

# Legoland

Günzburg, Germany



*A great time guaranteed: Seven Lutron GRAFIK 5000 systems linked together to provide fingertip lighting control throughout the park.*

## Background:

In May 2002, the Lego Company opened the world's fourth Legoland theme park in Günzburg, Bavaria. Legoland Deutschland is divided into seven major themed areas, including the ultra-modern Lego City, the hands-on Imagination Zone, and the thrilling Adventure Land. The 33-acre park also features themed shops and restaurants connected by a network of pathways.

## The challenge:

To design and install a lighting system for the whole Legoland park to help maintain a high quality visitor experience, throughout the year, in all weather conditions. The centrally controlled system was required to be flexible, simple to operate, easy to maintain and highly cost effective.

## Lutron's GRAFIK 5000 series:



Lutron's GRAFIK 5000 series can control the lit environment from 48 up to 512 areas, at the touch of a button.



Offers preset lighting levels from wall panels or remote keypads.



Highly energy-efficient, electricity consumption can be reduced and bulb lifetime extended to bring both cost and environmental benefits.

## The solution:

Lutron's GRAFIK 5000 lighting control system was installed in each of the seven themed areas. A high-performance data bus links the GRAFIK 5000 systems with handheld programmers, dimming and switching panels, interfaces and wallstations, installed in each building.

Each system is linked to Lutron's Floorplan control software which allows the entire architectural and exterior lighting for the park to function as one 'Super Area'. This central control provides a clear overview of every single lighting source in the park, at all times. The lighting for zones, buildings, restaurants, shops and pathways, can be reprogrammed, as individual entities, or in groups.

An astronomic timeclock controls exterior and path lighting using the precise latitude and longitude of the park to calculate sunrise and sunset times.

## The results:

Lutron's Floorplan software linked to the seven GRAFIK 5000 control systems enables lighting throughout Legoland to be reprogrammed quickly to create attractive lighting effects. For example, warm light when snow is falling, or bright lights for gloomy weather. Staff can use wallstations to adjust an individual lighting scene, without permanently changing the master settings.

Dimming and switching technologies are extremely energy efficient, and bring both cost and environmental benefits. Restaurant and shop lighting can be dimmed by ten per cent – a reduction that cannot be detected by the human eye. This saves money on electricity, and doubles the lifetime of 6000 bulbs.

Lighting plays an important role in creating the right ambience for each themed area – atmospheric lighting for the Castle Land dungeon, or a complex link between lighting, sound and water effects for the spectacular Torrential Waterfall experience.

**Architects**  
**Lighting Designer**  
**Electrical Contractor**  
**Project Development**

Forrec Ltd., Toronto, Ontario  
Gallegos Lighting Design, Northridge, CA  
ARGE Elektro ABB & Cegelec, Böblingen, Germany  
Pro Systems, Wolfegg

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