DIAGNOSIS: GOOD LIGHT
LIGHTING SOLUTIONS FOR HOSPITALS

JUNE 2020
HIGH-QUALITY LIGHT FOR A SWIFT RECOVERY
INNOVATIVE HOSPITAL LIGHTING FROM LEDVANCE

Light is life. Its effects on body and soul are irreplaceable. Good quality light has a significant influence on the mood of patients and their speed of recovery.*

Light creates a positive atmosphere: Good lighting makes patients feel relaxed and helps to create a friendly, health-promoting environment – not only in hospitals but also in rehabilitation centers, nursing homes and all other medical facilities. In particular, lighting that simulates the changes in natural daylight has a beneficial effect on the sleep patterns of patients, speeds up the recovery process and improves the performance of staff. The key here is human centric lighting.

Light increases efficiency: Efficient LED light and smart light management systems can deliver energy savings of up to 80 %.

* Source: AT Kearney, Human Centric Lighting: Going Beyond Energy Efficiency

HUMAN CENTRIC LIGHTING (HCL) – DAYLIGHT FOR HEALTH

Daylight is our most important source of energy. A lack of daylight can cause serious disruption to our day/night rhythm (our “inner clock”). This in turn can lead to a massive degradation in performance levels in healthy individuals and can have a severe effect on the recovery process of sick patients.

HCL is now bringing the health-promoting effects of daylight into sharp focus. The principle here is that the right light at the right time creates a lighting scenario that mimics the natural course of daylight with all its biological and emotional effects.

CIRCADIAN RHYTHM – THE BODY’S 24-HOUR CYCLE

Daylight in the morning
Stimulates the production of the mood enhancer serotonin – the patient is in a positive mood

Start of the day
Waking phase

Deep sleep
The body is recovering

12 o’clock midnight

Optimum alertness

Optimum coordination

Fastest reaction time

White light, high intensity

Cold light, high intensity

Warm light, low intensity

No light

Source: LightingEurope

If the body receives too little light during the day, the melatonin level falls too low. As a result, the patient does not sleep well at night, and is sluggish, tired and listless during the day.

Many challenges, one answer: LEDVANCE
LEVDANCE offers optimum lighting solutions whatever the task – thanks to a comprehensive portfolio and a wide range of professional services.
BIOLEX is the innovative HCL system from LEDVANCE. With the help of an intelligent algorithm, it automatically adjusts the artificial light to simulate the changes in natural daylight – accurate for the time of day and the location – to produce the best possible biological effect. Changes in color temperatures and lighting levels support our natural bio-rhythms.

Winner of design, function, innovation & quality awards:

LEDVANCE BIOLUX SYSTEM: THE FIVE LIGHT PROFILES

Operation of BIOLUX is intuitive. Preprogrammed light profiles can be easily selected on the control unit.

NATURAL LIGHT WHATEVER THE TASK: THE BIOLUX COMPONENTS

BIOLUX is ideal for rooms with up to 20 luminaires* –such as patient rooms, staff rooms, public rooms and offices with little daylight.

* Higher number of luminaires on request
THE PERFECT PRESCRIPTION:
IDEAL LIGHTING SOLUTIONS
FOR ALL AREAS

FOYERS/WAITING AREAS
Solid background lighting in foyers and waiting areas creates a friendly atmosphere and helps visitors to find where they need to go. Swivel spotlights that can be directed on objects and pictures add visual accents, while LED strips produce a pleasant indirect light.

STAIRS/CORRIDORS
Stairwells and corridors need good basic lighting 24 hours a day, with minimum illumination guaranteed by optional emergency lighting in the event of a power failure. DALI functionality also allows for intelligent, energy-efficient lighting management.

STAFF ROOMS
Cool light colors in staff rooms help to keep doctors and nurses motivated and alert during their shifts, support high levels of concentration and aid faster recuperation during work breaks.
Hospitals are complex buildings with numerous different areas. The lighting has to fulfill very specific tasks for patients, staff and visitors. While functional aspects predominate in stairwells and corridors, for example, the light in reception areas, patient rooms, waiting areas and dining rooms must also always promote the well-being of people.

And the light around the buildings and along the access routes also has to meet specific requirements. Visitors appreciate facades that are attractively illuminated, and parking lots and garages that are well lit for maximum security and ease of navigation.

