

Press

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Osram advances to become leading supplier for digital farming solutions with US acquisition

- Osram acquires one of the world's leading suppliers of smart grow lighting
- US-based Fluence expands Osram's portfolio of horticultural systems
- Osram is pioneering the digital automation of smart farming solutions by combining intelligent lighting, sensors, and smart software

Osram is taking the next step in its quest to become the leading provider of intelligent plant growth solutions by acquiring Fluence Bioengineering, Inc. of Austin, Texas. Fluence was founded in 2013, has approximately 95 employees and its 2017 sales were in the mid-double-digit millions of dollars (USD). The company specializes in LED-based horticultural systems, using Osram LED chips, for a wide variety of applications including vertical farming, especially in urban areas. Potential crops range from salad greens and herbs to medicinal plants. Osram and Fluence have agreed not to disclose the purchase price.

"Fluence is opening the floodgates to a huge future market," said Stefan Kampmann, CTO of OSRAM Licht AG. "Fluence's extensive knowledge of the horticulture market and possible applications, combined with Osram's expertise in lighting technologies, sensors and connectivity, will position us as a leading horticultural solutions provider." Associated smart farming software can be integrated into Osram's Internet of Things (IoT) platform Lightelligence, which brings the digitalization of lighting control to a new level. By combining and analyzing sensor data, Lightelligence enables significant progress in automation and intelligent applications far beyond lighting.

Increasing population and continued urbanization are intensifying the demand for fresh food, especially in densely populated cities around the world. To meet the needs of these areas, growers must tap the potential of greenhouses and vertical cultivation systems, utilizing smart lighting, sensor systems and artificial intelligence. In addition to

growing healthy and tasty food, vertical farms reduce the need for long-distance transportation routes. They also lessen the need for pesticides, fertilizers and excessive water use, and ultimately reduce spoilage. These technologies, which also can be used for growers of medicinal plants, contribute to the goal of sustainable agriculture.

LED-based solutions from Fluence help growers meet their yield and sustainability goals by increasing harvests up to 25 percent, reducing energy costs by as much as 50 percent and, through the targeted use of light, improving the quality and nutritional content of plants. Considering also that approximately 40 percent of food is spoiled between the producer and the supermarket shelf, there is an additional ecological aspect to benefit the smart farming approach.

“In the future, self-learning software algorithms will create and optimize digital plant models in order to cultivate tailor-made salads and herbs for platform partners such as supermarkets, online grocery shops and pharmaceutical companies,” Kampmann said.

Osram has increased its involvement in the horticulture sector over the last several years. The company has developed research and specialty luminaires that enable tailor-made light recipes to be controlled for specific plant types. In 2017, Osram invested in the Munich-based startup [Agrilution](#) which develops plant cubes with LED lighting for home use.

Fluence Bioengineering, upon closing, will be positioned within Osram’s Professional and Industrial Applications segment in the Specialty Lighting business unit. “We are excited to be teaming up with Osram to drive forward this global expansion and expand our digital product portfolio. Our new and existing customers will benefit from our partnership with Osram in all matters relating to light and sensors”, said Fluence CEO Nick Klase.

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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 26,400 employees worldwide as of end of fiscal 2017 (September 30) and generated revenue of more than €4.1 billion. The company is listed on the stock exchanges in Frankfurt and Munich (ISIN: DE000LED4000; WKN: LED 400; trading symbol: OSR). Further information can be found at www.osram.com.

ABOUT FLUENCE

Fluence specializes in LED-based horticultural systems for a wide variety of applications including vertical farming. Its customers are agricultural producers in indoor locations such as high-rise buildings. Potential applications range from salad vegetables and herbs to medicinal plants. For more information go to <https://fluence.science/>.

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