

centralised lighting control | integrated solutions



 **LUTRON**[®]
LIGHTING CONTROLS

Lutron® | centralised processor lighting control system

GRAFIK 7000™ lighting control system

The Lutron GRAFIK 7000™ lighting control system is designed to provide switching, dimming, and daylight control in a single space or campus from one central location or multiple locations. It is ideal for partitionable spaces, public spaces, entire buildings and business campuses. Each solution is customised to meet the customer's needs with virtually no limitation on the component and software offerings.

AOL – US Headquarters



Applications

Set the right mood for each event.

Enhance the aesthetics of the architecture and interiors of the space. Create an exciting atmosphere by sequencing coloured lights and by adding other lighting effects.



Blauer Adler – Nürnberg, Germany

Control your lights and shades in each area or space.

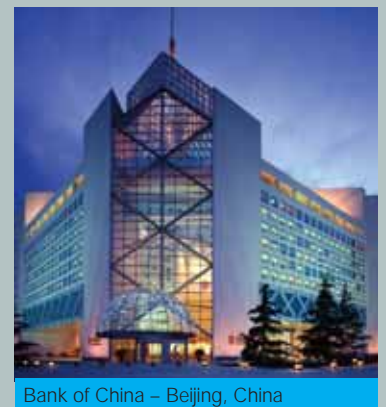
Recall preset scenes or control individual zones at the touch of a button. Integrate your Lutron system with touch panels, A/V and theatrical equipment.



Grünwald Musikschule – Munich, Germany

Easy user interface for your entire system.

Use the floorplan-based graphical control software for easy navigation and control of spaces. Customise the software to your preferences and language choice. Integrate to other Building Management Systems as necessary.



Bank of China – Beijing, China

Switching, dimming and shade control from one global manufacturer

Ease of use

Users can control the system via software or wallstations from multiple locations. They can also access the system from anywhere at any time through a secure Ethernet/Internet connection.

Scalable

The system can scale from small to very large and can be easily upgraded at any time.

Interoperable

The system easily integrates with other systems, including audiovisual equipment, security, BAS, BacNet/LonWorks, DMX 512, Ethernet and more, for seamless total-building control.

Enhanced system performance and integrity

The system management function keeps system operation in its optimum state for desired performance. Customised software user interface protects from unauthorised access.

Backward compatible

The system works with existing Lutron centralised lighting control systems, and allows seamless upgrade of these systems quickly and easily.

Reliability

Lutron design, quality control and performance are unsurpassed in the industry. And in an emergency, the multiple redundant system ensures uninterrupted normal operation.

Outstanding service

Lutron representatives and project management teams are ready to help design and specify the right lighting control system for your project, and to commission the installation.



Guggenheim Museum – Bilbao, Spain

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Lutron® | GRAFIK 5000™ lighting control system

Blauer Adler – Nürnberg, Germany



Lighting control system for projects from 48 up to 128 zones

GRAFIK 5000 lighting control system is ideal for the following applications:

- Presentation spaces
- Retail stores/spaces
- Shopping Centres
- Hotels
- Restaurants
- Ballrooms
- Houses of Worship
- Schools
- Lobbies

