EXPANSION OF THE ACADEMIC SPORTS

Bydgoszcz, Poland

General information

The facility was built at the intersection of Akademicka Street and Professor Sylwester Kaliski Avenue, on land donated by the city. As part of the expansion project, which cost 42 million PLN, a football pitch, a basketball court, a professional shooting range, and tennis courts were built. These new additions complemented the facilities opened at the end of 2023, during the first stage of construction, which was worth 30 million PLN. The first stage included sports halls with basketball and volleyball courts, a climbing wall, a gym, and fitness rooms.

Product advantages:

- Lifetime t [h]: up to 50,000 hours (L70/B50 at max. Tc 85°C)
- Ambient temperature range Ta: -20…+45°C
- Length × width × height [mm]: 50000 × 12 × 4.5
- Pre-installed connector with twist lock – length: 266 mm
- Minimum cutting unit length: 100 mm
- Resistant to salt mist and UV radiation
- Two power supply methods: mains voltage 220–240 V~ and via LED driver 215 V DC
- Double-sided 3M adhesive tape

ACADEMIC SPORTS CENTER DECORATED WITH LEDVANCE LIGHTING

At the end of May this year, the expansion of the Academic Sports Center in Bydgoszcz, located at Bydgoszcz University of Science and Technology, was completed. This modern sports complex has been equipped with a range of innovative technological solutions, including advanced lighting installations. The lighting systems were supplied by LEDVANCE.

CHALLENGES

The second phase of the construction primarily required lighting for outdoor sports fields, which are exposed to environmental conditions. Therefore, the project focused on using fixtures with a high degree of protection. Many of the lighting fixtures used have a protection rating of IP65 or even IP66.

Lighting such varied spaces also required the use of different types of luminaires. Although the entire installation was based on LED technology, specific fixtures had to be tailored to the needs of each field. One particular challenge was lighting the football pitch — a large area where no light sources could be placed in the center.

SELECTED COMPONENTS

The building interiors were mainly fitted with Office Linear series luminaires, which mimic the appearance of traditional fluorescent lights but are built with LED technology. Numerous 60x60 cm light panels were also installed, giving the interiors a modern look. In the shooting range, impact-resistant fixtures were used.

However, the most interesting solution was the use of custom-designed LED strips developed by the Warsaw-based company Fes Technologia. These provided a unique lighting effect that gave the space a distinctive look. The installation was also based on LEDVANCE LED strips, including both white light and RGBW variants, with protection ratings of IP66 and IP67.

LIGHTING CONTROL

In a public-use facility such as this, energy efficiency requires appropriate lighting control systems to prevent unnecessary illumination. For this reason, the investor decided to implement advanced lighting control mechanisms.

Numerous sensors were installed — including 44 motion detectors and 22 complex Osram detectors, capable of detecting both occupancy and ambient light levels. That's not all. The entire system was integrated using the DALI2 interface. A total of 35 DALI controllers and various DALI-compatible connection modules were used. The system is managed by two main Osram DALI modules. The DALI PRO C-4RTC can be conveniently controlled via an app and features battery backup in case of a power outage, making it ideal for both office spaces and sports facilities. The second controller, DALI PRO 2 IOT, is designed primarily for office environments and allows remote system access from any location, including cloud-based API support. It also automatically tests and reports on the installed emergency lighting.

These selected components ensure the installation aligns with the latest trends in lighting technology.

CONCLUSION

Professional lighting in a sports facility not only enables it to host competitive events but also enhances its modern appearance. The installed system has already proven itself during the celebration of the 60th anniversary of the University Sports Club of the Bydgoszcz University of Science and Technology.