**PATIENT ROOMS**

Pleasant, glare-free light that patients can control from their beds creates an attractive ambience. For bathrooms, wash rooms and so on, however, bright and uniform illumination is important for safety reasons.

**CAFETERIAS/DINING ROOMS**

Bright, friendly light boosts appetite and encourages relaxation. While area luminaires are recommended for background lighting, vintage lamps can create cozy coffee house zones. Damp-proof IP54 luminaires are suitable for food preparation and serving areas.

**OUTDOORS/PARKING**

Brightly lit access roads, facades and entrance areas look inviting and create a sense of reliability. Smart LED tubes provide highly energy-efficient zoned lighting in parking garages.
CLINICALLY TESTED EXAMPLES FROM ACTUAL PRACTICE

TIROL KLINIKEN INNSBRUCK
LED LIGHT AND SUSTAINABLE ENERGY MANAGEMENT

Tirol Kliniken in the heart of the Alps is synonymous with first-class innovative medicine. The facility has set itself ambitious goals also in terms of sustainability. As part of its sustainability drive it has already upgraded its lighting to energy-efficient LED technology. 6,000 modern LED luminaires from LEDVANCE now deliver much better quality of light – and energy savings of up to 50 percent.

At a glance:
- Around 6,000 new LED luminaires
- Power consumption for lighting reduced by up to 50%
- Cost savings of up to 50 %*
- Improved quality of light in the different areas of application
- Easy installation and mounting, low maintenance

CONNOLLY HOSPITAL DUBLIN
RELIABLE ENERGY-EFFICIENT LIGHTING

Connolly Hospital is a very large hospital with high admission levels. There was therefore a need for lighting that combined high energy efficiency with minimum failure rates. Our solution comprised over 400 new LED panel luminaires and a light management system, producing energy savings of up to 70 %. And with a 5-year warranty, LEDVANCE guarantees high reliability.

At a glance:
- Over 400 LED panel luminaires with sensors, integrated in a light management system
- Energy savings of up to 70 %*
- Improved quality of light thanks to high homogeneity

* Taking into account lamp replacement
PERFECT CARE, ALWAYS
FULL RANGE AND ALL-ROUND
SERVICE

LEDVANCE: THE RIGHT CHOICE
FOR NEW AND REPLACEMENT
LIGHTING

With our extensive product portfolio
that we are continually expanding we
can offer you the greatest possible free-
dom of design for future-proof lighting
solutions. As a full-service partner with
a worldwide sales and service network,
we can also give you individual advice
based on our high levels of expertise
and experience. This will take the pres-
sure off you from the planning stage
right through to implementation.

As a valuable extra, especially in the
cost-conscious healthcare sector,
many of our OSRAM LED lamps are
designed as one-to-one retrofits,
which makes replacing conventional
lamps both simple and cost-effective.

THE COMPLETE
PROGRAM

Innovative, top quality and from a
single source: our portfolio offers you
everything you need for the success
of your project.

SERVICE FROM START
TO SUCCESS

Take advantage of our comprehen-
sive support to achieve optimum
results and reduce the time and
effort you spend.

- LED luminaires
- OSRAM LED lamps – including many retrofit products for
  straightforward replacement
- Electronic components, drivers and LED modules
- Flexible LED strips
- Smart light management systems
- Traditional light sources

- Individual lighting and product advice for your project
- Clever lighting calculation with DIALux and RELUX
  software
- International sales network for personal contacts around
  the globe (healthcare@ledvance.com)
- eLearning courses for professional users
  (training.ledvance.com)
- User-optimized online catalog for efficient product
  searches (www.ledvance.com)
- Complete range of services and practical tools
  (www.ledvance.com/tools)
ABOUT LEDVANCE

With offices in more than 50 countries and business activities in more than 140 countries, LEDVANCE is one of the world's leading general lighting providers for professional users and end consumers. Having emerged from the general lighting business of OSRAM GmbH, LEDVANCE offers a wide ranging assortment of LED luminaires for a broad spectrum of application areas, intelligent lighting products for Smart Homes and Buildings. The company offers one of the largest LED lamps portfolios in the industry, traditional light sources, LED Strip system and light management systems.