

# ENCELIUM



## ENCELIUM™ Energy Management System

*Innovative Lighting Control Technology for Healthcare Facilities*

SEE THE WORLD IN A NEW LIGHT

**OSRAM**



Lighting impacts every aspect of human health and performance. By bringing quality lighting into healthcare facilities, patients, visitors, and staff benefit while the facility's bottom line improves. The ENCELIUM™ Energy Management System (EMS) was designed from the ground up as a software-based, integrated lighting control and energy management system that dynamically responds to the changing characteristics of a building by providing the right amount of light when and where required. It has the flexibility to meet the specific lighting requirements of a wide range of hospital applications.

## Applications for Healthcare

### Patient Care Areas

**Challenge:** Reduce lighting energy consumption in areas that operate 24 hours a day, 7 days a week while individual patients recover on unique schedules. Strategically lower light levels in adjacent corridor areas to encourage quiet at night.

**ENCELIUM Solution:** Through the use of networked occupancy sensors, the ENCELIUM EMS assures the lights are only ON during occupied periods. Networked photo sensors enable the system to automatically reduce electric lighting energy when natural daylight brightens the space. Occupants and caregivers can adjust light levels with ENCELIUM Wall Stations or with the ENCELIUM Polaris 3D™ software. System integration options can link patient call button systems with lighting to provide remote control of dimming and scene selection.

Suggested Strategies:



### Laboratories/Diagnostics/Therapeutic Treatment Areas

**Challenge:** These rooms normally require at least two levels of lighting. A brighter light level, for instance, is necessary for setting up equipment, whereas a dimmer light level is necessary for areas where physicians and technicians need to read information off monitors.

**ENCELIUM Solution:** Through task tuning and scene control adjustments, ENCELIUM Wall Stations allow users to quickly select a preset lighting scene providing the right amount of light for the current activity. Overlaying this with an occupancy control strategy optimizes the opportunity for energy savings.

Suggested Strategies:



#### Lighting Your Way with Six Smart Strategies



Smart Time Scheduling



Occupancy Control



Daylight Harvesting



Personal Control



Task Tuning



Variable Load Shedding

### Administrative Areas

**Challenge:** Reduce lighting energy consumption in private offices where paperwork is filled out and quality lighting is needed. Lower light levels where tasks involve computer monitors to reduce eye fatigue and limit glare.

**ENCELIUM Solution:** Occupancy control and personal control are the major strategies utilized in these areas. Employees can set and recall default lighting scenes from their desktop PCs with the ENCELIUM Personal Control Software. Individuals generally prefer less light than typically provided in the design of office spaces.

Suggested Strategies:



### Support Areas (Kitchens, Supply Rooms)/ Public Areas (Cafeteria, Lobby)

**Challenge:** Reduce lighting energy consumption in rooms that are used intermittently or where natural daylight might be available.

**ENCELIUM Solution:** Networked occupancy sensors can be used to switch lights in these rooms ON/OFF based on motion detection. When occupancy control is not appropriate, smart time scheduling uses dimming and switching to turn lights ON/OFF based on the time of day.

Suggested Strategies:




### Parking Garages

**Challenge:** Maximize lighting energy savings while balancing the safety and security of visitors and staff. Take advantage of available daylight in perimeter areas and assist in accommodation as people enter and exit parking structures.

**ENCELIUM Solution:** Through smart time scheduling, the ENCELIUM EMS uses zonal switching to turn different groups of luminaires ON/OFF or perform bi-level switching as desired by facility managers while keeping illumination levels safe for both staff and visitors.

Suggested Strategies:





2-5 year  
payback

up to **75%**  
**energy**  
**savings**

## Why Choose ENCELIUM™ EMS

**The ENCELIUM EMS will save your healthcare facility money.** The ENCELIUM EMS can reduce lighting energy consumption by up to 75%, lowering operational costs, and improving profitability. The system is an investment that provides, on average, a two to five year payback.

**Through innovative software, the ENCELIUM EMS shows you real-time data on energy savings.** The user-friendly ENCELIUM Polaris 3D™ software will graphically display lighting energy savings in formats ranging from kWh to dollars, in any timeframe desired. Reports generated can focus on an entire building all the way down to an individual fixture, show overall energy savings, or be broken down by energy management strategy. Facility managers can easily show interested parties hard data on how much money and energy the system is saving.

**The ENCELIUM EMS will future-proof your lighting.**

The ENCELIUM EMS is easily scalable and agnostic to all non-proprietary ballasts, power supplies, and sensors. The system can quickly accommodate additional luminaires or future upgrades to new, more efficient lighting technologies, such as LED fixtures and their power supplies.

**The ENCELIUM EMS will earn you government and utility rebates, resulting in even more savings.** In an effort to facilitate sustainability initiatives, state governments and utility companies are offering rebates for energy efficiency projects. Utility rebates vary by state and company but can result in significant additional savings.

The Energy Policy Act (EPAct) of 2005 was signed into law providing for deductions of up to \$0.60 per square foot for improvement measures affecting any one of three building systems: the building envelope, lighting, or heating and cooling systems. These tax deductions are available for systems “placed in service” from January 1, 2006 through December 31, 2013.

**The ENCELIUM EMS can integrate with other building automation systems.** HVAC, fire and security systems can integrate with the ENCELIUM Energy Management System. Temperature control can now be based on real-time occupancy status rather than speculative time schedules, resulting in energy savings that extend beyond lighting consumption.

## Why Invest in Lighting Controls

**Saving energy saves money.**

Lighting controls reduce lighting maintenance and replacement and result in a longer lifetime for luminaires. This minimizes disruption of the healthcare delivery process and also lowers chances of contamination that could lead to hospital-acquired infections. Reducing lighting energy consumption lowers operational costs and improves profitability.

**Lighting improves patient and staff well-being.**

Lighting has a profound effect on mood and perception and can completely transform clinical environments. Studies show that lighting is a main regulator of the human body's circadian rhythm. Quality lighting improves patient well-being, reducing depression and agitation, improving sleep, and easing pain. As a result, patients recover faster and decrease their hospital tenures. Pleasant, well-designed spaces also contribute to staff satisfaction and reduce employee turnover rates.

**Proper lighting reduces the chance for medical errors.**

The healthcare work environment can be chaotic and stressful for both doctors and nurses. Adequate lighting is essential to executing complex visual tasks, allowing doctors and nurses to perform operations more quickly and more efficiently with less stress. Healthcare staff also benefit from an easier transition to night-shift work when electric lighting supports the natural human day/night cycle. Staff members become less fatigued and more alert leading to better job performance and improved morale.

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**Let us show you how much you can save! To learn more about ENCELIUM products, call 1-800-LIGHTBULB.**



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