

Premium lighting redefined – ams OSRAM presents new Quantum Dot LED

- Osconiq E 2835 CRI 90 (QD) expands ams OSRAM's portfolio of lighting solutions that provide very high quality in a new mid-power LED.
- In-house Quantum Dot technology ensures outstanding efficiency values of over 200 lm/W, even at high color rendering indices (CRI).
- World's first Quantum Dot LED in established 2835 package.

Premstaetten, Austria (22 July, 2021) -- [ams OSRAM \(SIX: AMS\)](#), a global leader in optical solutions, presents a new Quantum Dot LED. LED technology has been on the rise for many years and the demand for high-quality and energy-efficient solutions for general lighting is growing. Manufacturers such as ams OSRAM have dedicated themselves to developing LEDs that meet this requirement. The Osconiq E 2835 CRI90 (QD) pushes efficiency values to new heights, even at very high color rendering indices and warm light colors. The special 2835 package offers further system benefits for luminaire manufacturers.

Quantum Dots (QDs) are special semiconductor particles that emit light in different wavelengths depending on their size when blue light hits them. Their unique properties allow very precise adjustment of the desired color temperature and outstanding efficiency values in the warm white color spectrum. "With our specially developed Quantum Dot phosphors, we are the only manufacturer in the market that can offer this technology for general lighting applications," said Peter Naegelein, Director Product Management Illumination at ams OSRAM. "The Osconiq E 2835 is also the only available LED of its kind in the established 2835 package and impresses with extremely homogeneous illumination."

The Osconiq E 2835 CRI 90 (QD) is available in a color temperature range of 2200 to 6500 K and achieves outstanding efficiency values of over 200 lm/W. The space-saving dimensions of the 0.5 W component of 2.8 mm x 3.5 mm enable particularly compact and efficient luminaire designs. The good absorption behavior of the Quantum Dots reduces the amount of nanoparticles required. Unlike other phosphors in general lighting, Quantum Dot-based solutions are still in their infancy in terms of development – with a very promising future of what can be achieved in upcoming product generations. A special feature of Quantum Dots from ams OSRAM is that they are encapsulated in a protective package that makes them more robust, protecting them from moisture and other external influences. This special encapsulation technology makes it possible to use the small particles in demanding "on chip" operation within an LED.

The LED also meets the strict requirements of the Single Lighting Regulation (SLR) regarding the energy efficiency of light sources, which will become mandatory in Europe in September 2021. Part of the new guidelines is, among other things, a value >50 for saturated red, the so-called R9 value. R1 to R8 is used to determine the CRI. Each R-value stands for a specific color.

The Osconiq E2835 is also available in two other versions: a CRI 80 component for office and retail lighting solutions and the Osconiq E2835 Cyan, which produces a spectral peak in the blue wavelength range that suppresses melatonin production in the human body, making it ideal for [Human Centric Lighting solutions](#).

[Further information on Quantum Dot Technology](#) can be found on our website.

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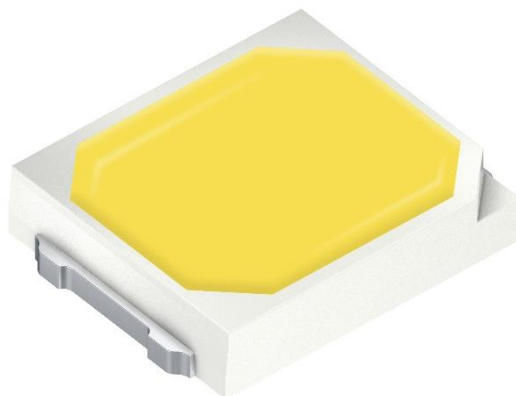
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The Osconiq E 2835 CRI 90 (QD) extends ams OSRAM's comprehensive portfolio for high-quality lighting solutions.

Image: OSRAM



Thanks to Quantum Dot technology, the Osconiq E 2835 CRI 90 (QD) achieves outstanding efficiency values and ensures brilliant color rendering in a wide range of applications - from retail to office lighting.

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-headquarters in Munich (Germany), the group achieved well over USD 5 billion combined revenues in 2020 (pro-forma).

ams AG is listed on the SIX Swiss Exchange (SIX: AMS/ISIN: AT0000A18XM4).



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