

Smart Lighting Control Systems



















Better Light For a better quality life

EXE GREEN HOLDING solutions provide more than illumination.

Through a combination of light quality, color, and intensity, they help create environments that can be tailored to occupants' needs and preferences.

Lighting has a profound effect on the human body. It's more thanjust how we see.

It also affects how we feel and how we function.

EXE Green Holding solutions are designed to help maximize the influence of lighting on your daily life.



In the morning, as the sun comes up, light levels increase, the color of light shifts towards cooler color temperatures, and we wake up and become active. On the other hand, in the evening, as the sun goes down and the color of light shifts towards warmer color temperatures, we unwind, relax and prepare for sleep.

Our body's hormone levels rise and fall with these lightcycles. Cortisol production increases with morning light and decreases throughout the course of the day. Melatonin levels increase as darkness sets in anddecrease as morning approaches.

In our modern society, we spend much of our time indoors - at home, in a school, office, shop or hospital. Those who have to stay indoors for significant parts of their time under static lighting conditions run the risk of disrupting their biological rhythms.



The effect of light on our biological clock is important as it influences many aspects of our physical and emotional well-being.

This biological clock is regulated by light and darkness, by the daily cycles of night and day and the time we spend asleep and awake.





The visible spectrum

The CIE standard colour diagram shows all the colours that the human eye can detect. Within this range of colours, the white tones are shown as a so-called black body curve. The closer to this line a colour lies, the purer the white. The shift in colour temperature between cold and warm white runs essentially between 2700 and 6500 Kelvin.

Color temperature plays a decisive role in the biological effect of light: light with a high level of red calms.

Based on the latest scientific findings, the detector for well-being adjusts lighting to the optimum white tone.

Beside natural daytime synchronization, biological effective light can also be used to raise energy levels: for example, at lunch time and in the early afternoon, lighting strength and color temperature can be increased for a short while, to provide stimulation.

In the evening, this stimulation is not required, so warm light colors and reduced light levels tune the body to the night's rest.







SMART TROFFER LIGHT

Tunable white Works with an EXE Green Holding compatible, energy efficient, dimmable smart lighting control system.



Standard Bright light is preferred for everyday activities/interaction



Presentation Warmer light with lower intensity is recommended for times of personal interaction



Focus Cooler color temperature at higher intensity levels provides illumination that is designed to help employees focus on the task.



This setting is recommended for creative and brainstorming sessions where employee cooperation and engagement is desired



LED TROFFER Smart product



- 2.4Ghz RF receiver module / Zigbee control system control
- Applicable location: offices, schools, hospital, andhealthcare environments.
- Can be controlled by wall switch or remote switch
- 0-10V dimming

Tunable white solution, allows for lighting to

easilybe adjusted to the needs of the people in that space



FULL SPECTRUM LED TUBE Smart product



- Type C, AL+PC led tube
- The special circuit design avoids the problem caused by the single broken LED
- Utilizes high-efficiency class 2 constant current driver
- One driver for 2, 3, or 4 LED tubes available
- Energy saving: up to 70%
- Eco-friendly: no UV or IR radiation, mercury free



Full-Spectrum Led Tubes

CRI OVER 97

Natural Daylight





LED LINEAR HIGH BAY Smart product



Zigbee control system

Applicable location: factory, warehouse,

- offices, schools, hospital, and healthcare environments
- Can be controlled by APP or cloud control
- 0-10V dimming





High Bay

Gateway







Light sensor



Traditional solution



EXE HOLDING Solution



SMART CONTROL SYSTEM ZIGBEE



- ZigBee control solution, able with APP control, wall panel control, and remote control
- Daylight Sensor & Motion Sensor available be integrated and it can be split to separated
- This solution can be integrated into the Dali system fordimming or white light adjustment functions
- This solution can connect to your Dali system, to achieve dimmable, tunable white functions.
- With this solution, 40% energy cost can be saved, your investment can be return after 7-13 month's using by this solution.



