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news views

ARCHITECTURAL LIGHTING

Ancient Church of Porza gets stunning yet non-invasive LED lighting retrofit

Dating to the 17th century, the Church of Porza stands on a hill in the Swiss district of Lugano, and while small in size, the church carries significant historical worth. The church recent underwent a solid-state lighting (SSL) retrofit that was intended to emphasize the beauty of the building without impacting the historic structure in any way. B Light has supplied a number of LED luminaires that have accomplished the goals as the nearby photo demonstrates.

The Church of Porza was dedicated to Saint Bernardino from Siena in the Tuscany region of Italy and Saint Martino from Tours in France. The building has a single nave and a bell tower with an octaganol drum. The baroque-neoclassical chuch is in a spectacular setting with views of the hills in the Lugano area.

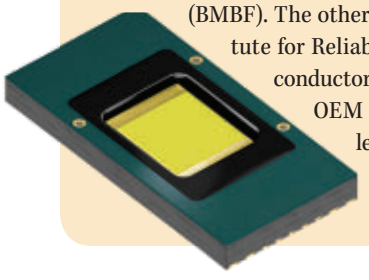
Lighting sacred and historic sites has been an important early application for the deployment of LED lighting. As was the case in Porza, such lighting projects must not imapact the structure for both religious and historic reasons. Small LED form factors and low power requirements have made an SSL retrofit the only option for projects where the desire is to improve the quality of the lighting design. For example, we covered the lighting in the » page 8

AUTOMOTIVE LEDS

Osram delivers prototype of 1024-pixel LED headlamp hybrid assembly

Osram Opto Semiconductors along with Osram Specialty Lighting has announced the demonstration of the Eviyos automotive LED headlamp module that could be the next advancement in automotive forward lighting beyond shipping adaptive drive beam headlights. The company recently showcased a prototype of the hybrid module at the ISAL (International Symposium on Automotive Lighting) event in Darmstadt, Germany.

Eviyos is the result of an R&D partnership coordinated by Osram and funded by the German Federal Ministry of Education and Research (BMBF). The other partners included the Fraunhofer Institute for Reliability and Microintegration (IZM), semiconductor-manufacturer Infineon, auto third-party OEM Hella, and auto manufacturer Daimler. We covered details of the R&D project called the µAFS Research Project last year (http://bit.ly/2f9pQNV) » page 10



SPORTS & ENTERTAINMENT LIGHTING

Martinsville Speedway gets LED lighting for fall NASCAR race

Eaton has announced an outdoor SSL installation at Martinsville Speedway located in Ridgeway, VA just south of the city of Martinsville. This past September, the new LED lighting bathed the track for viewers to watch the Late Model series NASCAR (National Association for Stock Car Auto Racing) series drivers duel in the ValleyStar Credit Union 300 race — the first night race in the 70-year history of the iconic raceway.

Seeing LED-based lighting installed for professional sports venues has become a fairly common occurrence of late, although just a few years ago it was quite novel. For example, we covered the first NFL (National Football League) Super Bowl played under LED lighting just two and a half years ago (http://bit.ly/1KqhVrQ). And MLB (Major League Baseball) teams made a big move into » page 8

interior of a neo-Gothic church in Germany (http://bit.ly/1tQsfkJ). And we published a feature-length article on an SSL project at the Durham Cathedral in England (http://bit.ly/1oVQ324).

In Porza, B Light was tasked to light the bell tower, the churchyard, and the outdoor area enclosed by low walls. The goal was to maintain a solemn atmosphere while enhancing the beauty of the site and making ingress and egress safer for worshippers.

To light the passage leading to the entrance of the church and portions of the churchyard, B Light installed Inserto Medium DO luminaires that are recessed into the surface in an asymmetrical pattern. The luminaires both light the passage and deliver some uplight to the front surface of the church and portal.