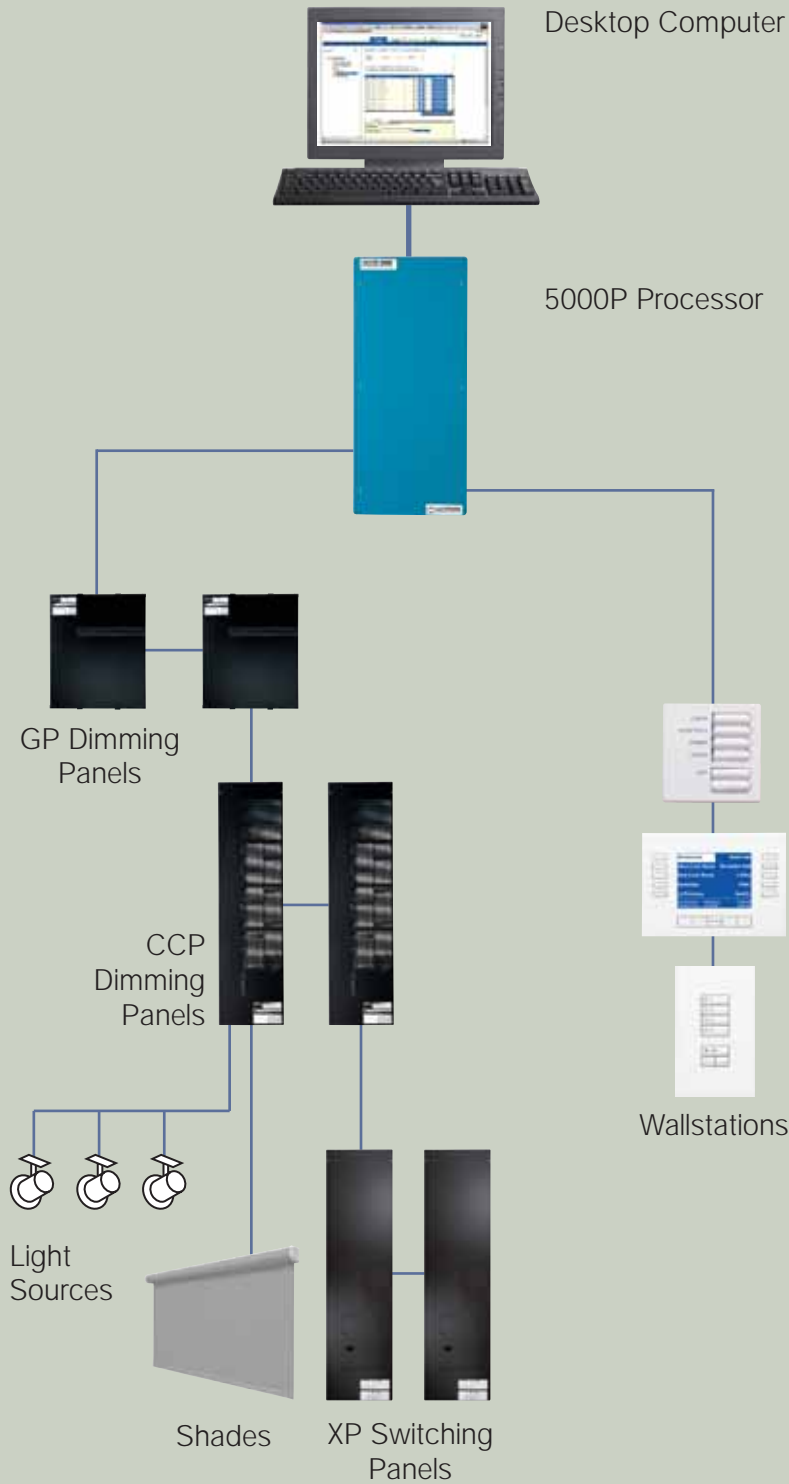
Typical System

- GRAFIK 5000P processor for centralised control of the system.
- GP and/or LP dimming panels with RTISS™ (Real-Time Illumination Stability System) technology to dim lights.
- XP switching panels with Softswitch™ technology for switching lights on and off.
- PC-based set-up software for lighting modeling and control strategies.
- Operation software for Web-based, real-time operation of the system.
- Low-voltage wallstations for local control.
- Enables remote diagnostics.

Options

- Contact closure input/output devices to integrate with occupancy sensors, daylight sensors and window shades/projection screens.
- BacNet, LonWorks, RS232 interfaces for enhanced integration with other building systems.
- Shade control to control daylight.
- DMX integration.

System map



Park Hyatt Hotel – Paris, France

System Maximums

- 1 GRAFIK 5000P processor
- 128 zones
- 2,048 circuits
- 64 dimming and/or switching panels
- 32 wallstations and/or interfaces
- 1 seat license for the ControllIT™ Software

Royal Mirage Hotel – Dubai, United Arab Emirates



Lighting control system for projects with up to 512 zones

GRAFIK 6000 lighting control system manages the lighting for an entire facility with up to 512 zones, including:

- Office buildings
- Shopping centres/malls/larger retail spaces
- Museums
- Auditoriums
- Conference centres
- Hotels

