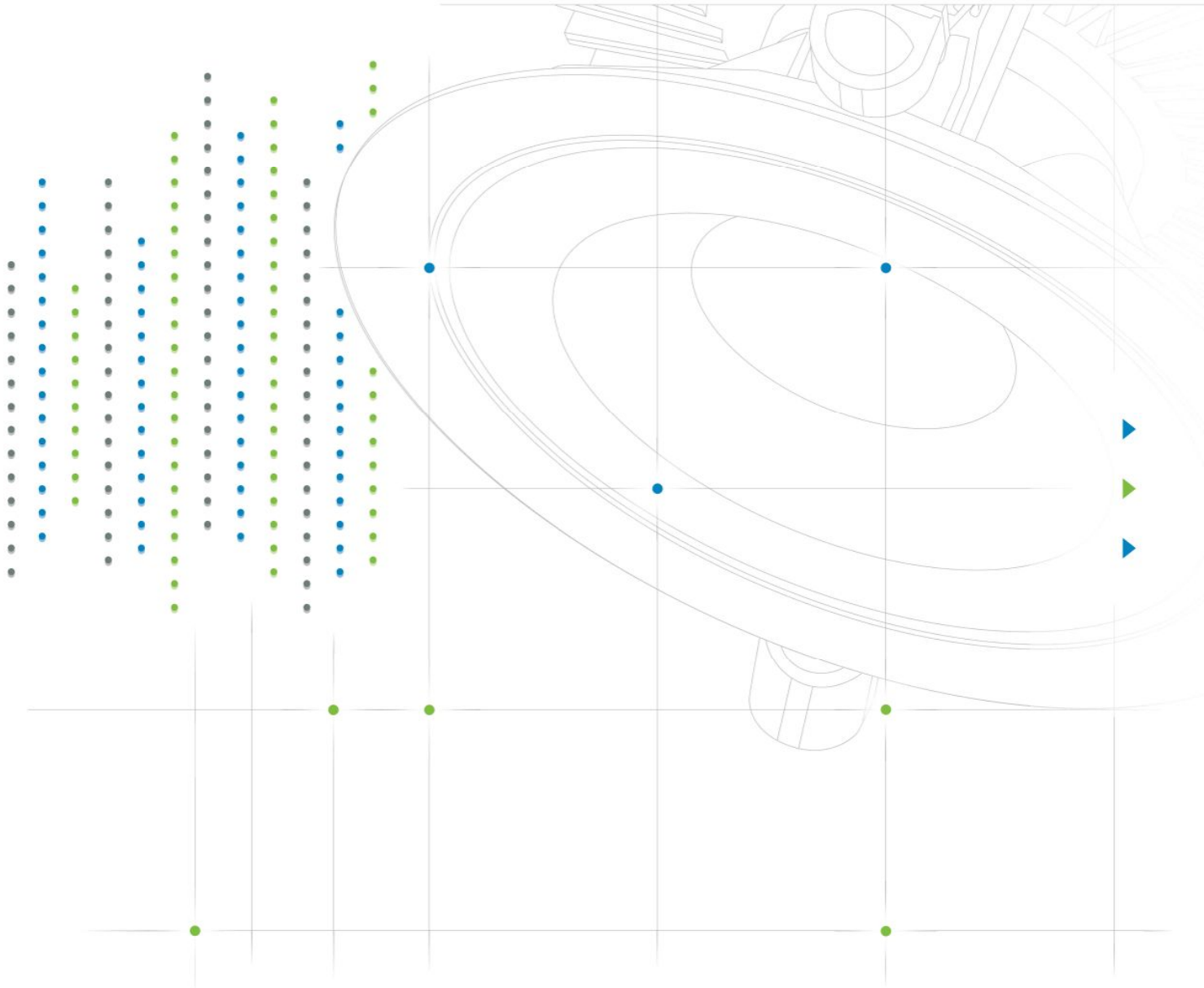




Catalogue LED 2014 - S1

LUCIBEL - LED Lighting Innovation



Lucibel - LED lighting designer and manufacturer



## In a nutshell

### About us

Lucibel is an innovative French group that designs and markets solutions based on its LED technology expertise and is consolidating the lighting market through a technology build-up.

### Our vision:

The LED revolution creates a usage value that goes way beyond lighting itself to authorize an unlimited number of applications, allowing agile players to create very significant value.

### Our mission:

To provide lighting solutions offering high value to demanding customers throughout the world.

## Our model: strong core technology and a positioning in the best channels



Unparalleled  
core  
technology

- Several dozens of patents filed or currently being filed.  
of our turnover invested in R&D.
- 2011: partnerships with Oséo and the CNRS (National French Research Laboratory), member of Oséo Excellence.
- 2012: "most innovative company" in Europe award in the Cleantech sector in Europe.



A customer-oriented focus,  
with fast response,  
adaptability and  
safety

- Our own factory and strict component selection allow excellent control of quality and lead times.
- Scalable production capacity and the ability to adapt to produce specific products in line with customers' real needs.
- A core product range certified "Photobiologically Safe" guaranteeing an absence of danger for the skin and the eyes.



High-speed  
performance and  
constant adaptation  
of our logistics chain

- A highly efficient supply chain combining our own factory for the differentiated products with a network of international partners-suppliers for the standard products.
- Rapid deliveries to over 35 countries managed independently by our international supply chain.





