

**Zwinger Palace  
in Dresden**



## Visual quality

### Illuminating objects

SUPERSYSTEM LED spots, with their compact dimensions, low energy consumption and, above all, excellent lighting quality, cannot fail to impress: a colour rendering index in excess of Ra 90 makes it possible to experience the natural appearance of exhibits which could not be more diverse in terms of materials and colours.

Whereas silver, for instance, looks best in a cool white light colour, warm white light colours are ideal for gold and bronze hues. Non-scatter spot and flood distribution characteristics ensure that the details of the very interesting scientific instruments are highlighted in a striking, precise manner.



Lighting solution



SUPERSYSTEM LED



After six years of reconstruction, the Royal Cabinet of Mathematical and Physical Instruments at the Zwinger Palace in Dresden has been open to the public since April 2013. The experimental cabinet of the Elector of Saxony, established in 1728, is now the oldest museum in the Zwinger Palace. The new exhibition design enhances the Baroque architecture of the palace and allocates more space to the fascinating collection. Four hundred of around 2,500 historic scientific instruments are displayed over a floor area that has almost doubled. Terrestrial and celestial globes, burning mirrors, telescopes, clocks and watches provide visitors with an insight into how scientists used to explore the world in the past. Because of the materials used and their exquisite craftsmanship, many items are impressive works of art. Large exhibits are presented free-standing, while smaller and especially delicate objects are protected by show-cases.

The lighting solution plays an important role against this backdrop: it accompanies visitors along the galleries and pavilions, facilitating orientation and ensuring that they can experience the instruments authentically, while at the same time allowing for targeted and gentle presentation. One of the most important decisions in the context of the new concept was the changeover to an LED-only lighting solution. The minimalist SUPERSYSTEM LED spots blend unobtrusively into the interior, enhancing the architecture to optimum effect.

**Zwinger Palace, Dresden / DE**

Architects (exhibition): Holzer Kobler Architekturen GmbH, Zurich / CH

Architects (structural engineering): Büro Lungwitz, Dresden / DE

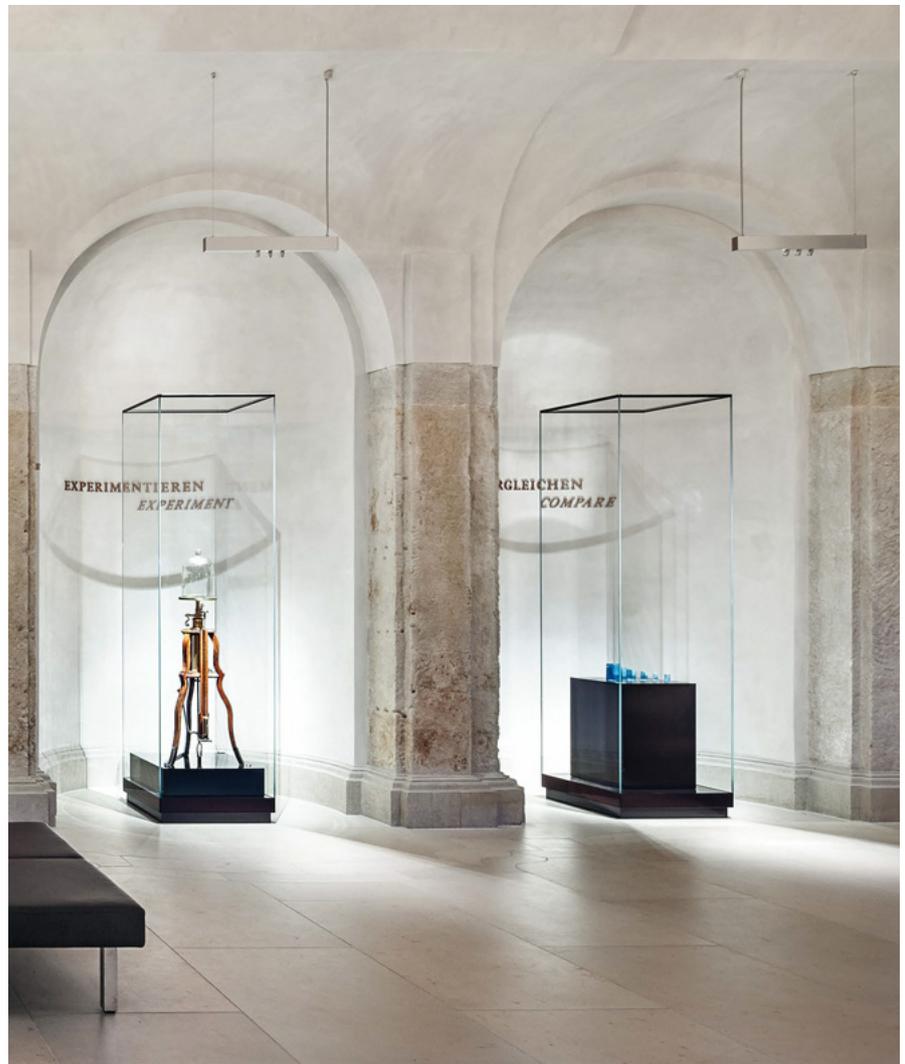
Lighting solution: modular SUPERSYSTEMS LED lighting system

## Flexibility and versatility for all exhibition areas

Some 400 exhibits are set centre stage authentically yet gently by approximately 1,100 LED spots. Thanks to their performance potential, accent lighting is possible even across longer distances. Here, the modular lighting system proves its outstanding versatility. Depending on the lighting task, various SUPERSYSTEM models have been installed throughout the exhibition area as well as in public spaces: recessed in the ceiling, surface-mounted or as pendant luminaires. Moreover, the individual spots can be swivelled in and out and rotated in all directions to provide selective accent lighting.



The ceiling-recessed, surface-mounted and pendant luminaire versions of SUPERSYSTEM perform various lighting tasks, both in the exhibition as well as in public areas.



## Conservational aspects

### Lighting exhibits gently

Another characteristic feature of the new lighting solution is the interplay of daylight and artificial lighting. In the bright galleries, which were originally not intended as museums and meet conservational requirements only to a very limited extent, a great deal of sensitivity was necessary to integrate air-conditioning and light-shielding devices in order to protect the precious and sensitive exhibits. Thanks to a built-in DALI unit, SUPERSYSTEM is compatible with a variety of lighting management systems, and the spots can be subdivided into control groups, adjusted to the prevailing lighting situation and set to ideal luminous intensity levels to suit the respective exhibition situation. Since the latest generation of LED luminaires emits significantly less heat and the light they generate is almost completely free from IR and UV radiation, potential damage is reduced to a minimum.



[zumtobel.com/culturewebapp](http://zumtobel.com/culturewebapp)

**Web app for comparing two lighting solutions** The app compares various light sources with respect to the potential risk they pose to sensitive materials. Professional background knowledge makes lighting design based on scientific methods straightforward and easily understandable.



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