

BRAUMS HPSM Central Light Source Technology - A Much Needed Upgrade

Improving Australasian Intersections

High power surface mount (HPSM) Central light source (CLS) traffic light technology is finally coming into the spotlight in Australia, New Zealand and Fiji thanks to BRAUMS' collaboration with Swarco Futurit.

BRAUMS is Australia's leading LED traffic light manufacturer, working with clients across the country, offering them a variety of different products and road sign hardware. When it comes to HPSM CLS technology, BRAUMS have supplied signal hardware for hundreds of intersections over the years, amounting to more than 380,000 HPSM CLS traffic lanterns around Australia. In fact, they brought the technology to the market.

Bringing Central Light Source to Australia

"We started using HPSM CLS traffic lanterns in 2013," says Bob Lemon, Senior Engineer at BRAUMS, "We introduced the product to the Australian market."

Our Managing Director, Andrew Bull selected the Swarco Futurit technology in 2012. As a long-standing partner of Swarco Group, the international leader in traffic management systems, BRAUMS noticed how this technology was being received and proven in the European and Middle East markets. Swarco Futurit had been building and supplying the technology for years; their technology pathway was, and still is, leading the evolution of LED development.



BRAUMS HPSM Central Light Source Traffic Signals on Newcastle Light Rail

Less LEDs for Improved Performance

With Australia's stringent traffic signal optical and photometric performance criteria, rigorous testing and design were undertaken on the existing Swarco Futurit product to bring it to an Australian model which not only met the standard but also reduced the potential points of failure on the LED circuit board by more than 90% compared to the existing LED solutions in the Australian market.

With fewer electrical connections, as is the standard with CLS technology, the reliability of the LED improves exponentially.

"With today's central light source technology, there are only two high power surface mount technology LEDs instead of 150+ LEDs required by the old technology."

"More connections with the old through-hole technology meant more points of failure. By cutting down the number of surface mount connections to four, instead of 150+ through-hole connections, you immediately improve reliability."

Reliable and Versatile Signalling

Swarco Futurit's optical system implements a 'state-of-the-art' thermal management system. Due to the high power LEDs being surface mounted, better heat transfer is achieved. Less thermal degradation of the LEDs and surrounding components means a longer operating life, and years of maintenance-free operation.

Another benefit of the HPSM CLS design is that it offers greater flexibility with symbols. As the desired symbol shape is achieved by simply applying a mask to the inside of the lens, virtually any symbol can be created and applied to any light.

This means standard lights can easily be converted to symbol lights, and vice versa, providing much more versatility than through-hole technology where symbol shapes must be constructed from several LEDs and are therefore not interchangeable.

"To make B for Bus or T for train, or even the pedestrian symbol, there is a lot more flexibility available with the HPSM central light source technology," says Bob. In fact, both Sydney Light Rail and Newcastle Light Rail utilise our HPSM lanterns with these unique symbol masks.

The Future of Traffic Light Technology

With already seven years experience implementing high power surface mount CLS technology, more than 380,000 across Australia, BRAUMS are thrilled to see an increase in interest in the technology locally. And proud to have identified and pioneered its development all those years ago, working with Australian organisations and Road Traffic Authorities to introduce traffic signalling innovation across the country and the wider region. But BRAUMS haven't stopped yet. With Futurled6 on the horizon, they are soon to be rolling out the next evolution in LED technology.

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