## An R&D organisation to reinforce innovation

Lucibel has structured its R&D organisation around 3 complementary sites:

### R&D Laboratory (France):

- > Innovation & design
- > Simulations / solution testing
- > Prototyping
- > Program coordination

### R&D Unit (China):

- > Pre-series
- > Adaptations
- > Certifications

### Active collaboration with prestigious research laboratories (CNRS, Institut LAPLACE...):

- > Fundamental research
- > Interaction with related research programs



## A dedicated team to serve our customers

### Customer service department:

- > available from Monday through Friday from 8:30am to 6:30pm

tel. +33 (0)1 80 04 12 31 or email [serviceclient@lucibel.com](mailto:serviceclient@lucibel.com)

### Technical department:

- > available from Monday through Friday from 8:30am to 6:00pm

tel. +33 (0)1 80 04 12 21



## A sales organisation to serve your projects

Lucibel, the ideal partner for your projects with a 5-step approach to support you

- 1 First contact
- 2 Visit to the location to be equipped
- 3 Consultancy
  - > Lighting study
  - > Lighting advice
  - > Building studies
  - > Lighting layout drawing
- 4 Sales proposal
- 5 Installation and work supervision

### 2013:

- > received the "fastest growing company" award in the Cleantech sector in Europe.
- > named one of the most promising 100 non-listed companies worldwide in the Cleantech sector.



LUCIBEL  
LUCIBEL

## Specific solutions

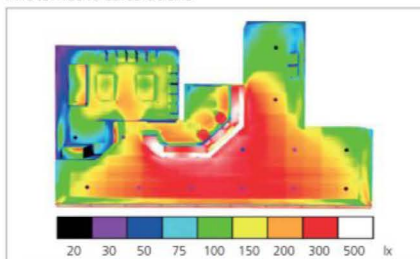
As a creator of LED lighting products, Lucibel proposes a true alternative to standard, off-the-shelf products by designing **customised products adapted to your specifications**: dimensions, power ratings, colours, accessories, assembly...

Based in France, a **dedicated team** (composed of a technical manager, project leaders and support engineers) **will advise you with your project**, inform you of relevant applicable standards **and undertake a return-on-investment study** in order to propose the product best suited to your specific requirements.

Based on your specifications (budget...), our team may also carry out **lighting studies, 3D simulations, thermal dissipation studies, or photometric calculations**.



Photometric calculations



3D simulations



You wish to receive further information?

Contact your sales representative or email us at [contact@lucibel.com](mailto:contact@lucibel.com)



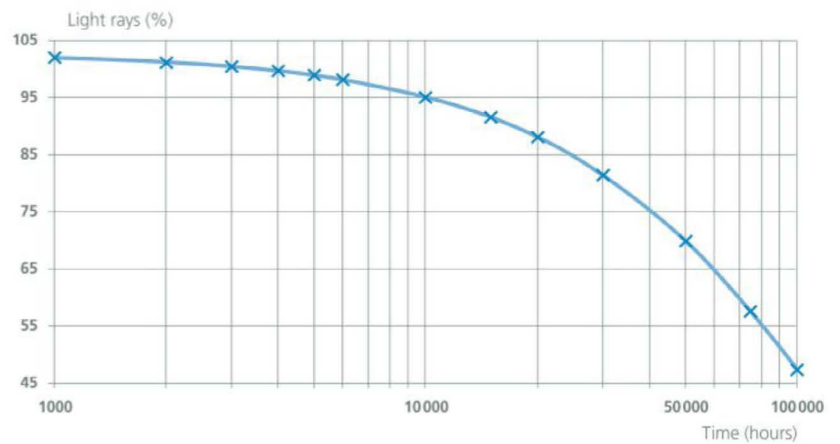
### How do you estimate the operating life of your products?

First of all, the operating life we indicate for our products is not the amount of time before they stop working, but the duration after which they only emit 70% of their initial light.

Our products' operating life is calculated on the basis of the working lives of their key components, i.e. the LEDs and the critical electronic components. We select our critical electronic components according to their operating life at the rated operating temperature, to ensure that the electronic portion functions throughout the product's operating life.

Our LEDs are tested for 6000hrs (more than 8 months) at different temperatures, and we record a temperature measurement every 1000hrs, thus allowing us to define the LM80 for the LED. This enables us to calculate the product's TM21, i.e. the forecast of its decrease in light emission over time. This is how we reach the result indicating that at its operating temperature, after 50000 hrs the product will only emit 70% of its initial light. This is how LED operating life is determined.

