

Press release

Dornbirn, April 2012

LEDs show art in a special light

Zumtobel lets exhibits shine safely

Zumtobel is presenting integrated, innovative LED lighting solutions for the *art and culture* application area at Light+Building 2012. Emphasis is placed on setting exhibits centre stage and showing them in an authentic manner. An on-going study by Darmstadt University of Technology in collaboration with Zumtobel disproves the widely held assumption that LED lighting solutions have significant damage potential. Using a drawing by Pablo Picasso as an example, in a realistic scenario the research showed how lighting solutions can be used intelligently and carefully.

The use of light must be designed and implemented with special care in *art and culture* applications: exhibits can only be presented optimally by achieving the right interplay between daylight and artificial lighting. Thoughtless design and implementation can pose risks to fragile exhibits and have an adverse effect on presentation quality. Perfect colour rendering and protection against UV and IR radiation are therefore indispensable. Extremely sensitive exhibits in particular require gentle lighting that does not fade or otherwise harm works of art. Extensive knowledge of how to use light is crucial when it comes to successfully designing and implementing premium, gentle lighting solutions for art and culture applications. At Light+Building 2012, Zumtobel is showing innovative lighting solutions that can be adapted individually to suit each exhibition and accentuate the distinctive peculiarities of an exhibit by masterfully setting it centre stage. Subtle ambient lighting, cleverly implemented use of daylight and precise, brilliant accent lighting are all basic prerequisites for achieving this.

Museums usually prefer a consistent luminaire design. With Tunable White, a broadly defined, subtly coordinated spectrum of light can be individually adapted to suit each exhibit at the push of a button with excellent colour rendering and optimal luminance levels for the exhibit - using just a single luminaire type such as the Arcos spotlight range or the Panos Infinity LED downlight range. Thanks to adjustable white light, i.e. by varying the intensity of light and light colour, works of art made from different materials or with predominantly bluish or reddish colours can be staged with equal flair. This can be accomplished without having to replace any light sources or spotlights.

Zumtobel research study underlines the benefits of LEDs

An investigation by the Lighting Technology Department of Darmstadt University of Technology commissioned by Zumtobel proves the benefits of state-of-the-art LED technology over conventional light sources when it comes to lighting works of art and cultural objects. The findings: reduced UV and IR radiation, a constant colour temperature over the dimming range and improved energy efficiency all minimise the potential damage to works of art. Valuable knowledge about lighting options was obtained by using Pablo Picasso's "Harlequin" drawing, which dates from 1916, as an example and taking into account assessment parameters that are relevant to art objects. The experiment made it possible to measure the advantages of LED technology over other forms of lighting. The findings underscore the benefits of LED lighting and provide architects, designers and curators with valuable criteria on which to base lighting that is beneficial to works of art.¹

The experts for sharp outlines - Arcos projection spotlights

The Arcos LED projection spotlight from the range of spotlights that bears the same name is a specialist in accent lighting for museums, exhibitions, art galleries and other prestigious venues. This high-output luminaire is used for illumination with sharp outlines and for focussed, sharp-edged pinpointing of individual areas. The precise, but nevertheless gentle, lighting provided by the Arcos LED projection spotlight sets any exhibit centre stage perfectly with sharp contrasts and uniform light distribution with beam angles from 6° to 24°. Wall surfaces are hardly illuminated at all. Round as well as square lighting cones with sharp contrasts are possible thanks to various adjustable objective lenses. The "Soft Edge" version also provides a luminous field with soft edges. The dimming level (from 10 to 100%) can be adjusted on the actual spotlight. This way, the requirements of sensitive exhibits can be taken into account and required illuminance levels can be adhered to. The high-output LED module has a service life of 50,000 hours at 70 % luminous flux, and produces virtually UV and IR-free light with a colour temperature of 3000 K. As usual with Arcos, even the LED projection spotlight can be accurately locked in position on two axes of motion by using an Allan key.

Microtools – Miniaturised showcase lighting

The Microtools modular LED system, which recently won the iF Gold Award 2012, is another highlight in the *art and culture* application area. The miniaturised lighting heads have been

¹ We will be glad to send you a detailed report on this study on request. Please request your report from: press@zumtobel.com

integrated into the modules to the greatest possible extent. A variety of easily combinable modules is available to ensure versatile, highly flexible illumination - for general lighting, lighting accents or a combination of both. The front ring used for aligning the spotlights and for replacing the optics protrudes only 4 mm from the module. This ensures that the light source remains virtually invisible. The full effect of the light is concentrated on the exhibits in the showcase. Targeted lighting accents emphasise even the smallest details, presenting them as elegant highlights. As the 1.2 W LED chips produce only very little heat, they can be placed close to the exhibit on display: this means that they can replace conventional low-voltage halogen spotlights without any compromise in terms of quality, yet at a significantly reduced installed load. LED light is focussed intelligently to meet all requirements in the context of museum and shop design. Beam angles ranging from spot (16°) to very wideflood (68°) ensure that targeted lighting accents direct the viewer's focus onto individual items while other areas are uniformly lit.

Zumtobel. The Light.

Brief profile

Zumtobel is a leading international supplier of integral lighting solutions that enable people to experience the interplay of light and architecture. As a leader in innovation, the luminaire manufacturer provides a comprehensive range of high-quality luminaires and lighting management systems for the most varied application areas of professional interior lighting – including offices and educational facilities, presentation and retail, hotels and wellness, health and care, art and culture as well as industry and engineering. Zumtobel is a brand of the Zumtobel group with its head office in Dornbirn, Vorarlberg (Austria).

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Captions:

Credits: Zumtobel



Caption 1: Test methods employed during the Zumtobel research study involving Pablo Picasso's "Harlequin" drawing.



Caption 2: The Arcos LED projection spotlight from the spotlight range of the same name allows sharp-edged accent lighting of individual goods and products.



Caption 3: The Microtools LED system blends almost invisibly into shelves and display cabinets. The LED spotlights are currently the smallest ones available on the market.



Caption 4: Regardless whether in the Stadel Museum, the Military History Museum or Neuschwanstein Castle: Zumtobel advises museums and art galleries and supplies them with tailor-made lighting solutions that guarantee the fullest appreciation of art while protecting precious exhibits against damage.