

PRESS RELEASE

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Sollatek's LED Bulkhead is ideal for demanding environments

With LED technology and a rugged, intelligent design, Sollatek's LED Bulkhead for solar street lighting sets a new standard for demanding lighting applications. The British designed and manufactures bulkhead offers a life expectancy of over 50,000 hours, which is more than 11 years' operation at 12 hours a day. The IP 44 rated bulkhead's robust construction protects the LEDs from traffic vibration, and the LEDs' efficiency maximises the lamp's use of available solar energy. These features create a street light ideal for remote and rugged environments, where weather can be highly variable and extreme, maintenance visits are difficult and expensive, and mains power is not available.

The LED Bulkhead's cool white light is an attractive alternative to the harsh orange output of SOX lamps. With efficiency comparable to that of fluorescent lighting, the LED Bulkhead is smaller than other lamps of the same output. Its instant start, with no warming-up period is a significant advantage for event triggered security lighting. The LED Bulkhead, rated at up to 60W, is the most powerful of a range that starts from 20W. With supply inputs ranging from 23.5W to 70.6W, this range has an electrical efficiency of 90%. The LEDs typically yield 100 lumens per watt and the light has a colour temperature of 5000 to 7500 K.

The LED Bulkhead accepts a 24 VDC nominal input, with a maximum current of 3.7A at 20V. It can also accept a 12VDC input with a maximum current of 7.3A at 10V. The entire input range is 10V to 30V maximum. Input power screw terminals accommodate cables up to 6 mm², with an integral fuse. The LEDs within the lamp comprise an array of 6 banks with 10 LEDs each. The modular design features a separate controller for each bank, so if one fails the others remain lit without compromise. The controllers' highly efficient, high frequency PWM constant current design ensures an even brightness across the LED array, with maximum operating efficiency for each LED.

The LED Bulkhead has an environmental protection rating of IP 44. Its tough two-part aluminium enclosure has a rising top section for good service access. The unit's operating temperature range of -10°C to +50°C and operating humidity of 10 to 90% RH equip it well for its dusk to dawn operational role. An optional cooling fan can be fitted for high temperature applications. Comprehensive protection functions are also provided; these include short circuit, over current, spike, over and under voltage, over temperature and reverse polarity connection. If any bank of 10 LEDs becomes too hot, power is automatically reduced to maintain a safe operating temperature. Full brightness is automatically restored as the temperature reduces. Brightness adjustments are nearly continuously variable to minimize the visible effects of change.

The LED Bulkhead can also dim or turn off after a time delay; both the length of the delay in hours and the depth of dimming as a percentage of full power can be user set. Delays of up to 12 hours and dimming levels from Off to Full Power are possible. The timing features allow users to ensure that the LED Bulkhead only operates in darkness, or when it is needed. This maximizes battery autonomy and the LED Bulkhead's ability to be available on demand.

If the battery is subjected to heavy loading or poor solar input, voltage issues can also be mitigated. Battery levels from 10 to 12 volts and dimming levels from Off to Full Power can be set. Full brightness is restored when the battery voltage increases beyond the 'low battery dim' set point. Both the Delay Dim and Low Battery functions can be disabled if required.

Sollatek is to supply 500 LED Bulkheads in a new project for the Southern Oil Company in Iraq. These are to be installed into the remote oil fields near the city of Basra in the southern part of the country – an area known for poor lighting and recurring security issues. The LEDs' 50,000 hour maintenance free lifespan is an essential advantage in this remote area, given the difficulty and cost of access for maintenance. The bulkheads each output 6000 lumens of bright white light, and feature an intelligent automated switching schedule operating from dusk to dawn.

In hot, sunny climates such as Iraq's, solar energy is a plentiful resource, and solar lighting is a natural solution. However Sollatek is also using its solar technology expertise and experience to ensure the commercial and ecological success of installations into the UK and other regions with cooler climates. Success depends largely on optimizing the more limited sunlight hours and lower solar energy levels usual in such latitudes.

For more information please contact Sollatek on +44 1753 688 300 or email sales@sollatek.com