Luminosity maintenance diagram



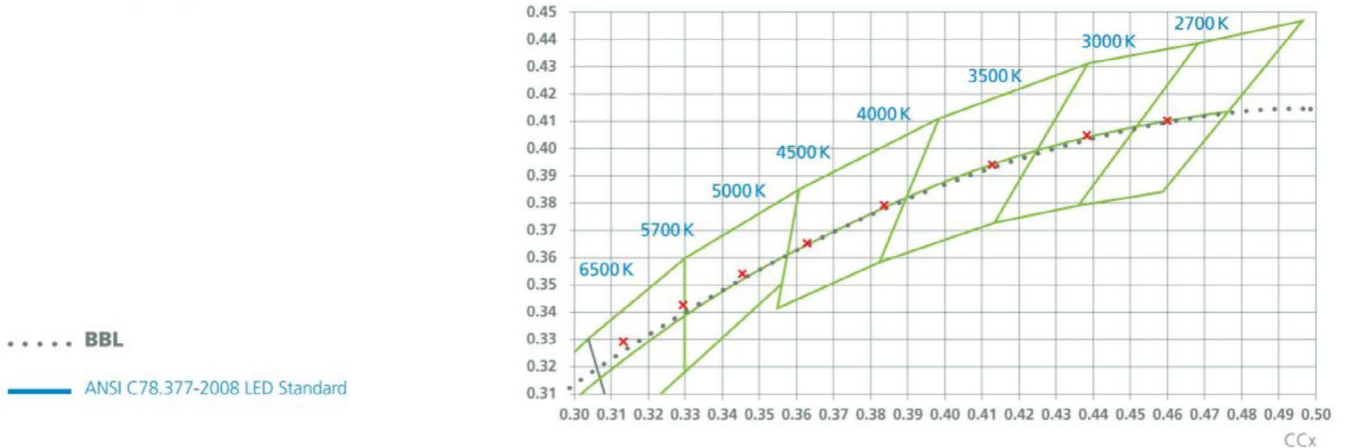
### How do you choose your LEDs?

#### Binning - LED colour range

After their manufacture, the colours and voltages of the LEDs produced may vary considerably and randomly. These characteristics are then measured in order to sort the LEDs according to performance range. Each range groups together LEDs with similar colours, light outputs and voltages.

When choosing the LEDs for our LUCIBEL lighting elements, we make a very precise bin selection (LED colour range) to ensure that any variations in colour or intensity between LEDs are not visible.

#### Chromaticity diagram



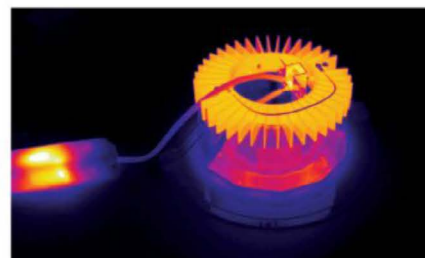


## How do you dissipate the heat emitted by the LEDs?

An increase in the temperature in the LED core will have a negative impact on its operating life and performances. To prevent this, LUCIBEL has made it a top priority to control heat dissipation in its products.

Below is an example of heat management and distribution in our Lucicup Downlight.

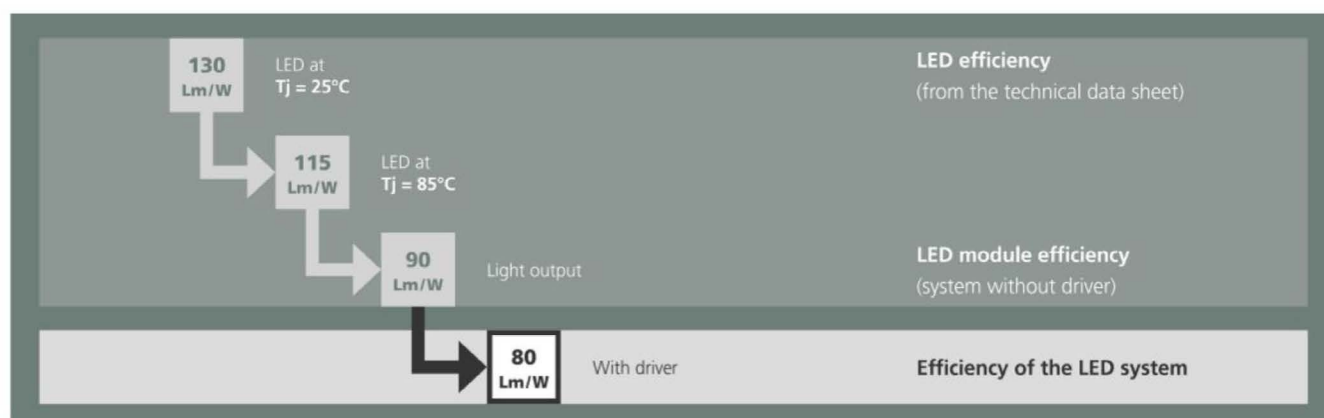
In order to effectively evacuate the heat produced by the LED, LUCIBEL heat sinks are made of aluminium with high thermal conductivity. The heat sink (an extruded part with fins) is designed to lead the heat towards the ambient air and evacuate it by convection.



## What do you take into account in your energy efficiency calculation?

(There are often large differences between suppliers)

The energy efficiency of the system in lumens per watt reflects the ratio of the light emitted over the power consumed. It is a very useful value when comparing two different products or technologies. To be relevant, this efficiency must be that of the complete system (including the LED source and the driver), and all comparisons should be made between systems. Here you can see for example the difference between the efficiency of the LED and the efficiency of the system:



It should also be noted that efficiency is not the only parameter to be taken into account. For example, the Colour Rendering Index (CRI) is also important, since the higher it is, the lower the efficiency. Photometry is also crucial: a lighting element may be very efficient and yet not direct the light where it is necessary! In this case it is better to have less efficiency, but with a beam focused on the useful surface area to be illuminated.