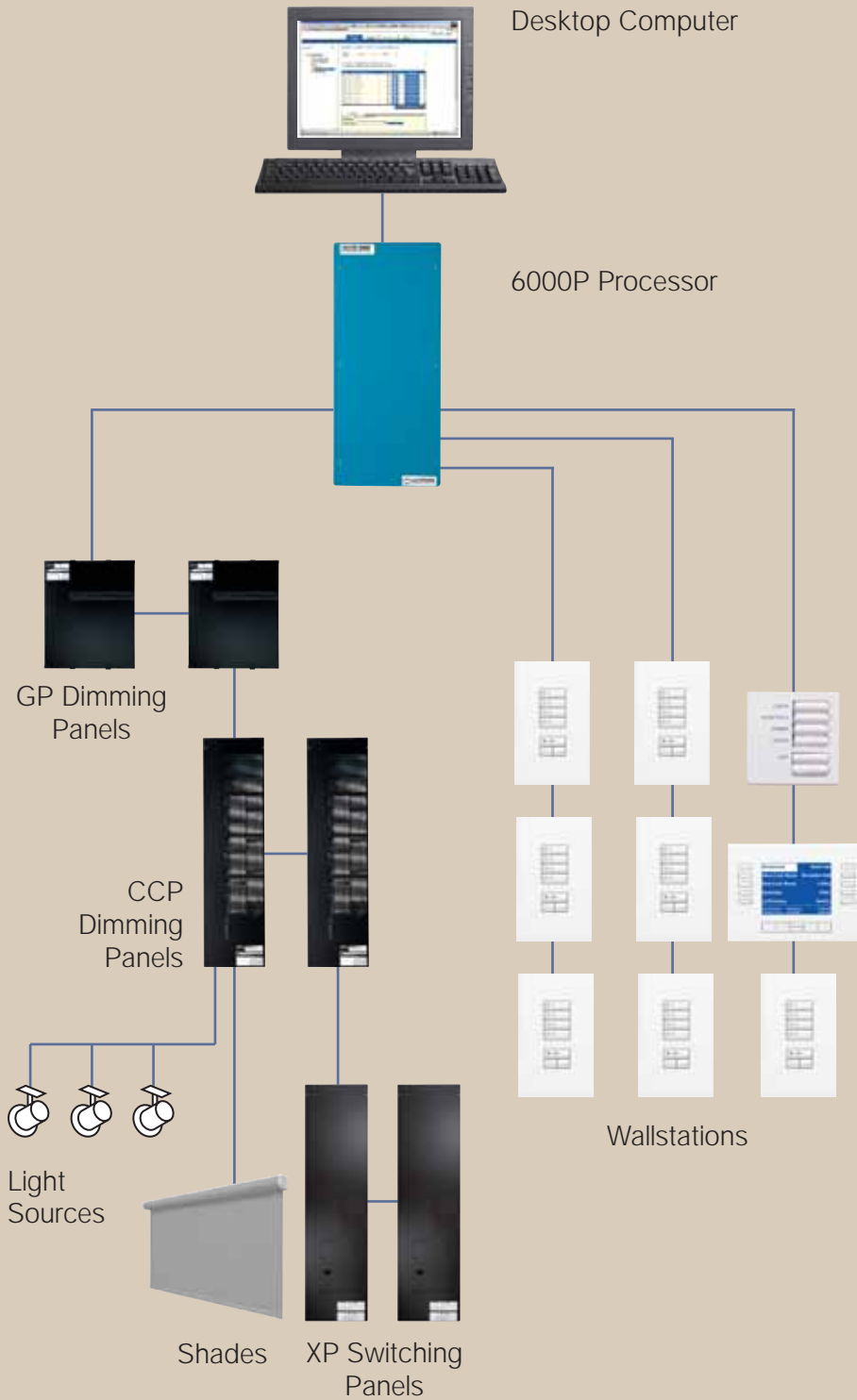
Typical System

- GRAFIK 6000P processor for centralised control of the system.
- GP and/or LP dimming panels with RTISS™ (Real-Time Illumination Stability System) technology to dim lights.
- XP switching panels with Softswitch™ technology for switching lights on and off.
- PC-based set-up software for lighting modeling and control strategies.
- Operation software for Web-based, real-time operation of the system.
- Low-voltage wallstations for local control.
- Enables remote diagnostics.

Options

- Contact closure input/output devices to integrate with occupancy sensors, daylight sensors and window shades/projection screens.
- BacNet, LonWorks, RS232 interfaces for enhanced integration with other building systems.
- Shade control to control daylight.
- DMX integration.

System map



Chelsea Harbour – London, United Kingdom

System Maximums

- 1 GRAFIK 6000P processor
- 512 zones
- 4,000 circuits
- 125 dimming and/or switching panels
- 96 wallstations and/or interfaces
- 1 seat license for the ControlIT™ Software



Lighting control system for projects with up to 16,384 zones

The Lutron GRAFIK 7000 lighting control system is designed to provide switching, dimming and shade control for large projects with up to 16,384 zones. Typical applications include:

- Stadiums and arenas
- Universities/hospitals/institutions
- Theme parks and cruise ships
- Convention centres
- Business campuses

