TRIDONIC

PRESS RELEASE

Versatile light for Kunsthalle Mannheim

LED light engines in the new exhibition cubes

Dornbirn, November 28, 2018. **The lighting in the new extension to the Kunsthalle Mannheim (Mannheim Museum of Modern Art) can be tailored to suit different requirements thanks to the controllable lighting panels in the ceiling and configurable spotlights – anything is possible, from a black box to a white cube for presenting artwork. The key to this sophisticated solution is the use of LED light engines and LED drivers from Tridonic.**

Mannheim is known as the “city of squares” because of its ordered structure of blocks in a chessboard pattern. Architects Gerkan, Marg und Partner (gmp) took this pattern as the starting point for the design of the extension to the Kunsthalle Mannheim. For this new building they developed the concept of a “city within a city”. The space is therefore divided into smaller units with rectangular footprints, organised around a central element – a 22 metre high atrium. Thirteen galleries are interlinked by bridges, stairs and terraces. These cubes with their individual dimensions and proportions offer a total exhibition space of 3,600 square metres. Some open up to daylight from windows and glazing units, while other appear as introverted cabinets and halls. This means that the curators have a wide range of environments in which they can present all genres of artwork to best effect.

Variable rooms, flexible light

The various room situations and the fact that the rooms can be changed with partitions means that the lighting concept had to be particularly flexible. The lighting designers from a.g Licht met this challenge with a solution that is not only functional but also aesthetic. “We opted for lighting panels integrated in the ceiling”, said Daniel Walden, the man in charge of the project at a.g Licht. “We could then do without light sources as objects in the room, leaving the clear minimalist architecture of the cubes unimpaired. We used simulations to calculate the dimensions and placement of the ceiling panels so that we could achieve optimum illumination and the greatest possible freedom for the exhibition layouts.” A power

rail into which spotlights can be installed for accent lighting and a ventilation strip provide the outlines of the lighting panels. Combining multiple functions in the rectangular form ensures that the ceiling remains pleasantly uncluttered.

Proven technology, proven collaboration

The ceiling panels were designed and produced by Rentex. This specialist in light ceilings and walls used frames covered with translucent film to ensure homogeneous light in the exhibition rooms. “The laminated plastic film is lightweight, neutral in colour and has high transmittance. It has proven its worth as an excellent diffuser in many other lighting systems for museums and exhibition spaces”, said Uwe Jacob from Rentex. Collaboration between Rentex and Tridonic also has a good track record. Uwe Jacob added: “We have already completed a large number of projects using LED technology from Tridonic. The quality of this technology is evident in many different respects in the ceiling panels installed in the Kunsthalle Mannheim.”

Broad selection of modules, tailor-made configurations

Linear Tridonic LLE advanced LED light engines are installed in the light ceilings. The light engines are available in different lengths and with different luminous fluxes. This variety is important here because it offers the necessary flexibility for arranging the LED modules in the luminaire housings. “The client specified that the building systems in the suspended ceiling should be accessible via the luminaires. The frame with the film and the equipment carrier with the LED modules and LED drivers are hinged to reveal an inspection opening in the back wall of the luminaire housing”, explained Uwe Jacob. By combining 24 mm wide LED light engines of type LLE G4 in different lengths and different light outputs and with a colour temperature of 3,500 K, the equipment carriers could be populated so that the light from the ceiling panels was homogeneous. This also means that the braces in the film frame are not visible and do not cast shadows. A linear opal plastic cover, which Tridonic offers as an accessory for the LLE, also helps. It ensures that the LEDs do not appear as individual points of light and also protects against contact when the luminaire is open.

High quality of light, digital control

This demanding project also called for high quality of light, including narrow binning. This means that there are no visible spectral differences between the individual

Tridonic modules. This is essential to achieve a homogeneous effect, particularly if, as here, the LED light engines are so tightly packed next to one another. Tridonic technology also ensures colour fidelity of the LEDs when dimmed. The luminous flux can be reduced or increased without any perceptible colour shift. DALI lighting control is used for dimming and switching the ceiling panels. The LLEs are operated on one4all premium drivers. In addition to various other control options, these drivers include a DALI interface as standard. The adjustable output current of the constant-current LED drivers provides flexibility in the assignment of the LED light engines. Other benefits include particularly low standby power consumption and long life.