## Do your products comply with the latest eco-design directives?

ErP2 or DIM2

Yes, our products are developed and tested in compliance with the directive 2009/125/CE, which has been applicable since September 2013 and sets a minimum performance level for LED-based lighting and other technologies. This concerns key values such as energy efficiency, colour deviation, the power factor, etc. The directive also requires more detailed communication of product information to users (via technical data sheets, packaging and a website).

Our products are subjected to technical measurements and aging tests to guarantee the performances required by the directive.

## Equivalences

Traditional product		Operating life	Lucibel product		Operating life	Energy savings
	Waterproof lighting element 2x24W	8 000 h		LuciPark 60 cm 30W	50 000 h	= 45 %
	Waterproof lighting element 1x36W	8 000 h		LuciPark 120 cm 30W	50 000 h	= 25 %
	Waterproof lighting element 2x36W	8 000 h		LuciPark 120 cm 50W	50 000 h	= 40 %
	Waterproof lighting element 2x35W T5	15 000 h		Tubular 50W	50 000 h	= 40 %
	Metal iodide highbay 50W	12 000 h		LuciBay 50W	30 000 h	= -
	Metal iodide highbay 100W	12 000 h		LuciBay 100W	30 000 h	= -
	Metal iodide highbay 150W	12 000 h		LuciBay 150W	30 000 h	= -
	Metal iodide highbay 200W	12 000 h		LuciBay 200W	30 000 h	= -
	High pressure sodium vapor lighting 100W	10 000 h		LuciBay Modular 100W	50 000 h	= -
	High pressure sodium vapor lighting 150W	10 000 h		LuciBay Modular 150W	50 000 h	= -
	High pressure sodium vapor lighting 250W	10 000 h		LuciBay Modular 200W	50 000 h	= -
	Halogen floodlight 50W	2 000 h		LuciFlood 10W	30 000 h	= up to 80 %
	Halogen floodlight 100W	2 000 h		LuciFlood 30W	30 000 h	= up to 70 %
	Iodide metal floodlight 35W	10 000 h		LuciFlood 50W	30 000 h	= -
	Iodide metal floodlight 70W	10 000 h		LuciFlood 80W	30 000 h	= -
	Iodide metal floodlight 100W	10 000 h		LuciFlood 100W	30 000 h	= -
	Iodide metal floodlight 150W	10 000 h		LuciFlood 120W	30 000 h	= up to 20 %

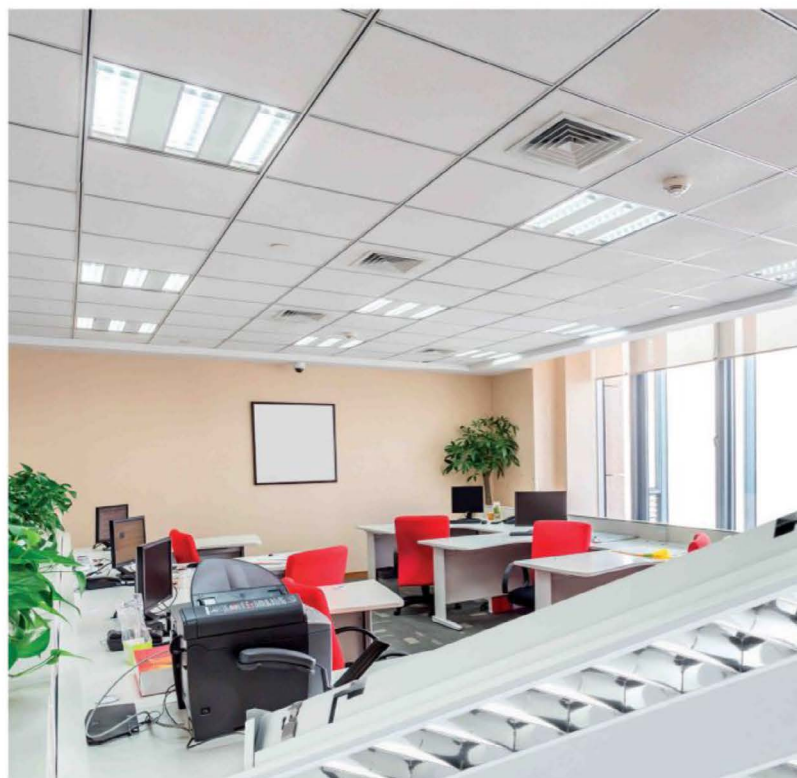
## Equivalences



### Sources

Traditional product		Operating life	Lucibel product		Operating life	Energy savings
	Halogen source 35W	2000 h		Powerlight Low luminosity 6W	50000 h	= 80%
	Halogen source 50W	2000 h		Powerlight Low luminosity 8W	50000 h	= 82%
	Halogen source GU5.3 35W	2000 h		LED 6.5W GU5.3 dimmable	30000 h	= 81%
	Halogen source GU10 50W	2000 h		LED 6.5W GU10 dimmable	30000 h	= 87%





## T3 LED

A traditional body for a unique LED core!

- **A profitable investment**
  - > 14 years without maintenance\*
  - > More than 25% energy saving compared to 4x18W T8
  - > Optimisation of price / performance ratio
- **The "retrofit" product**
  - > Dimensions and design identical to 3x14W T5
  - > Easy installation without opening the product (with access flap and rapid connectors on the bottom)
  - > Also available in versions standard, dimmable and DALI
- **Comfortable light**
  - > Low luminance reflector ( $< 1000 \text{ cd/m}^2$  for  $\alpha < 65^\circ$  - NF 12 464)
  - > Low glare rate:  $\text{UGR} < 19$
  - > Immediate illumination without flickering

\* 50000h, 14h/day, 255d/year



APPLICATION: Office • Education • ...