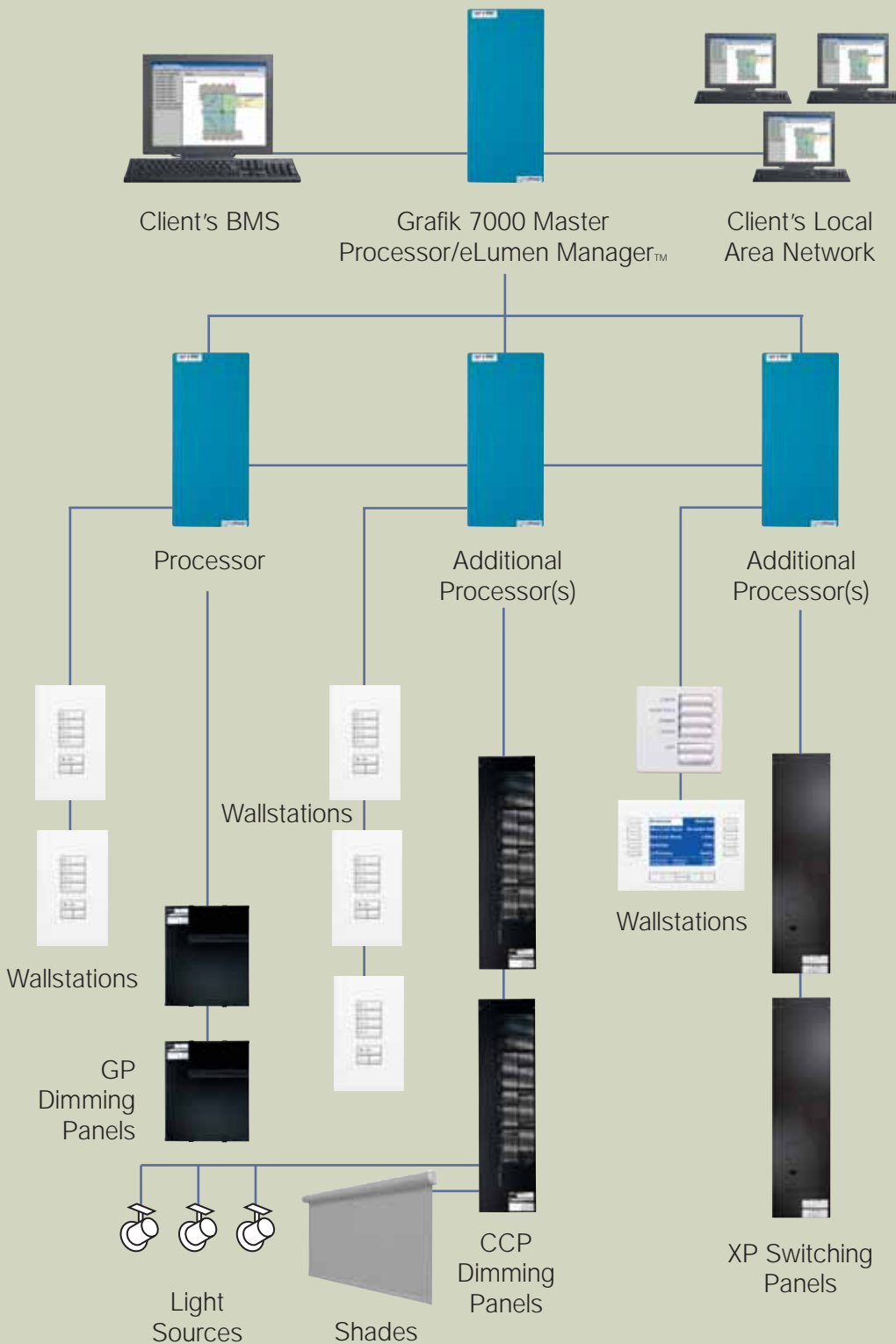
Typical System

- Network-based server.
- GRAFIK 7000P processor for centralised control of the system.
- GP and/or LP dimming panels with RTISS™ (Real-Time Illumination Stability System) technology to dim lights.
- XP switching panels with Softswitch™ technology for switching lights on and off.
- PC-based set-up software for lighting modeling and control strategies.
- Operation software for Web-based, real-time operation of the system.
- Graphical Control software for intuitive graphical navigation and control.
- Low-voltage wallstations for local control.
- Enables remote diagnostics.

Options

- Contact closure input/output devices to integrate with occupancy sensors and daylight sensors.
- BacNet, LonWorks, RS232 interfaces for more enhanced integration with other building systems.
- Shading system for daylight control.
- DMX integration.
- Quick Events Scheduler for simple time-clock event editing.
- Administration software for setting up users and user rights.





System map



Legoland – Günzburg, Germany

System Maximums

- 32 GRAFIK 7000P processors
- 16,384 zones
- 128,000 circuits
- 4,000 Lutron dimming and/or switching panels
- 6,144 wallstations and/or interfaces
- 1 eLumen Manager™ with RAID (Redundant Array Independent Disks)
- 50 seat licenses for the Web-based ControllIT™ and PictureIT™ Software
- 50 client computers

	DESCRIPTION	FUNCTIONS
	<p>GRX-IT, GRX-IT8* Handheld Infrared Wireless Remote Control Transmitters</p>	<p>Controls 4 (or 8) scenes plus master raise/lower and Off. Recalls scenes or fine tunes light levels. Turns lights on or off. Note: Not included in 32 accessory maximum.</p>
	<p>NTOMX-2B-SL Two-Button Entrance Control</p> <p>EOMX-2B-SL European-style Two-Button Entrance Control</p>	<ul style="list-style-type: none"> ▪ Optional functions (software configured): <ul style="list-style-type: none"> – Recalls preset light levels for two scenes – Reflects door status of one or two partitions – Enable/disable Wallstations – Start/stop one sequence – Enable/disable timeclock/security override Scene 1 – Fine-tuning of zones ▪ Class 2/PELV control wiring ▪ Counts as one of 32 maximum Wallstations/Control Interfaces
	<p>NTOMX-4S, NTOMX-4S-IR, NTOMX-4B Scene Selection Control with and without Infrared Receiver; Four-Button Control</p>	<ul style="list-style-type: none"> ▪ Optional functions (software configured): <ul style="list-style-type: none"> – Recalls preset light levels for four scenes plus off with four-scene Wireless Remote Control (GRX-IT; ordered separately) – Fine-tuning of light levels from keypad or Wireless Remote Control ▪ Recalls preset light levels for eight scenes plus off with eight-scene Wireless Remote Control (GRX-8IT; ordered separately) ▪ Class 2/PELV control wiring ▪ Counts as one of 32 maximum Wallstations/Control Interfaces
	<p>EOMX-4S, EOMX-4S-IR European-style Scene Selection Control with and without Infrared Receiver</p>	<ul style="list-style-type: none"> ▪ Optional functions (software configured): <ul style="list-style-type: none"> – Recalls preset light levels for four scenes plus off with four-scene Wireless Remote Control (GRX-IT; ordered separately) – Recalls preset light levels for eight scenes plus off with eight-scene Wireless Remote Control (GRX-8IT; ordered separately) – Fine-tuning of light levels from keypad or Wireless Remote Control ▪ Mounts in UK/German 86mm wallbox ▪ Class 2/PELV control wiring ▪ Counts as one of 32 maximum Wallstations/Control Interfaces

FUNCTIONS

DESCRIPTION

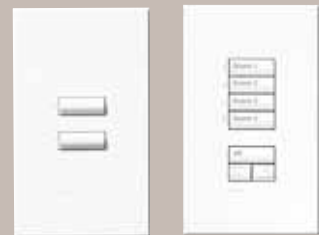
Navigation buttons provide direct access to Lighting Control System to program, monitor and operate every scene, zone and area in a space or in an entire building.

