

Presse Press

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Take the stage: Blue high-power laser from Osram provides breathtaking moments at events

The PLPT9_450LA_E expands the Munich-based high-tech company's laser portfolio for lighting applications

Rock and pop shows today are about much more than music. The entertainment factor, including numerous show elements, is becoming more and more important in concerts in big stadiums and event halls across the world. State-of-the-art stage lighting plays an essential role in these shows. Numerous manufacturers rely on lighting solutions from Osram to create memorable experiences. A new blue high-power laser is now expanding the range of options available to manufacturers of show lasers and stage spotlights.

The PLPT9_450LA_E from Osram Opto Semiconductors is a multimode laser diode that is mounted in a hermetically-sealed TO metal can package. Lasers combine an outstanding form factor with excellent beam quality – making them particularly suitable light sources for show lasers and stage lighting.

In terms of brightness, laser diodes offer some advantages over LEDs. At a typical operating current of 2 A, the PLPT9_450LA_E achieves an optical power of 3.0 watts and emits blue light with a wavelength of 447 nm. In a typical optical system, the laser light is focused at a point only a few micrometers in diameter. The laser can be directly used as a blue light source or in combination with a special phosphor for white conversion. The achieved luminance of the white light source is around three times higher than that of a comparable LED.

The PLPT9_450LA_E comes in the proven, robust TO90 package. Compared to the first TO56 generation that included three pins, the new TO90 package contains only two pins for contact. Thanks to the simpler cooling, the generated heat can be easily dissipated from the component. In addition, the integration of the laser into the final lighting solution is much less complicated.

"The PLPT9_450LA_E completes our broad portfolio of InGaN lasers with a 3-Watt version. Thanks to the easier cooling, an application range up to 85° C and an operating voltage of less than 5 V, we are able to offer our customers particularly small and lightweight designs of high-quality lighting solutions for show lasers, endoscopy, professional laser torches and other numerous applications," explains Christoph Walter, Product Manager for Visualization & Lasers at Osram Opto Semiconductors.

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Osram is expanding its photonics portfolio for stage lighting with the PLPT9_450LA_E.
Picture: Osram



The new high-power blue laser enables breathtaking lighting solutions for events.
Picture: Osram

ABOUT OSRAM

OSRAM, based in Munich, is a leading global high-tech company with a history dating back more than 110 years. Primarily focused on semiconductor -based technologies, our products are used in highly diverse applications ranging from virtual reality to autonomous driving and from smartphones to smart and connected lighting solutions in buildings and cities. OSRAM uses the endless possibilities of light to improve the quality of life for individuals and communities. OSRAM's innovations enable people all over the world not only to see better, but also to communicate, travel, work and live better. OSRAM has approximately 23,500 employees worldwide as of end of fiscal 2019 (September 30) and generated revenue of about 3.5 billion euros from continuing activities. The company is listed on the stock exchanges in Frankfurt and Munich (ISIN: DE000LED4000; WKN: LED 400; trading symbol: OSR). Additional information can be found at www.osram.com.