SMART CONTROL SYSTEM ZIGBEE





SYSTEM DIAGRAM



Control



ALTERNATIVE





CONFIGURATION 1

APP control mode - IOS / Android / Windows)







FUNCTION





CONFIGURATION 2 APP+Light sensor control mode



Gateway



Controller





Light sensor

Lighting Fixture

FUNCTION

APP remote control

Dimming function, can achieve 0-100% brightness adjustment Grouping and sub-regional control

Timing function, can achieve different times, different brightness

After setting the value (Lux) of the light sensor constant illumination mode, the brightness of the light can be automatically adjusted according to the natural light.



CONFIGURATION 3

APP + Remote control + Wall touch switch control mode



FUNCTION



set the brightness of the lamp.



CONFIGURATION 4

APP + Microwave sensor control mode





Microwave sensor



Lighting Fixture

FUNCTION

 APP remote control
Dimming function, can achieve 0-100% brightness adjustment
Grouping and sub-regional control
Timing function, can achieve different times, different brightness

The microwave sensor lights up when the person comes in. After the person walks away, keep the brightness of the lamp before the person comes.



CONFIGURATION 5

APP + Light Sensor + Microwave Sensor + Remote Control + Wall touch switch control mode



FUNCTION

- APP remote control
- Dimming function, can achieve 0-100% brightness adjustment..
- Use the wall touch switch and remote control to manually set the brightness of the lamp
- Grouping and sub-regional control
- Timing function, can achieve different times, different brightness
 - / The microwave sensor lights up when the person comes in. After the person walks away, keep the brightness of the lamp before the person comes.

After setting the value (Lux) of the light sensor constant illumination mode, the brightness of the light can be automatically adjusted according to the natural light.



SCHOOL PROJECT

The project is a renovation project.

Each classroom is equipped with a wallscene panel, and the classroom teacher can control the entire classroomlighting through the scene panel.

The scene panel is further divided into a classmode, a projection mode, a self-study mode, a rest mode, and a class mode.

Light Items 40W dimming panel light and blackboard light

Project lighting fixture •Dimming 40W power supply:264 •Gateway + scene panel + Light sensor





OFFICE PROJECT

The project is a renovation project. A wall touch panel is provided to control the dimming color luminance

Light Items

40W dimming palette light

Project lighting fixture Dimming tunable white power supply: 200+ Gateway + Wall touch panel





HOSPITAL PROJECT

The project is a renovation project with a large construction time span. Wireless products can shorten construction time, reduce construction costs, and deliver end customers as soon as possible.

Servers are set up on each floor and the lights on each floor are controlled by the server. Users can access the server to obtain power andfault information through the account password, which reduces the maintenance timeof the terminal customer

Project requirements

The microwave start-up time can be set regularly in the public area, and the microwave sensoris turned on after 22:00

Project lighting fixture

Dimming tunable white power supply: 200+ 22W led tube, 25W downlight, emergency light Gateway + Light sensor + Microwave sensor + Emergency controller







HOTEL PROJECT

The project is a new project. Provide manual touch panel partition control. At the sametime, the color temperature and RGB color can be changed according to seasonal changes.

Project requirements

Mobile application software control and touch panel control

Project lighting fixture

Dimming tunable white 25W power supply and Light strip controller: 3000+ 25W downlight, RGB light with controller Gateway + Dimming tunable white panel





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CONTACT

Phone +40 722 241 231

Email office@exeholding.com

web www.exeholding.com

Global coverage

BUCHAREST - ROMANIA: Dumitru Zosima Str. No. 58th A, Sector 1, Bucharest, Romania, PO Box 011536

VIENNA - AUSTRIA: Martin Str. No 51, Vienna, Austria, PO Box 1180

LONDON - UNITED KINGDOM: D3 The Shrubberies, George Lane, South Woodford London, PO Box E18 1BG

NEW YORK - USA: 46-12 Queens Blvd. No. 205, Sunnyside, NY, USA, PO Box 1104