OMX-VDC-LB
Viseo™ Wallstation
Control



Wallstations with large, rounded buttons and easy-to-read backlit engraving option; IR models available; available in one- to seven-button configurations.

seeTouch™ Scene Selection Controls
For Model Numbers, Contact Lutron



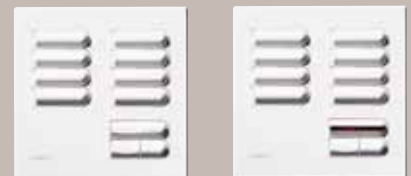
- Optional functions (software configured):
 - Recalls preset light levels for four scenes plus off
 - Fine-tuning of light levels
- Mounts in Lutron-supplied wallbox
- Class 2/PELV control wiring
- Counts as one of 32 maximum Wallstations/Control Interfaces
- Standard: bright brass (BB) and white (WH) finishes

OMX-4S-DW, OMX-4S-DN
Architrave™ Door Jamb Control, Wide and Narrow








- Optional functions (software configured):
 - Recalls preset light levels for four scenes plus off with four-scene Wireless Remote Control (GRX-IT; ordered separately)
 - Recalls preset light levels for eight scenes plus off with eight-scene Wireless Remote Control (GRX-8IT; ordered separately)
 - Fine-tuning of light levels with keypad or Wireless Remote Control
- Mounts in UK/German 86mm wallbox
- Class 2/PELV control wiring
- Counts as one of 32 maximum Wallstations/Control Interfaces

EOMX-8S-, EOMX-8S-IR
European-style, 8-Scene Selection Control, with and without Infrared Receiver



*All GRAFIK Eye/GRAFIK Integrale Control Units are equipped with an IR Receiver for use with Lutron GRX-IT and GRX-8IT handheld remote controls. The IR frequency for all Control Units is 40KHz. Any other device continuously operating in the frequency range from 30KHz to 50KHz may cause either no response or unwanted scene changes on the Control Unit.

	DESCRIPTION	FUNCTIONS
	<p>NTOMX-KP5 5-Button Scene Selection Control with Slim Buttons</p>	<ul style="list-style-type: none"> ▪ Optional functions (software configured): <ul style="list-style-type: none"> – Recalls preset light levels for four scenes plus off with fine-tuning – Recalls five scenes plus off with full-on ▪ Class 2/PELV control wiring ▪ Counts as one of 32 maximum Wallstations/Control Interfaces ▪ Amber status LEDs standard
	<p>NTOMX-KP-10 10-Button Scene Selection Control with Slim Buttons</p>	<ul style="list-style-type: none"> ▪ Optional functions (software configured): <ul style="list-style-type: none"> – Recalls preset light levels for nine scenes plus off with fine-tuning – Recalls preset light levels for 10 scenes plus off with full-on ▪ Class 2/PELV control wiring ▪ Counts as one of 32 maximum Wallstations/Control Interfaces ▪ Amber status LEDs standard
	<p>NTOMX-KP-15 15-Button Scene Selection Control with Slim Buttons</p>	<ul style="list-style-type: none"> ▪ Optional functions (software configured): <ul style="list-style-type: none"> – Recalls preset light levels for 14 scenes plus off with fine-tuning – Recalls preset light levels for 15 scenes plus off with full-on ▪ Class 2/PELV control wiring ▪ Counts as one of 32 maximum Wallstations/Control Interfaces ▪ Amber status LEDs standard
	<p>NTOMX-LB6 6-Button Scene Selection Control with Large Buttons</p>	<ul style="list-style-type: none"> ▪ Optional functions (software configured): <ul style="list-style-type: none"> – Recalls preset light levels for three scenes plus off with fine-tuning of light levels – Recalls preset light levels for five scenes plus off ▪ Class 2/PELV control wiring ▪ Counts as one of 32 maximum Wallstations/Control Interfaces ▪ Amber status LEDs standard
	<p>NTOMX-LB9 9-Button Scene Selection Control with Large Buttons</p>	<ul style="list-style-type: none"> ▪ Optional functions (software configured): <ul style="list-style-type: none"> – Recalls preset light levels for six scenes plus off with fine-tuning of light levels – Recalls preset light levels for eight scenes plus off ▪ Class 2/PELV control wiring ▪ Counts as one of 32 maximum Wallstations/Control Interfaces ▪ Amber status LEDs standard

FUNCTIONS

DESCRIPTION

Two-way interface between GRAFIK Eye/GRAFIK Integrale Controls and contact-closure devices (A/V systems, timeclocks, security systems, occupant sensors, etc.)

OMX-AV
Contact Closure Interface

Integrates GRAFIK Eye/GRAFIK Integrale Controls with user-supplied PC or digital A/V equipment.

OMX-RS232
RS232 Interface

For use with GRX-3500 and GXI-3500. Integrates GRAFIK Eye/GRAFIK Integrale Controls with user-supplied PC or digital A/V equipment. Features built-in astronomic time-clock— 4 schedules/60 events per schedule.

GRX-PRG
Programmer Interface



Converts Grafik 5000/6000/7000 intensities to DMX output to control fibre optics, LED lamps, strobe lights, fogger machines, moving fixtures and animated characters. Receive DMX using 2Link option in the power panel.

LUT-DMX
DMX512 Interface



Increases single zone load capacity for incandescent, magnetic low voltage, neon/cold cathode sources. 1200W per zone flush mount (with face plate), 1840W surface mount (without face plate) @230V for CE; 1920W @120V.