Casino Joa, Montrond les Bains (France)



Corp, Barcelona (Spain)



## LuciSpot<sub>range</sub>

- Recessed swivel spot LED without **IR or UV**, ideal for the illumination of heat-sensitive surfaces or objects : **Accentuation lighting** in shops, restaurants, bars, galleries, hotels, showrooms...
- **Energy saving up to 80%** compared to a halogen source AR111 75W
- **Angle of 40°** ideal for highlighting of volumes
- **Two rotation axes allowing the lamp to be swivelled as required**
- Unlimited number of on/off switching cycles
- Instantaneous illumination



APPLICATION : Shop • Hospitality • Showroom • ...



## LuciShop G-LED<sub>range</sub>

- **Respect for your products**

- > UV- and IR-free lighting that does not alter illuminated objects
- > A faithful colour rendering
- > Excellent light stability over time

- **Effective accenting**

- > Choice of the number of heads
- > Over 1000Lm per head
- > Swivels in two directions (+/- 30°)

- **A sustainable investment**

- > 80% energy saving compared to AR111 halogen spots
- > Over 10 years\* without maintenance
- > Reduces air conditioning costs (no heat released under the light)

\* 50000h, 15h/day, 300days/year



APPLICATION: Shop • Hospitality • Showroom • ...

A flexible and innovative  
LED lighting solution  
combining functional  
and decorative lighting!



## Clip n'Slide

Illuminate as you wish!

- **Lighting as you wish**
  - > Freely positioned magnetic spotlights
  - > 5 colours available to create your own ambiance
  - > Infrared remote control
- **Designer lighting**
  - > Thin and discrete aluminium rail (11 mm thick)
  - > A range of connectors respecting the form of your support
  - > Design and manufacture protected by several patents
- **Fast installation**
  - > Rail fastened with 2 screws
  - > Connectors and magnetic clips
  - > Low-voltage rail (15V) for protection of the installation and users

**Presentation videos:**

<http://www.youtube.com/watch?v=Vz0KzrtRhKI>

<http://www.youtube.com/watch?v=LD00K7GiP1c>

[http://www.youtube.com/watch?v=WYZmC5L\\_zk0](http://www.youtube.com/watch?v=WYZmC5L_zk0)



APPLICATION: Shop • Hospitality • Showroom • ...



**Easy to install**

> Installation completed in 7 minutes

**Safety**

> Extra low voltage only

**Unique**

> Protected with several patents

**Durable**

> Over 15000h operating life

**Power**

> LED module equivalent to a 35W halogen lamp

**Versatile**

> Slide and place the magnetic modules on the rail as required

**Interactive**

> Manual or infrared remote control



Schneider Electric, Ulaanbaatar (Mongolia)



Casino Joa, Montrond les Bains (France)



## Strip range

- Ideal for **architectural lighting and highlighting of volumes**
- Operating life: **50 000 h**
- Unlimited number of on/off switching cycles
- Instantaneous illumination



APPLICATION: Office • Shop • Hospitality • ...



Pharmacy «La Barrière», Toulouse (France)



## LuciPark<sup>range</sup>

- **Sealed (IP65) and robust lamp**, ideal for car parks, basements, workshops, warehouses, cold storage room (-20°C to +45°C)...
- Operating life: **50 000 h**
- Unlimited number of on/off switching cycles
- Instantaneous illumination
- Fastening brackets and link wiring for **fast and easy installation**
- Diffuser providing homogenous lighting and excellent control of glare
- **Serial connection to create a continuous line possible**



APPLICATION: Industry • ...





Ahorra Energia, Madrid (Spain)

