corridor. With its appealing contemporary design and vast range of customisable features including: interchangeable colour attachments and reflectors, covers and bespoke bezels, this versatile luminaire can be tailored to suit different architectural styles, decors and branding colour schemes, providing designers with the tools to create inviting and vibrant lighting solutions.

The luminaire's elegant, minimalist design harmonised perfectly with the factory's modern design theme and was provided in all-white attachments to match the colour scheme. For both the entrance's high ceilings and the lower level corridor, it was supplied in 3000lm to achieve the desired light levels and uniformity with the most efficient luminaire spacings.

But the Protec LED offers far more than just aesthetic appeal. Using the latest Lumileds LEDs with its highly-efficient anodised aluminium reflectors (semi-specular or specular options available), the luminaire offers premium efficiency with LORs in excess of 90% in lumen outputs of up to 3000lm.

By making the most of the LED source, the ultra-efficient Protec LED delivers impressive energy cost savings (with short capital cost payback periods) over fluorescent equivalents, tying in perfectly with environmental management policies.



Further options for this range include an IP65 sealed versions for bathrooms, wet areas, and a BSEN 12464 glare compliant variant for use in offices.

To offer clients increased flexibility, the Protec LED is available with Touch-Dim and DALI dimming functions which are compatible with a wide selection of sensors from Dexsors' Reacta range to maximise efficiency.

The Protec range also offers simple, ultra-quick installation thanks to a four point self clamping spring bracket and can be fitted in plasterboard, mineral fibre or metal tile surfaces.



PRODUCTION AREA – VERTECO LED

The state-of-the-art Verteco LED high-bay was utilised in the factory's high-level production area to enhance visibility and safety whilst minimising operational costs. The system also required suitable lighting controls to adapt to the changing production processes and layouts of EPM's diverse projects.

By using high quality Lumileds sources, the Verteco LED offers the longevity and durability of LED, to provide a reliable and low maintenance solution for demanding industrial environments.

When combined with its high-transmission diffuser and selection of customisable optics, the luminaire ensures that the most efficient distribution and desired light intensity is achieved with each application. These advanced optic and LED technologies allow the Verteco to perform at an impressive average of 103 Llm/w in lumen outputs between 13,200lm and 32,000lm, offering excellent performance and significant energy reduction in a single attractive package.

Brightness however, is not the single indicator of luminaire performance. The Verteco utilises mid-power LED boards with its efficient diffuser, providing clarity and great coverage ensuring staff can now work in a bright, comfortable and safer environment.

With the Verteco LED's integral R14 daylight regulation and presence detection sensor, each individual luminaire harvests daylight entering from the ceiling windows and dims the luminaires during periods of absence. This intelligent system allows optimal light levels to be attained throughout the day whilst rapidly accumulating energy savings.

As flexibility was a key requirement for the production area, the R14 sensor is designed to be programmed from the ground level via the user-friendly REA-AP remote control.

This remotely addressable system minimises the cost of installation by eliminating the need for BUS Wiring.

Installation is further simplified thanks to the luminaire's unique slide-out brackets, for an easier method of mounting to trunking without removing the reflector.

Overall, the Verteco LED owes its growing success to its excellent performance, simple installation, significant energy reduction and intelligent controls, which combine to offer customers exceptionally rapid returns on investment of three years with a typical installation.



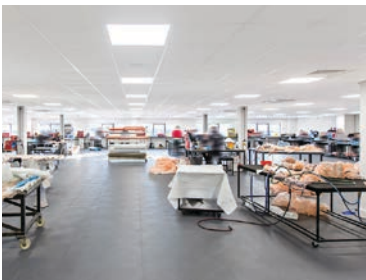
LOW-LEVEL PRODUCTION AND DESIGN AREA & OFFICES – MODLED SLIM

The MODLED Slim's continued success across various sectors is down to its versatility and premium performance. Offering lumen outputs from 3500lm to 9000lm across three different body sizes, the luminaire allows installations to be designed most efficiently for either retrofit or new-build applications. Advanced optic panels offer up to 93% transmission of its high-efficiency Lumileds LEDs and excellent diffusion. In the low-level production and design studios, where attention to detail for quality control inspections and visibility for intricate production tasks are vital, these features will allow the 600mm x 600mm MODLED Slim to help increase productivity, by maintaining higher than average Lux levels without compromising on visual comfort.