The bell tower, meanwhile, is lit with Linear Tube 112 Slim fixtures that, as the name implies, feature a tube-shaped form factor that can uniformly light such a structure while being hidden from direct view. The luminaires are installed inside the bell tower, making the bell clearly visible against the contrast of the night sky.

The remainder of the area lighting in the project was focused on benches located around the site and on the trees in the churchyard. Under the benches, B Light deployed Button 100 DO luminaires that have optics designed to reduce glare. More-directional and recessed Meropre 140 AD luminares provide uplight on the trees.

The Church of Porza joins a growing list of sacred sites where worshippers will enjoy the benefits of LED lighting. Indeed, the list includes among the most famous sites the Vatican's St. Peter's Square for example (http://bit.ly/2l9qCT3). ◄

Race from page 8

LED lighting for the 2016 season (http://bit.ly/28YaZ5u). Top European soccer teams have also been in on the SSL trend (http://bit.ly/2tq7eBQ).

Still, Martinsville has become the first major automobile speedway or motorsports facility to be lit with LEDs. International Speedway Corporation (ISC) owns the track and instigated the project called "Light Up Martinsville." Distributor Graybar also participated in the installation of the Ephesus Stadium 750 luminaires.

As is increasingly the case in sports venues, the choice of LED-based lighting was more about light quality than energy efficiency — although a track that previously had no lighting for night racing will surely appreciate energy-efficient lighting. But ISC said the lighting was selected to optimize the viewing experience for fans in the stands and those watching at home in HDTV.

Martinsville is one of the most popular venues on the NASCAR circuit for fans and drivers. The circuit is small relative to most NASCAR venues at just over 0.5 miles for the oval track. But fans in the stadium-like venue can see all the action. The track has been on the NASCAR circuit since the inception of that racing organization.

This season, fans and drivers are in for an all-new nighttime experience at Martinsville. "We were honored when historic Martinsville Speedway selected our Ephesus LED lighting solution to light up Martinsville," said Mike Lorenz, president of Eaton's Ephesus Lighting business. "It's especially rewarding to bring night racing to this remarkable venue. There is nothing like racing under the lights and with our industry-leading digital lighting system, drivers experience optimum conditions while fans will experience this venue in a whole new light." ◄

HORTICULTURAL LIGHTING

Seoul announces horticultural LEDs; Cree, Lumileds, and Osram show recent newcomers

The *LEDs Magazine* Horticultural Lighting Conference took place on Oct. 17 in Denver, CO, and the event yielded the public debut of a number of new packaged LEDs for the burgeoning application. Seoul Semiconductor used the event to launch its Horticultural Series LEDs across mid-power, high-power, and chip-on-board (COB) products, including LEDs that emit in the ultraviolet (UV) range. Osram Opto Semiconductors, Lumileds, and Cree, meanwhile, all used the conference as a venue to demonstrate new horticultural LEDs launched in the past few months.

Seoul horticultural entry

The Seoul announcement became what was perhaps the broadest horticultural LED launch in the industry, even surpassing the Lumileds SunPlus announcement last year in breadth. Seoul is the only vendor offering horticultural-centric products spanning the UV range to the near infrared (NIR) bands. Moreover, the company is targeting some LEDs at horticulture that are based on its SunLike technology platform that debuted earlier this year with a uniform spectral power distribution said to mimic the sun (http://bit.ly/2sNvv2U).

In the high-power sector, Seoul announced deep-blue (449–461 nm), deep-red (646–665 nm), far-red (730 nm peak), and broad-spectrum-white LEDs. In each case, the company is specifying a photosynthetic photon flux (PPF) measure of performance expressed in micromoles per second (µmoles/sec). For example, the 650-mW deep-blue LEDs are rated at 2.6 µmoles/sec. For more on horticultural-centric metrics, see our feature article on the topic (http://bit.ly/2fwtLZB).

The high-power offering also includes horticultural LEDs in the UV-C, UV-B, and UV-A bands, which are marketed by the Seoul VioSys business unit. During the conference sessions, Peter Barber, product marketing