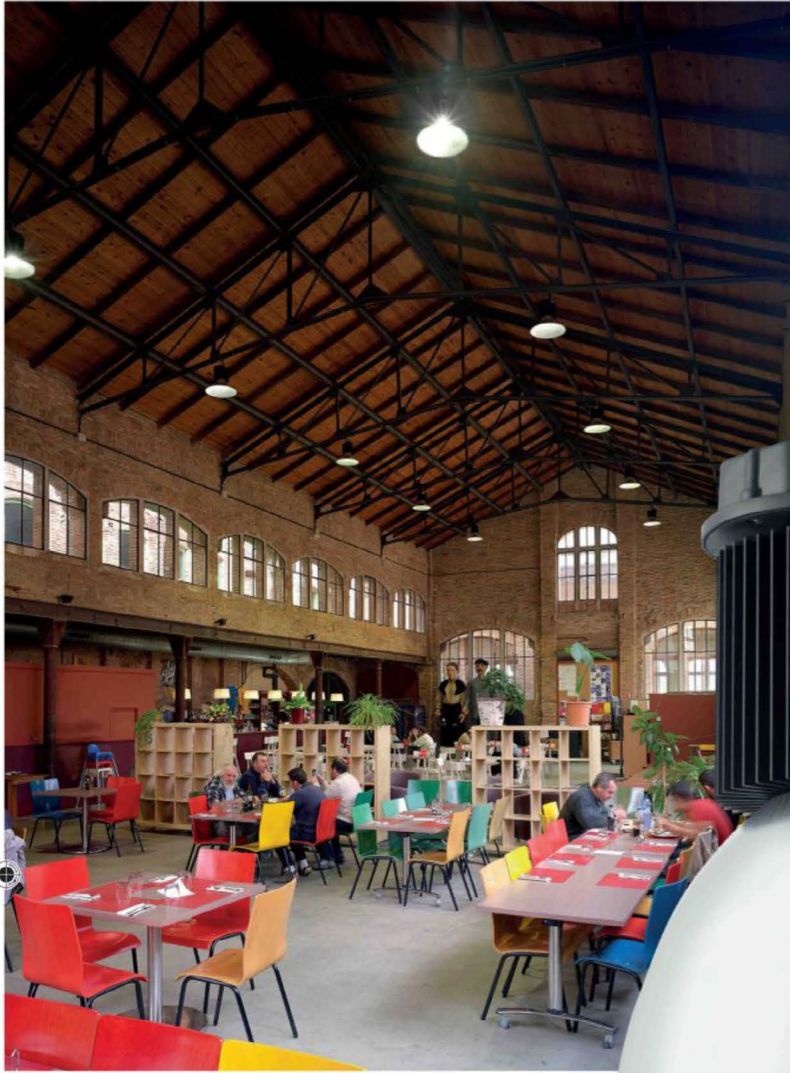


## Tubular

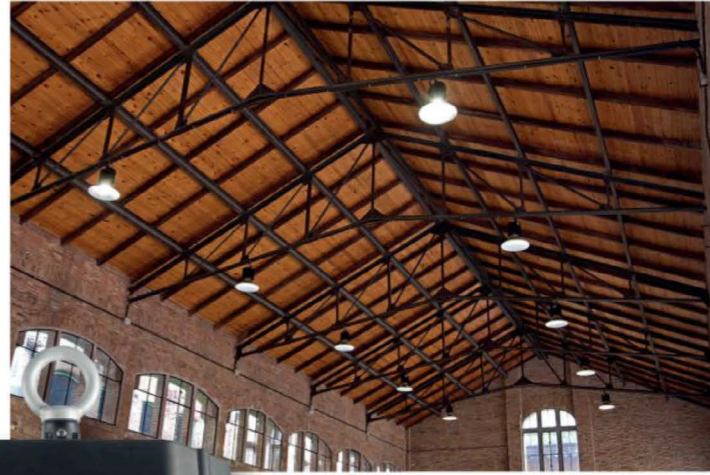
- **Sealed (IP65) and robust lamp**, ideal for car parks, industries, tunnels, workshops, humid rooms...
- Operating life: **50000 h**
- Very high lighting efficiency: **91.5 Lm/W**
- Cylindrical shape makes cleaning easy
- Fastening brackets and prewiring for **fast and easy installation**



APPLICATION: Industry • Outdoor lighting • ...



Civic centre, Celrà (Spain)



## LuciVar range

- Ideal for **industrial facilities, warehouses, retail space**
- High-temperature MeanWell driver guaranteeing **unparalleled operating reliability**
- Operating temperature -20°C to +45°C
- **Unlimited number of on/off switching cycles**
- Instantaneous illumination
- Delivered with 1.45 m supply cable (3x0.75 mm<sup>2</sup>)
- Reflector choices: **45° / 90° / 120°**



APPLICATION: Industry • Showroom • Outdoor lighting • ...

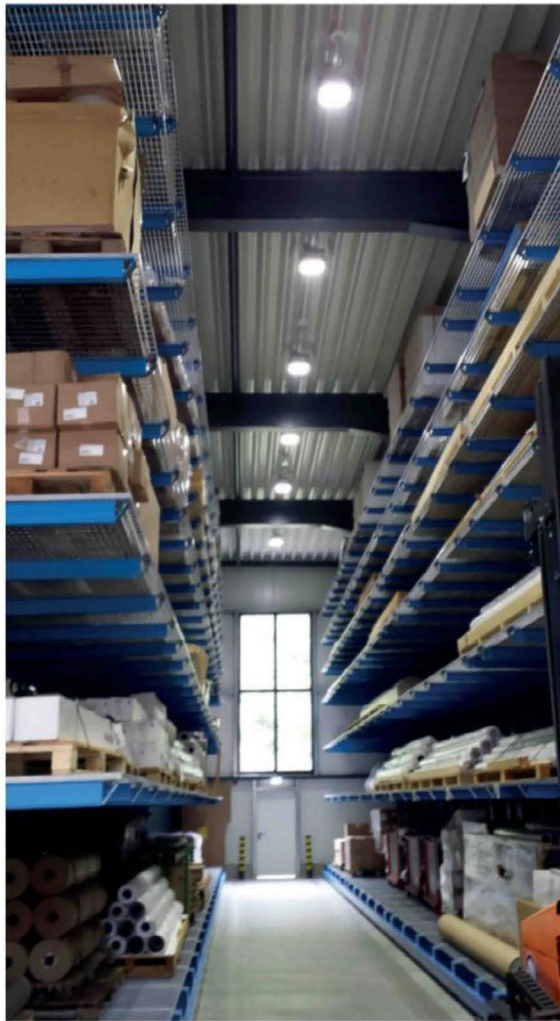


## LuciBay Modular range

- Ideal for **indoor and outdoor industrial lighting purposes**
- High-temperature Inventronics driver guaranteeing a **high level of reliability**
- Robust lighting elements: **IK09 / IP67**
- Operating temperature -40°C to +50°C
- **Unlimited number of on/off switching cycles**
- Instantaneous illumination



APPLICATION: Industry • Showroom • Outdoor Lighting • ...





