Presse Press

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What plants want: Osram technology helps provide fresh food around the globe

With the new generation of Oslon Square Hyper Red, Osram presents the most efficient LED for Horticulture lighting to date

The world population has been growing for many years. In particular, metropolitan areas are attracting more and more people. In places where farmland is limited and delivery must be quick, horticulture lighting offers a major advantage. With the help of state-of-the-art lighting technology, it is possible to provide the exact light composition various plants need for ideal growth or to develop certain characteristics. Plants can be grown in a very space-saving manner and with considerably higher yields thanks to tailor-made lighting solutions. For greenhouse owners, energy footprint is essential to production. The new generation of Oslon Square Hyper Red contributes to improving efficiency far more effectively than comparable products currently available on the market.

During dark season, many of us experience the effects of not getting enough light. As soon as the days get shorter, we feel more tired and exhausted. Plants are in a similar situation - when they don't get enough light, their photosynthesis doesn't work sufficiently.

Plants predominantly need red (640 to 700 nm) and blue light (400 to 490 nm) for their growth. For example, red light promotes the production of biomass in plants.

The new generation of the Oslon Square Hyper Red with a wavelength of 660 nm is the flagship product in Osram Opto Semiconductors' comprehensive Horticulture portfolio. In addition to the outstanding efficiency values, greenhouse operators benefit from a radiant flux of 1.030 mW at 73% WPE (wall-plug efficiency) and a photon flux of 5.7 µmol/s at an efficacy of 4.0 µmol/J at 700 mA. For applications with higher efficacy requirements, the

LED provides 78% at a driving current of 350 mA and 80% at 250 mA with an efficiency of 4.6 µmol/J. Besides the best-in-class efficiency values, customers benefit from a long lifetime of over 100,000 hours even at high temperatures. The surface mountable component has a ceramic package that is completed by a robust silicone lens.

"Horticulture lighting is an absolute growth market, which we have been leading for many years by providing more and constantly improved products," explains Yong Sheng Chew, Product Manager at Osram Opto Semiconductors. "The significantly improved efficiency values help our customers save energy. Thanks to the proven compact footprint of 3.0 mm x 3.0 mm, greenhouse owners can easily bring existing lighting systems up to date with the latest LED technology".

Horticulture lighting technologies from Osram not only help produce fresh food in smaller spaces without the use of pesticides, they also make it easier for consumers in urban areas to obtain fresh and healthy food quickly.

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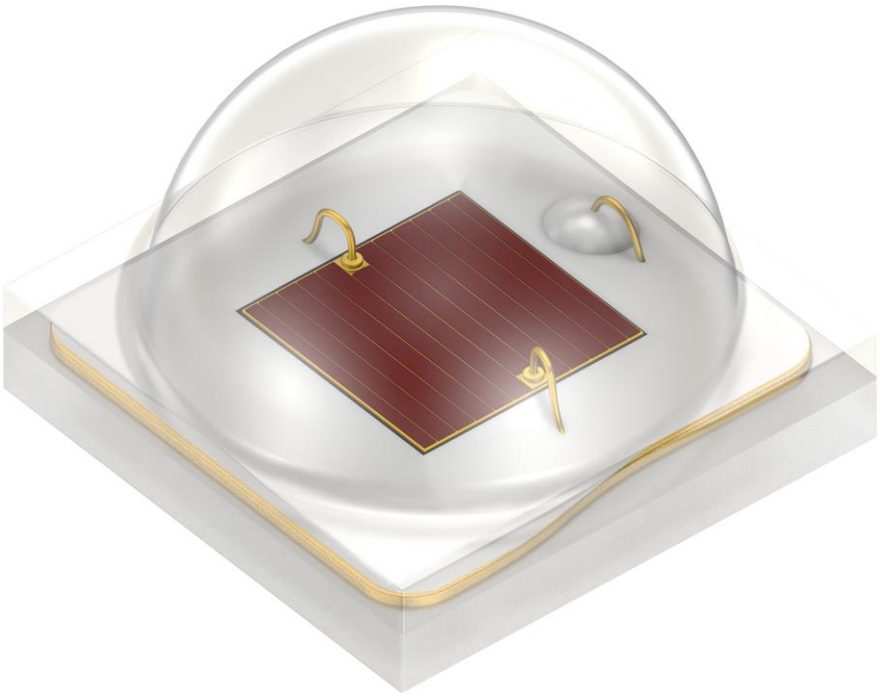

Osram is expanding its photonics portfolio for horticultural applications with the new generation of Oslon Square Hyper Red.
Picture: Osram

Horticulture Lighting helps where natural daylight is not enough.
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.