

## PRESS INFORMATION

### LED in classic designs



The luminous efficacy of high power LEDs is today significantly greater than 100 lm/W, a value that will continue to increase in the coming years. This means that in terms of efficiency, LEDs now surpass mean wattage high pressure sodium vapour lamps, a fact that qualifies them to be an interesting light source for streetlighting.

As well as a positive energy balance, LED technology has quite a few more advantages to offer: the compact dimensions of the light emitting diodes create new possibilities for luminaire design and their long service life reduces maintenance costs. The lumen output of LEDs increases with a reduction of temperature, an excellent characteristic when considered that at our latitudes most burning hours for outdoor lighting are in cool or even cold ambient conditions. And in addition LEDs can be dimmed from 0 to 100%, not only without loss but even according to a progressive characteristic curve.

Despite these technological advantages there exist today only a modest number of LED solutions for the lighting of roads and paths in accordance with standards, because the development of high performance LED luminaires presupposes expert know-how in terms of engineering and optics. LEDs for example require effective heat dissipation for cost-efficient and reliable operation. The relatively small surface via which light emitting diodes output light demands custom-designed optics; only in this way can targeted light guidance and glare elimination be achieved.

State-of-the-art lighting technology with classic designs

The lighting specialist Siteco has mastered this challenge and now offers its comprehensive range of town and park luminaires with LED technology. The LED versions of the Mushroom Luminaire, Lantern, Lantern Classic, Lantern Deluxe, City Light Plus, City Light Elegance, City Light Bollard and City Light Pillar combine classic design with state-of-the-art lighting technology, opening the

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way for users to achieve significant cost savings with luminaire operation.

The LED Module 520 is used as a light source throughout the new luminaire versions. Its high performance LEDs precisely positioned upon a passive heat sink are combined with special lenses, highly specular reflectors and transparent luminaire enclosures to form an efficient system that is able to save towns and local authorities enormous quantities of energy for outdoor lighting, while at the same time distinctly improving upon quality of light.

The key to such sustainability is supplied by Siteco LED gear tray technology: light sources, optics, thermal management and control gear are all accommodated within a central module. This completely functional and closed unit means that the installation of control gear within masts is a thing of the past. Simultaneously this construction ensures that future, more powerful LED generations can be easily retrofitted, or that existing luminaire systems featuring conventional lamps can be modernised according to the latest state of technology.

#### Dimming instead of switching off

The process of lighting control enables further economic and ecological potential. The luminaires are equipped with an electronics module that allows power reduction via a control wire: light can be dimmed according to needs. And the key here is that lumen output does not sink in proportion to power input. The semiconductor characteristic of the LEDs and their intelligent control ensures that with a reduction of power input down to 35%, lumen output is still 50%.

This eco-function is particularly interesting for those operators that due to cost factors still switch off every second luminaire. By dimming LED luminaires they not only save 15% of energy, but also illuminate the road more uniformly; brightness levels are harmonious, and the eye can adjust well to the lighting conditions. And visual perception and therefore safety in road traffic is optimally supported.

#### Designing with light distribution and light colour

The town and park luminaires with LED Module 520 are available with two light distribution patterns (symmetric and asymmetric) and two colour temperatures (3000 and 4000 Kelvin). This enables nearly all lighting tasks to be solved for applications that include residential streets, town squares, parks and gardens.

The version with asymmetric distribution is used primarily for residential roads, service roads and paths. It guides light specifically onto traffic surfaces but prevents stray light from falling onto

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adjacent facades and apartments. Symmetrical light distribution is required mostly for town squares, but also when green strips along roads are to be illuminated or for when the luminaires are positioned along central reservations.

Photos: Siteco