Bookshop «La Manoeuvre», Paris (France)

## LuciFlood range

- Ideal for **sign lighting (version 10 W)** and **lighting in urban areas, service and industrial buildings (versions 30 W to 120 W)**
- High-temperature MeanWell driver guaranteeing a **high level of operating reliability**
- Operating temperature -20°C to +45°C
- **Unlimited number of on/off switching cycles**
- Instantaneous illumination
- Provided with a supply cable of 1 m (3x0.75 mm<sup>2</sup>)
- Cast aluminium painted grey as standard (black and white on request)



APPLICATION: Industry • Showroom • Outdoor Lighting • ...

Modern, functional and efficient, the **lucEco** LED porthole lamps are an alternative to traditional porthole lamps.

by Lucibel

Robust, economical and respectful of the environment!



Lycée français «Victor Segalen», Hong Kong (HK)



## MoonLED range

- Ideal for **indoor as well as outdoor use** (IP65): entrance halls, corridors, stairwells, fronts, changing rooms...
- Replaces the 18W and 2x18W fluocompact porthole lamps
- **Surface mounted** on walls or ceilings
- **Anti-vandalism** with anti-tamper screw and shock-resistant polycarbonate diffuser (IK10)
- High resistance to dust and humidity
- **Homogenous light** diffusion without shaded zones
- Unlimited number of on/off switching cycles
- Autonomous model with **automatic presence detection** (HF technology) for vandalism dissuasion
- Available on order: **Model with extinction warning and a model with permanent stand-by**



APPLICATION: Industry • Residential • Car parks • ...



Can Fajol, Figueres (Spain)



Pub Renault, Paris Champs Elysées (France)



## Powerlight<sup>range</sup>

Low luminosity

- Ideal for **accentuation lighting** and replacement of halogen sources 35W or 50W (80% energy saving)
- Operating life: **50000h**
- Fastening in a fixed or swivel ring
- **Unlimited number of on/off switching cycles**
- Instantaneous illumination



APPLICATION: Office • Shop • Hospitality • Education • ...





Corp, Barcelona (Spain)



Casino Joa, Montrond les Bains (France)

Both modern and elegant, our **lucEco** LED lamps are the perfect alternative to incandescent lamps. The comfortable and warm light quality allows you total liberty to create your own ambiance...  
**Robust, economical and eco-friendly!**

**lucEco**  
by Lucibel

LED lamps are the perfect



AR111



- Ideal to **directly replace 100W AR111 halogens**
- Over 80% energy savings compared with traditional 100W AR111 sources
- **UV- and Infrared-free**
- Drastically reduces maintenance
- Use of 16 Nichia LEDs
- More than 15 000 on/off switching cycles
- Instantaneous illumination



APPLICATION: Shop • Hospitality • Showroom • ...



Velcro, Barcelona (Spain)



SOFERIM, Paris (France)



## LED GU5.3 II Dimmable

- Ideal for **accentuation lighting** and replacement of 35W halogen sources, allowing over 80% in energy savings.
- **Compatible with most standard controllers and transformers available on the market** (list on request)
- Operating life: **30000 h**
- Unlimited number of on/off switching cycles
- Instantaneous illumination



APPLICATION: Shop • Hospitality • Showroom • ...

Both modern and elegant, our  
alternative to incandescent lamps.  
The comfortable and warm light quality allows you total liberty to create  
your own ambiance...  
**Robust, economical and eco-friendly!**

**LUCECO**  
by Lucibel

LED lamps are the perfect



**GU5.3**



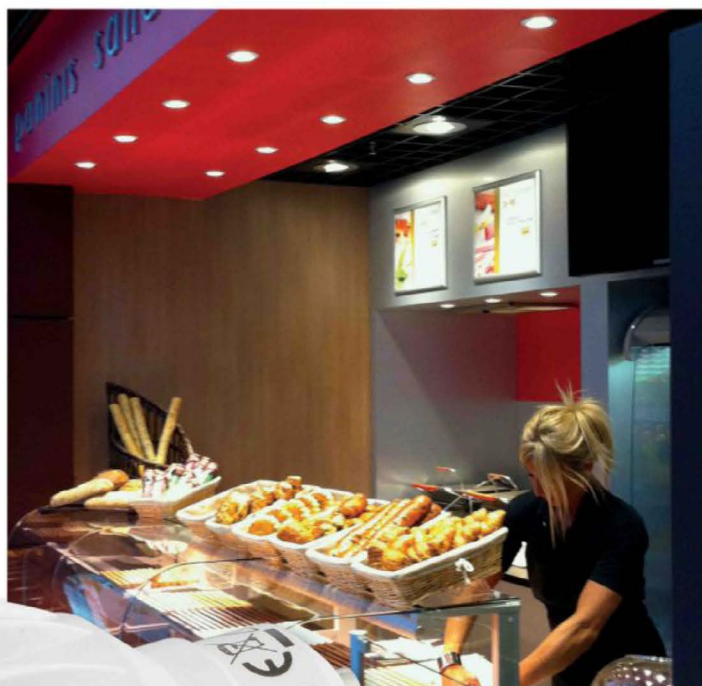
- To replace MR16-GU5.3 halogen sources, with 80% in energy savings
- Sized for residential use (2.5 hrs/day)
- More than 15 000 on/off switching cycles
- Instantaneous illumination



APPLICATION: Residential • Shop • Hospitality • ...



