



GROW YOUR LIFE

ams **OSRAM**

Leadership and expertise in professional LED horticulture applications and technologies.

ams OSRAM offers a broad horticulture LED portfolio for professional top lighting, inter lighting and vertical farming applications. The High and Mid Power LED families include 660 nm (hyper red), 450 nm (deep blue) and 730 nm (far red). All important wavelengths in three different radiation angles 80°, 120° and 150° to support the perfect lighting for all types of plants and flowers. **ams OSRAM leaps into the next chapter in horticultural lighting surpassing the efficacy threshold of 75%.**

Setting new standard for professional horticulture applications. The new generation OSOLON® Square Hyper Red 660 nm is unmatched in its class of High Power LEDs. Significantly anticipating the performance roadmap plans, the new generation OSOLON® Square Hyper Red delivers performance levels that cannot be refuted.

With the expansion of LED lighting into horticulture, the real test of expertise and know-how lies within offering consistent growth practices and responsible use of energy whilst ensuring the cultivation of high quality crops for growers and end users. Most TCO calculations rely on high efficacy and sustainable long-term light output.



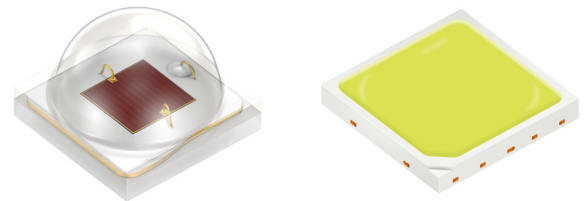
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Key Products

- OSCONIQ® S 5050 Horti White
- LED Portfolio (2 Watt) - OSLON® Square
- LED Portfolio (1 Watt) – OSCONIQ® S 5050
- LED Portfolio (1Watt) – OSLON® SSL
- LED Portfolio (0.3 – 0.5 Watt) - DURIS® S 5, DURIS® E 2835



Key Features

Professional Horticulture LEDs

- Deep blue (450 nm) and hyper red (660 nm) to provide the light for the photosynthesis
- Far red (730 nm) to control the plant from germination to vegetative growth and flowering
- White to provide a human friendly working environment
- High energy efficacy in $\mu\text{mol}/\text{J}$
- High maximum driving current
- Low thermal resistance
- Radiation angles – spot or wide illumination 80°, 120°, 150°
- High reliable packages with superior lifetime and corrosion stability
- Robust even in humid environment
- Additional colors like Blue, True Green, Yellow, Red are also available for special light recipes
- Best in class flux with hot/cold factor (85 °C to 25 °C)

Consumer Horticulture LEDs

- Wide spectrum color solution
- Complete portfolio with industrial standard footprints (2835) of 2.8x3.5mm and (3030) of 3.0x3.0mm



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Key Applications

Professional Horticulture Applications

- Top lighting, inter lighting and vertical farming
- Supplemental lighting and cultivation without natural daylight
- Photoperiodic lighting and photo-morphological control
- Urban farming and controlled environment farming
- Algae grow lights and agriculture lighting
- Agricultural lighting
- Fish & Poultry lighting

Key Benefits

Professional horticulture lighting

Market leading performance in efficacy and robustness with the OS-LON® Square Hyper Red 660nm reaching up to 81% wall plug efficiency. The small 3.0 mm x 3.0 mm footprint allows for very compact clustering. Flexible and efficient designs for professional top lighting, inter lighting and vertical farming applications. The OS-LON® SSL and OSCONIQ® product families complete the LED portfolio for professional horticultural lighting.

If it is highest performance, high robustness and long lifetime you seek – the OS-LON® Square will guide the way. Industry leading performance based on a 2mm² die LED.

For high performance, high robustness and long lifetime at best value – the OSCONIQ® S and OS-LON® SSL series will provide ample design solutions for your horticulture application.

Consumer Horticulture Applications

- Consumer horticulture applications
- Horticulture retrofit bulb

Consumer horticulture lighting

The DURIS® LEDs are offering exciting opportunities for innovative applications and designs. Thanks to ams OSRAMs' innovative color spectrum with a focus on 450 nm and 660 nm users will be able to grow their own food inhouse with horticultural lighting for home applications. The purple color achieves state-of-the-art efficacy and brightness. Two standard footprints of 2.8 mm x 3.5 mm and 3.0 mm x 3.0 mm allow cost-efficient horticulture solutions.