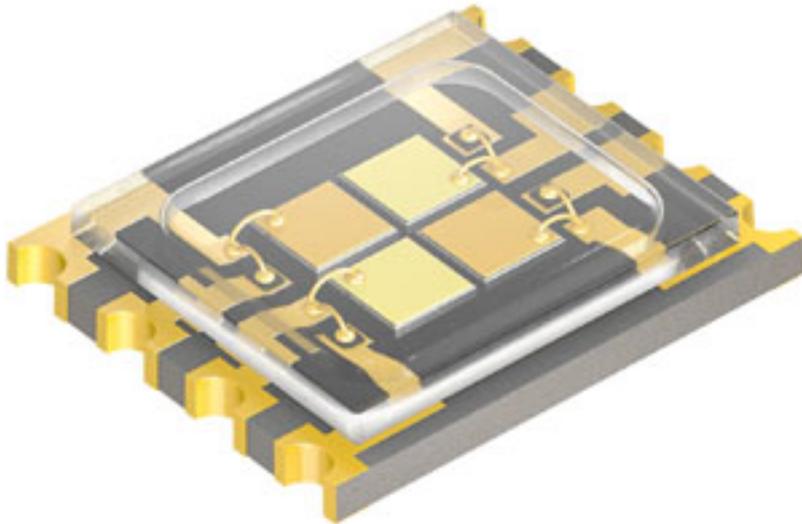


## **LEDs ideal for stage, booth lighting at trade fairs, and architectural lighting**



The new Osram Ostar Stage LEDs from Osram Opto Semiconductors offer high luminance of 48 million candelas per square meter (Mcd/m<sup>2</sup>) and tunable color tones from cold white to warm white. Combined with their extremely low-profile design and glass cover with anti-reflective coating, they provide the basis for more compact spotlights with an extremely narrow beam. The Ostar Stage LEDs are ideal for use in moving head spotlights on stage, for booth lighting at trade fairs, and for architectural lighting.

The special feature of these new LEDs is their tunable white light color. Two warm-white and two cold-white chips, arranged diagonally in the package, enable colors to be mixed perfectly at the component level and also allow all white tones between color temperatures of 2700 Kelvin (K) (warm white) and 10,000 K (cold white) to be produced with precision control. The LEDs achieve a high color rendering index of 94 for warm white and 74 for cold white.

Instead of the usual lens, the Ostar Stage LEDs have a flat glass cover with an anti-reflective coating, making them ideal for injecting the light into lens systems. Their etendue (the emission angle/area ratio of the emitting light surface to the projected light surface) in conjunction with external optics is retained, enabling a very narrow beam of light (+/- 9°) to be produced. This beam is smaller by a factor of 2 compared to spotlights based on plastic-encapsulated LEDs. Consequently, the luminance of the spotlight is greater by a factor of 2.

Thanks to the glass cover, the Osram Ostar Stage LEDs also have a much lower profile than previous standard components. At 1.23 millimeters (mm), their height is only one quarter of the usual component height and their footprint is only 5.9 mm x 4.8 mm. This enables the production of very compact spotlights.

### **Surface emitters enable the light to be tightly focused**

All the versions of the Osram Ostar Stage LED are based on the successful Osram Ostar SMT platform and are suitable for standard solder processes. The chips are fabricated in state-of-the-art thin-film technology so that almost all the light produced internally is emitted at the top. This makes the LEDs ideal for use with external optics.

In continuous operation (DC), the chips can handle an operating current of up to 900 mA. This delivers maximum values of 390 lumens (lm) in cold white (10,000 K) and 210 lm in warm white (2700 K). At a typical value of 1.8 K/W, the thermal resistance is very low, eliminating the problem of heat removal. In constant use, the LEDs will last for more than 50,000 hours, giving the moving heads and architectural fixtures a very long life.

### **Wide range of applications**

These LEDs can be used in spotlights of any size, from small stage spots to large moving heads. Andrew Lin, Product Marketing Manager at Osram Opto Semiconductors, said: "Three versions of the Osram Ostar Stage LED are available: the Multi Color (RGBW), the pure white, and now the tunable white. The range of applications is now greater than ever before. With so many colors and configurations, lamp designers have a virtually unlimited set of options."

Osram will be showcasing the new Ostar Stage LEDs at Prolight + Sound 2013, April 10 to 13, in Frankfurt, Germany, in Hall 9.0, Stand D10. Information about other new products, such as the first LED spotlights from Osram for event and studio lighting, will also be available there.

<http://www.osram-os.com/pr-ostar-stage-white> [1]

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[1] <http://www.osram-os.com/pr-ostar-stage-white>