NGRX-PB
Power Booster



Increases single zone load capacity for electronic low voltage sources. 1000W per zone @230V for CE and 1000W @120V.

NGRX-ELVI
Electronic Low Voltage Power Booster

Permits GRAFIK Eye/GRAFIK Integrale Controls to automatically select preset lighting scenes in response to available daylight (measured by MW-PS photo sensor – ordered separately) for optimum light levels and energy savings.

OMX-DACPI
Automatic Daylight Control

MW-PS
Photo Sensor



Provides remote infrared wireless control to GRAFIK Eye/GRAFIK Integrale Control Units. Functions with handheld transmitters and operates one or more GRAFIK Eye/GRAFIK Integrale Control Units.

OMX-CIR
Ceiling Mounted Infrared Receiver

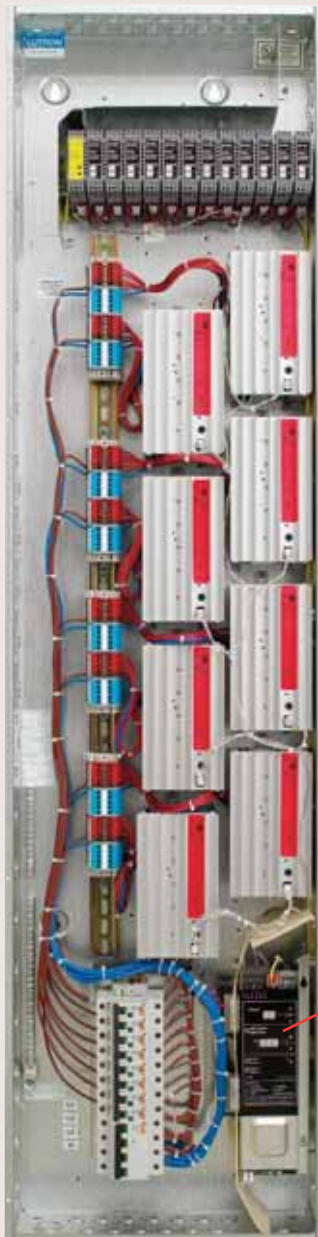


Lutron® dimming panel model specifications

Lutron Dimming Panels are used with GRAFIK 5000, 6000 and 7000 Series controls for architectural lighting control of premiere spaces and complete buildings.

- Prewired. Panels are prewired and ready for installation. Dimmer modules are plug-in design, 120-277 VAC, 50/60 Hz, and compensate for line voltage changes. Note: 100 VAC available for Japan.
- Normal/Emergency. All Panels have an internal switch for normal or normal/emergency (non-essential or essential) power operation.

- No Ventilation Fans. Unique ribbed base conducts heat out of panel via convection cooling.
- Fastrack™ Panels are pre-engineered for quick shipment. Panels can be surface- or flush-mounted.
- Premium Temperature Margins. Panels operate at a minimum of 20 degrees Celsius below the power conducting component temperature rating. Electronic components live twice as long for every 10 degrees Celsius below the rating at which they operate both increasing semiconductor reliability and ensuring the system's design life span.



TVM –
Ten Volt Module

(8) Modules

Module
Input
Breakers

3 Phase
Main
Breaker

Dimmers:

- Handles all GRAFIK lighting sources
- Automatically sets Square Law dimming curves for smooth, linear control when load types are selected (at circuit selector)
- High-end trim easily adjusted to extend Incandescent/Tungsten and Low Voltage lamp life, and for energy savings

Circuit Selector:

Fast Easy Pushbutton Setup

- Assigns load types to circuits
- Assigns circuits to zones
- Simplifies system setup
- Makes field changes easy
- Flashes individual circuits for visual identification



Dual Line
Circuit Selector



GP 24 Panel
without cover



Mini GP Panel
with cover

GP Dimming Panels

Offered in three cabinet sizes, from 3 to 72 circuits, prewired for 120-127, 220-240, 230 or 277 volts. Field wiring is similar to wiring in distribution panel. Meets CE requirements for Europe.



GP 24 (CE) Panel
without cover

GP 72 Panel
without cover



Mini LP Panel
with and without cover

CCP Dimming Panels

For handling numerous small loads. Panels have from 1 to 8 four-circuit Dimming Modules (4-32 switch legs, 8-16 KW). Panels control Fluorescent and Electronic Low Voltage sources through Power Interface Accessories.

CCP Panel
with and without cover



Mini XP Panel
with and without cover

XP Switching Panels

For Low Voltage switching control of large numbers of circuits. Panels have 1 to 12 four-circuit switching modules with individual circuit relays with mechanical latching switch contacts.