R'Cod, Paris (France)



Casino cafeteria, Bordeaux (France)



## LED GU10 II Dimmable & Kit

- Ideal for **accentuation lighting** and 50W Halogen light bulb replacement
- Operating life: **30 000 h**
- Unlimited number of on/off switching cycles
- Instantaneous illumination



### Kit:

- GU10 6.5W dimmable
- White swivel ring, aluminium
- GU10 ceramic socket



APPLICATION: Shop • Hospitality • Showroom • ...

Both modern and elegant, our  
alternative to incandescent lamps.  
The comfortable and warm light quality allows you total liberty to create  
your own ambiance...  
**Robust, economical and eco-friendly!**

**LUCECO**  
by Lucibel

LED lamps are the perfect



**GU10**



- To replace GU10 halogen sources, with 80% in energy savings
- Sized for residential use (2.5 hrs/day)
- More than 15 000 on/off switching cycles
- Instantaneous illumination



Kit:

- GU10 4x1 W
- White swivel ring, aluminium
- GU10 ceramic socket



APPLICATION: Residential • Shop • Hospitality • ...



## LuciFlora

- **Lighting equivalent to that of a 35W conventional source**
  - > The same lighting (400 lumens and 3000 Kelvins)
  - > Horizontal 360° and vertical 275° illumination
  - > Instantaneous illumination
- **Over 80% energy saving**
  - > 5W consumption compared to 35 W for conventional lighting
  - > Efficiency of 80 lumens/Watt
- **Investment protected for 10 years**
  - > Cooling to maximise the working life (30000 hrs)
  - > Shock resistance
  - > Compliant with ERP2 standards (Euro DIM2)



APPLICATION: Shop • Hospitality • Showroom • ...

Both modern and elegant, our **LUCECO** LED lamps are the perfect alternative to incandescent lamps. The comfortable and warm light quality allows you total liberty to create your own ambiance...  
**Robust, economical and eco-friendly!**

**LUCECO**  
by Lucibel

LED lamps are the perfect

alternative to incandescent lamps.

The comfortable and warm light quality allows you total liberty to create your own ambiance...

**Robust, economical and eco-friendly!**



## Flame



- Flame with lamp base E14, to replace 25W incandescent flames
- 88% energy savings with the same amount of light
- Sized for residential use (2.5 hrs/day)
- More than 15 000 on/off switching cycles
- Instantaneous illumination



APPLICATION: Residential • Shop • Hospitality • ...



Both modern and elegant, our **LUCECO** LED lamps are the perfect alternative to incandescent lamps. The comfortable and warm light quality allows you total liberty to create your own ambiance...  
**Robust, economical and eco-friendly!**



## Mini Globe €

- Mini-globe with lamp base E14, to replace 25W incandescent mini-globes
- 88% energy savings with the same amount of light
- Sized for residential use (2.5 hrs/day)
- More than 15000 on/off switching cycles
- Instantaneous illumination



APPLICATION: Residential • Shop • Hospitality • ...

Both modern and elegant, our **LUCECO** LED lamps are the perfect alternative to incandescent lamps. The comfortable and warm light quality allows you total liberty to create your own ambiance...  
**Robust, economical and eco-friendly!**

**LUCECO**  
by Lucibel



## Globe range

- Globe with lamp base E27, to replace 60W incandescent globes
- 84% energy savings with the same amount of light
- Sized for residential use (2.5 hrs/day)
- More than 15000 on/off switching cycles
- Instantaneous illumination



APPLICATION: Residential • Shop • Hospitality • ...



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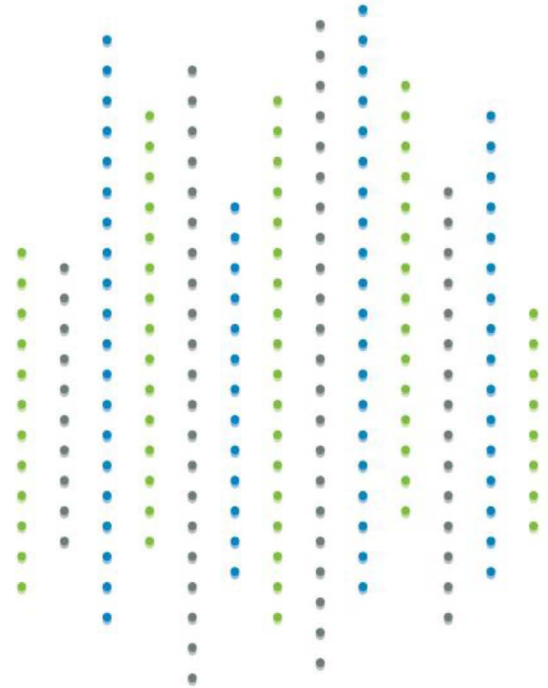
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