

It's all in the mix – ams Osram presents white LED for highly efficient horticulture lighting

- When growing plants indoors without natural sunlight (so-called indoor farming), red, blue and white LEDs are used in different combinations.
- Osconiq S 5050 enables particularly efficient system designs thanks to a new type of phosphor.

Premstaetten, Austria (24, June 2021) -- [ams Osram \(SIX: AMS\)](#), a global leader in optical solutions, is expanding its comprehensive horticulture portfolio with the Osconiq S 5050. There is an ideal light recipe for each plant that includes "ingredients" such as the required wavelengths, intensity, average illumination duration and much more. Operators of greenhouses and so-called indoor farms naturally want to be as energy-efficient as possible in addition to maximizing yields. ams Osram's Osconiq S 5050 addresses a key problem of often used white LEDs resulting in lower energy costs and more efficient lighting to luminaire manufacturers and indoor farmers.

In indoor farming, red and blue or alternatively red and white LEDs are the predominate combinations found today. Standard white LEDs used to grow plants also emit light in the red wavelength range, which could be covered by direct emitting red LEDs in the lighting system instead. In addition, classic white LEDs require considerably more energy than a directly red-emitting LED would for a comparable number of red photons. "Our new Osconiq S 5050 now enables a higher system efficacy of red-white spectra by reducing the share of phosphor converted red photons. With this concept, growers are now able to save energy costs significantly," explains Thomas Grebner, Marketing Manager at ams Osram. The special phosphor used in the Osconiq S 5050 cuts the red part of the spectrum, so to speak. The red component in the white light of the LED is therefore considerably lower.

The Osconiq S 5050 enables compact luminaire designs for manufacturers thanks to its space-saving dimensions of just 5.0 mm x 5.0 mm x 0.7 mm. The mid-power LED also boasts an efficiency of 2.86 $\mu\text{mol}/\text{J}$ and an optical output of 630 mW. In addition, the device, which can be operated in a range of 180 to 1050 mA depending on the target application, is protected against overvoltages of up to 8 kV.

Horticulture technologies from ams Osram not only help to produce food independently of location, in a space-saving manner and without the addition of pesticides, they also make it easy for consumers in urban areas to obtain fresh and healthy food quickly.

[Further information about horticulture lighting](#) can be found on our website.

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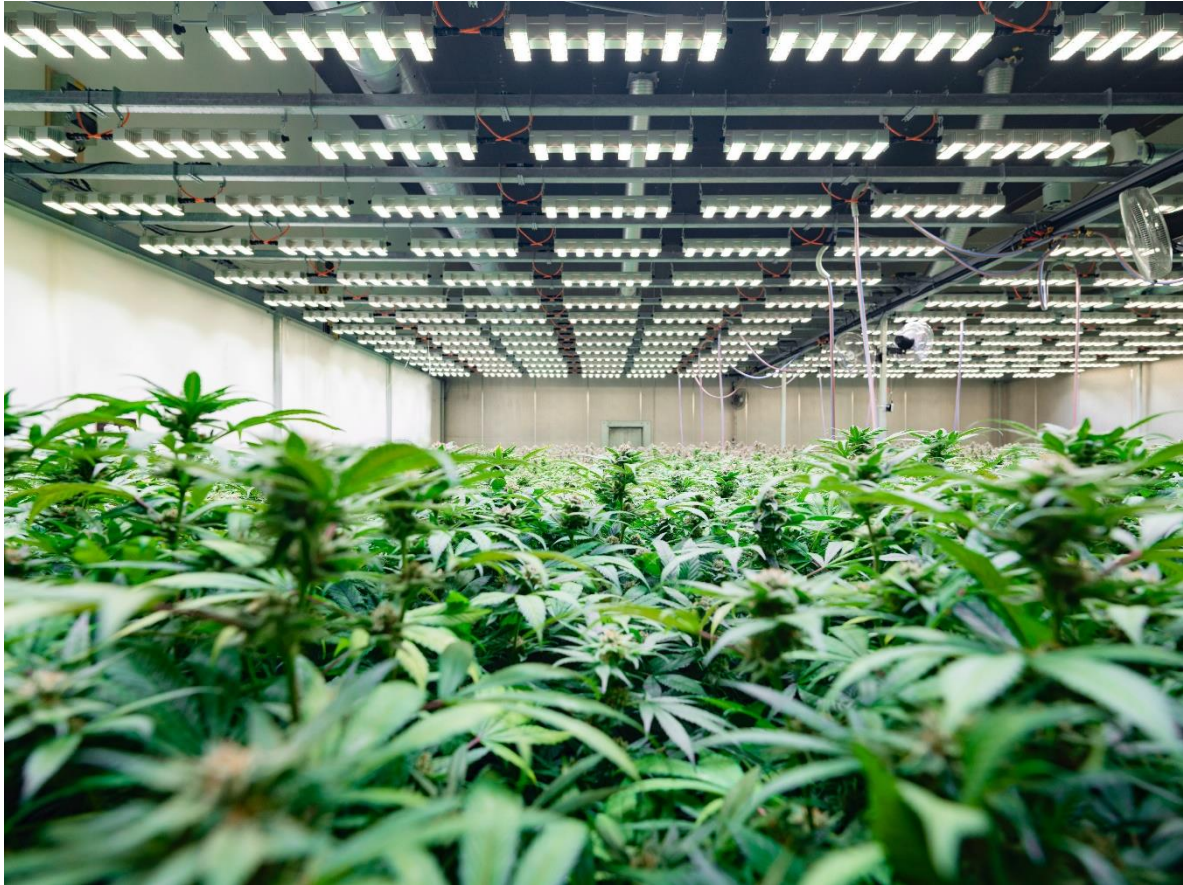
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The Osconiq S 5050 expands ams Osram's comprehensive horticulture lighting portfolio and significantly increases the energy efficiency of lighting solutions thanks to a new type of phosphor.

Image: Osram



Combined with red LEDs for horticulture lighting, white LEDs provide the right spectrum for the growth of various plants.
Image: Osram

About ams OSRAM

The ams-OSRAM Group, including the listed companies ams AG as parent company and OSRAM Licht AG, is a global leader in optical solutions. By adding intelligence to light and passion to innovation, we enrich people's lives. This is what we mean by Sensing is Life.

With over 110 years of combined history, our core is defined by imagination, deep engineering expertise and the ability to provide global industrial capacity in sensor and light technologies. We create exciting innovations that enable our customers in the consumer, automotive, healthcare and industrial sectors maintain their competitive edge. We thereby drive innovation that meaningfully improves the quality of life in terms of health, safety and convenience, while reducing impact on the environment.

Our around 30,000 employees worldwide focus on innovation across sensing, illumination and visualization to make journeys safer, medical diagnosis more accurate and daily moments in communication a richer experience. Our work creates technology for breakthrough applications, which is reflected in over 15,000 patents granted and applied. Headquartered in Premstaetten/Graz (Austria) with a co-headquarter in Munich (Germany), the group achieved well over USD 5 billion combined revenues in 2020 (pro-forma).



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