XP Panel
with and without cover

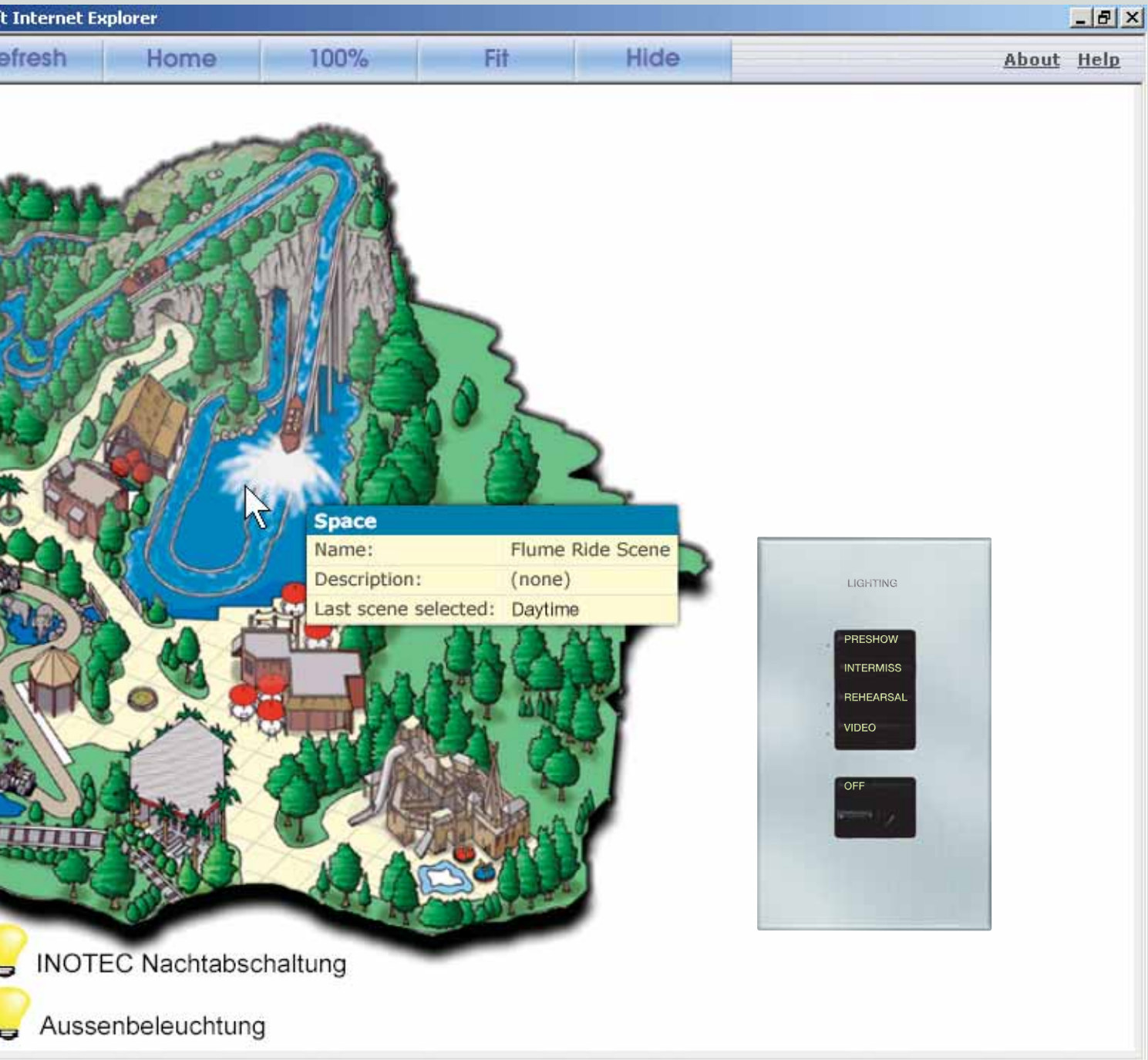
Software features

- eLumen™ Software Suite is Web-based, real-time, easy-to-learn and operate, and obsolescence-immune.
- Customers can choose any software combination to suit their needs.
- Software capacity grows with system without the need of being upgraded.
- Secure, remote access (monitoring, control and diagnostics) from anywhere at anytime via Internet/Ethernet or from a telephone.
- Personalised access and control in language of choice for all software.

Grafik 7000™ Software

- **PictureIT™ software**
Provides you with the option to operate the GRAFIK 7000™ lighting control system through customised, intuitive graphics.
- **DesignIT™ software**
Helps you to create, modify and expand the model of the controlled spaces and to implement the desired control strategies.
- **ControlIT™ software**
Manages lighting and shades at any point within the system with secured total lighting control of the space.
- **ScheduleIT™ software**
Allows you to schedule and implement temporary schedule for special lighting events, without affecting the existing schedules in the system.
- **SecureIT™ software**
Permits multiple levels of personalised access and control in the language of choice, and protects the system from unauthorised access.





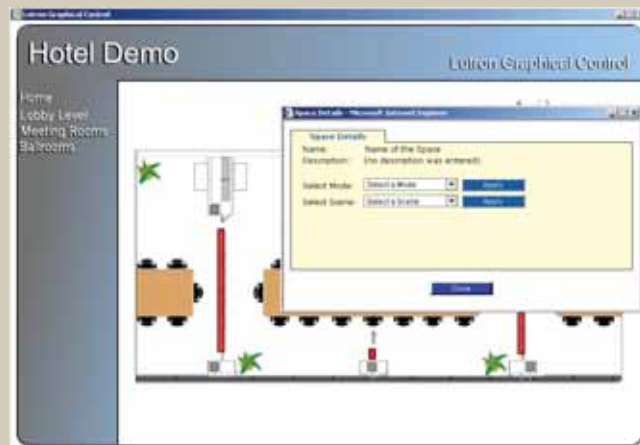
Graphical Control software screen for Legoland® project, Günzburg, Germany