Light for art

Kunsthalle Mannheim claims to be a “museum in motion”. Consequently, it does not intend to organise any static permanent exhibitions in the new building. Instead, objects from its collection will be presented in the cubes in new combinations and themes, with ever-changing special exhibitions of works of art loaned from museums around the world. Thanks to the flexibility of the system, the lighting can always be configured to achieve the best possible visual, conservational and staging effects.

Project information:

- Extension of the Kunsthalle Mannheim, www.kuma.art
- Architects: Gerkan, Marg und Partner, Hamburg, www.gmp-architekten.de
- Client: Stiftung Kunsthalle Mannheim, www.kuma.art
- Lighting design: a.g Licht – Gesellschaft von Ingenieuren für Lichtplanung b.R., Bonn, www.aglicht.de
- Background lighting/light ceiling panels: Rentex Wand- und Deckensysteme GmbH, Eggenstein-Leopoldshafen, www.rentex-systeme.de
- LED technology for light ceiling panels: Tridonic, Dornbirn, www.tridonic.com
- Exhibit lighting: Zumtobel
- Facade lighting: iGuzzini

Captions:

Picture 1:
LED technology from Tridonic provides the basis for a particularly flexible lighting solution in the new extension of the Kunsthalle Mannheim.

Photo: HGEsch Photoraphy

Picture 2:

Thirteen galleries are interlinked by bridges, stairs and terraces. These cubes with their individual dimensions and proportions offer a total exhibition space of 3,600 square metres.
Photo: HGEsch Photoraphy

Picture 3:
Large light ceiling panels constitute the main elements of the lighting system in all the rooms for temporary exhibitions on the ground floor and in almost all the cubes on the two upper floors.
Photo: Andreas Körner

Picture 4:
Not only the lighting solution itself but also the building systems installed in the suspended ceiling are easily accessible for maintenance purposes. The film frame and the LED carrier are hinged to reveal an inspection opening.
Photo: HGEsch Photoraphy

Picture 5:
“We opted for lighting panels integrated in the ceiling”, said Daniel Walden, the man in charge of the project at a.g Licht. “We could then do without light sources as objects in the room, leaving the clear minimalist architecture of the cubes unimpaired.”
Photo: Andreas Körner

Picture 6:
A power rail into which spotlights can be installed for accent lighting and a ventilation strip provide the outlines of the lighting panels.
Photo: Andreas Körner

Picture 7:
Thanks to the lighting solution based on LED technology from Tridonic, the lighting is so flexible that it can always be configured to achieve the best possible effects.
Photo: Andreas Körner

Press contact

Silvana Kegele
Tridonic GmbH & Co KG
Phone: +43 5572 395 – 45109
silvana.kegele@tridonic.com

Markus Rademacher
Tridonic GmbH & Co KG
Phone: +43 5572 395 – 45236
markus.rademacher@tridonic.com

About Tridonic

Tridonic is a world-leading supplier of lighting technology, supporting its customers with intelligent hardware and software and offering the highest level of quality, reliability and energy savings. As a global driver of innovation in the field of lighting-based network technology, Tridonic develops scalable, future-oriented solutions that enable new business models for lighting manufacturers, building managers, systems integrators, planners and many other types of customer.

To promote the vision of the “Internet of Light”, Tridonic relies on partnerships with other specialists. The goal is the joint development of innovative technological solutions that convert lighting systems into

intelligent networks and thereby enable associated services. Its profound, technical industry expertise makes Tridonic an ideal partner for established brands and for newcomers to the market.

Tridonic is the technology company of the Zumtobel Group and is headquartered in Dornbirn, Austria. In the 2017/18 tax year, Tridonic generated sales of € 352.7 million. 1,690 highly skilled employees and a worldwide sales presence in over 50 countries provide the basis for developing and launching new, smart and connected lighting systems.

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