High levels of energy efficiency were achieved not only through the low running costs of LED chip boards but by using a lower number of optimally spaced luminaires in each area.

For the offices, a 3500lm variant offered compliance with BSEN 12464 3000 candela glare requirements making it suitable for areas with monitors in use.

Compatibility with HFR, DALI, Switch and DSI dimming also allows the luminaire to offer increased flexibility to adjust the lighting for different production tasks and adapt to daylight levels and staff movements.



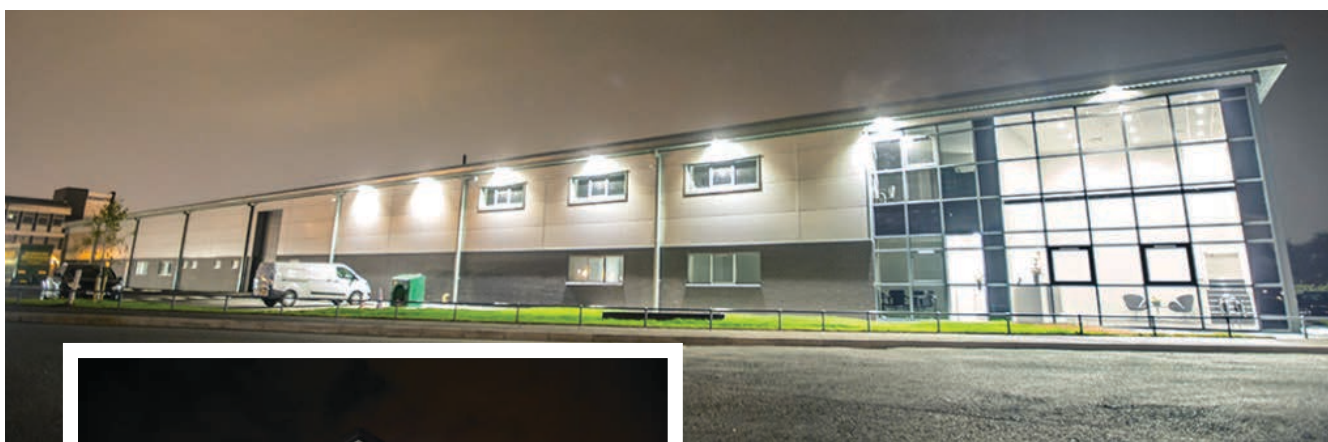
EXTERIOR – OPUS 2

As night time approaches, the OPUS 2 LED floodlight illuminates the building's perimeter and car park in a subtle yet distinctive manner.

The robust OPUS 2 LED is designed to withstand the rigours of the outdoors with its highly resistant die-cast aluminium construction and tough glass cover offering full IP65 protection. With the added durability of its Lumileds LED chips and Tridonic drivers, the luminaire offers a low maintenance, hassle-free exterior lighting solution, and performs at an impressive 100 Llm/w average, with LORs of over 85%. The Opus 2 LED's total cost of ownership is therefore drastically reduced by combining minimal maintenance with premium performance.

The OPUS 2 LED also shines in its versatility, with a wide range of lumen outputs from 3,000 to 28,800 across four housing sizes and a choice of symmetrical or asymmetrical lenses, each installation can be customised for specific outdoor requirements. A range of sensor and dimming controls also allow for increased energy savings to improve returns on investment.

All LED products featured in this project were offered with a comprehensive five year warranty and utilise the latest Lumileds high efficiency LED chips for improved performance, greater efficiency and ECA compliance. Energy-efficient emergency lighting was supplied throughout the premises in accordance to safety regulations.



FEATURED PRODUCTS



VERTECO LED



MODLED SLIM



PROTEC LED



OPUS 2 LED



DISCALO LED