Press release

LASSIE-FP7, a European project that explores innovative intelligent lighting solutions

Light quality and color rendering within our reach

Muttenz (CH), 5 December 2016—LASSIE-FP7, a European project, is pushing back the boundaries in the lighting industry. The module developed by the consortium led by CSEM strengthens the range of tools available to the European lighting industry and offers an innovative solution providing exceptional light quality and color rendering that stands the test of time. Furthermore, the developments made in the project promise to address some of the most important challenges of "Lighting 3.0", while paving the way for the emergence of "Lighting 4.0".

When shopping, the visual appearance of goods is an enormous driver for many customers in several market segments, from food to clothes to luxury goods. The color rendering of the illumination systems employed therefore plays an important role in customers' decisions. However, specific and commercially viable lighting solutions are still lacking, particularly ones that are able to provide intelligent and efficient illumination of a high quality and with color accuracy. This technological gap has been addressed with an innovative approach by LASSIE-FP7, which developed a thin and efficient large-area module with high color rendering and accuracy, and with constant performance over the luminaire's lifetime.

When artificial lighting looks completely natural

The technology developed is the ideal solution with which to create artificially lit "color-proof islands", where customers will be able to experience similar color rendering to that delivered by natural light. Such an application is just one example of the new opportunities created thanks to the technological developments made by the consortium, as the LASSIE-FP7 module may also target new markets and application areas. Furthermore, the technological building blocks developed by the partners successfully address certain of the ongoing challenges that still prevent the full exploitation of the unique characteristics of LED lighting in large area modules.

The lighting revolution is on

"Following the revolutionary introduction of LEDs, the lighting industry is once more going through a period of profound change, this time driven by the development of innovative, digitized smart lighting solutions ("Lighting 3.0") and by the explosion of the Internet of Things ("Lighting 4.0"). Consequently, the industry has to reinvent itself and look for new applications and business models," explains Rolando Ferrini, the project's coordinator at CSEM. "With its smart, environmentally friendly module, LASSIE-FP7 offers a unique solution that meets the requirements of human-centric lighting—the new wave that will influence the lighting industry in the years to come."

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About LASSIE-FP7

LASSIE-FP7 – Large Area Solid State Intelligent Efficient luminaires
In 2009, in an effort to reduce global energy consumption, the EU Commission decided to move toward a complete ban of incandescent light sources by 2020. Their progressive replacement by highly efficient light sources is expected to reduce energy consumption for lighting by 30 percent. Among all existing technologies, solid-state lighting (SSL) represents the solution of the future, with the term *solid state* referring to light emitted by solid-state electroluminescence, as opposed to incandescent bulbs (which use thermal radiation) or fluorescent tubes. However, in spite of the high efficiency and long lifetime offered by single LED components, LED-based luminaires cannot yet match the performance of their classical counterparts and important technological challenges remain to be solved if the successful social and economic impact of SSL is to become reality. In this respect, there is currently a clear need for innovative, large-area, high-performance, reliable, intelligent, and low-cost SSL modules.
LASSIE-FP7 is a European project on large-area, intelligent, efficient SSL modules and is funded by the 7th Framework Programme with an EU contribution of EUR 3.15 M. Started in January 2014, the project will be conducted over a period of 36 months. It builds on the competencies of the following partners: • CSEM, Switzerland • Fraunhofer-Gesellschaft zur Förderung der an-gewandten Forschung e.V., Germany • Teknologian Tutkimuskeskus/VTT, Finland • REGENT Beleuchtungskörper AG, Switzerland • BASF Schweiz AG, Switzerland • Fundacion GAIKER, Spain • Marsica Information & Technology S.r.l. - LFoundry Group, Italy, and • AMIRES s.r.o., Czech Republic.
Further information is available at www.lassie-fp7.eu.

About CSEM

CSEM—technologies that make the difference

CSEM, founded in 1984, is a Swiss research and development center (public–private partnership) specializing in microtechnology, nanotechnology, microelectronics, systems engineering, photovoltaics, and communications technologies. Around 450 highly qualified specialists from various scientific and technical disciplines work for CSEM in Neuchâtel, Zurich, Muttenz, Alpnach, and Landquart.

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