

ams OSRAM unveils enhanced OSOLON optimal horticultural LED series

16 June 2023 | News

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ams OSRAM has extended its OSOLON Optimal family of horticultural lighting LEDs with a new 640 nm Red LED, which enables indoor farmers to produce faster and healthier plant growth.

Providing broader coverage of the red portion of the spectrum, the new 640 nm Red LED joins the 660 nm Hyper Red and 730 nm Far Red in the OSOLON Optimal family, which also includes a 450 nm Deep Blue LED and a horti white LED.

It has been common practice in horticulture to illuminate crops with a mix of 660 nm, 450 nm and 730 nm, or 660 nm and white LEDs for plants that require full-spectrum light. Initial research conducted by Wageningen University on behalf of ams OSRAM shows that a double red peak (640 nm and 660 nm) in combination with horti white increases the dried biomass level in indoor growing environments.

In addition, the use of the OSOLON Optimal Red helps prevent photobleaching in some plant varieties. Experience shows that it can also prevent the incidence of fungal and bacterial infection in leafy greens such as basil.

The new OSOLON Optimal Red product can play an important part in raising energy efficiency and reducing the cost of electric power in all horticultural lighting applications, including greenhouse toplighting and interlighting, and vertical farming. Producing 3.53 $\mu\text{mol}/\text{J}$, it achieves a very high wall plug efficiency of 66.3 per cent. The LED's radiant flux is 485 mW, and photon flux is 2.58 $\mu\text{mol}/\text{s}$. The peak wavelength is 640 nm and the dominant wavelength is 630 nm.

Thomas Grebner, Marketing Manager at ams OSRAM, said, "The discovery of new recipes that include a double red peak of Hyper Red and Red is helping growers produce more biomass and maintain superior plant health. With the introduction of the OSOLON Optimal Red LED, horticultural lighting equipment manufacturers can achieve very high levels of efficiency and reliability."