Customised software graphics for easy navigation and control

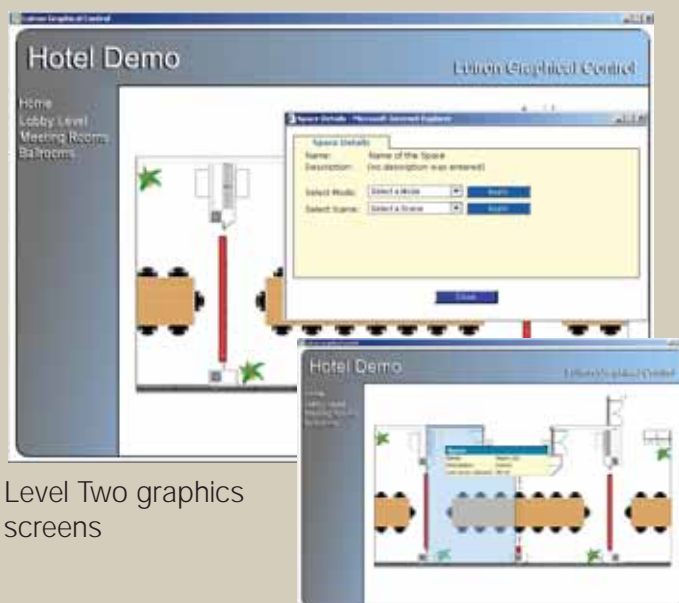
Lutron values your vision. Our design services take your images and create a graphical user interface, which is easy and intuitive to operate.

There are three levels of graphical user interfaces that Lutron can design for you:

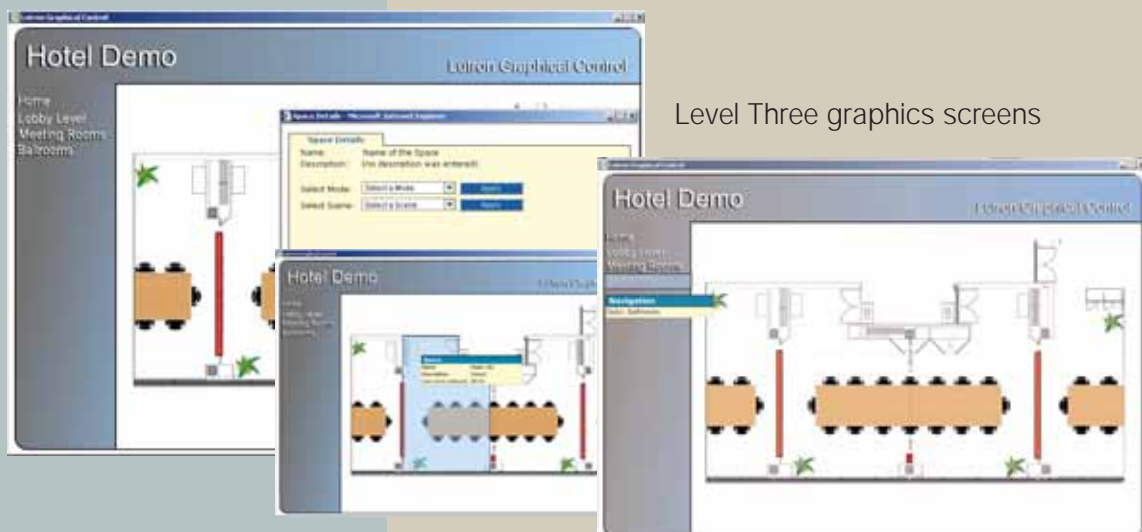
- **Level One graphics**
Simple buttons for you to control the lights in an area. Graphics are static.
- **Level Two graphics**
Simple buttons for you to control the lights in an area. You can click on the selected area and control a new set of scenes via buttons.
- **Level Three graphics**
In addition to Level One and Level Two graphics, you can view the lighting control feedback of the selected area. You can also control virtual lights and select scenes via virtual wallstation at this level.



Level One graphics screen



Level Two graphics screens



Level Three graphics screens

	GRAFIK 5000™	GRAFIK 6000®	GRAFIK 7000™
Processor type	5000P	6000P	7000P
Maximum number of processors	1	1	up to 32
Maximum number of zones	128	512	16,384*
Maximum number of circuits	2,048	4,000	128,000
Maximum number of wallstations and/or interfaces	32	96	6,144*
Maximum number of dimming and/or switching panels	64	125	4,000*
Astronomical time clock	Yes	Yes	Yes
Maximum number of time clock events	500	2,000	10,000
Master Processor/eLumen Manager™	–	–	Optional
DesignIT™ software	Standard	Standard	Optional
ControllIT™ software	Standard	Standard	Optional
Partitioning, sequencing and conditional logic	Standard	Standard	Standard
PictureIT™ software	–	–	Optional
Number of seat licenses for web-based software	1 for ControllIT software	1 for ControllIT software	up to 50 for ControllIT and PictureIT software
SecureIT™ and ScheduleIT™ software	–	–	Included with Master Processor/eLumen manager
BMS, BACnet and LonWorks integration	Optional	Optional	Optional
Processor Modem/RS232	Standard [†]	Standard [†]	Standard [‡]
Telephone interface	–	–	Optional
Standard warranty	2 years, 8 years limited	2 years, 8 years limited	2 years, 8 years limited
Field commissioning	Included	Included	Included

* Increased zone, circuit, wallstation and interfaces and switching panel capabilities are available by linking multiple GRAFIK 7000P processors.

[†] Will have simple touch-tone telephone interface.

[‡] Will be supplied on at least one processor.

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