

## STMicroelectronics drives LEDs lighting

### Energy-efficient solution for LED lighting

**STMicroelectronics is committed to developing products and technologies that increase energy efficiency, from power generation to consumption, as well as in lighting that represents more than 15% of global electricity consumption.**

**STMicroelectronics addresses the lighting market with a large portfolio of compact and efficient LED drivers solutions, with all the functionalities needed to ensure greater power saving in applications such as displays and signs, general illumination, backlighting, signal lighting, automotive and consumer.**

For LED matrix and displays, the STPxx family of LED array drivers covers most of the applications, from monochrome and RGB (STP24DP05) large displays to traffic signals, white goods and illumination. The new STP1612PW05, 16-channels array with adjustable PWM brightness reduce flickering effects and improve overall image quality in video wall applications.

In streetlighting, ST products enable design of an isolated SMPS that, besides featuring an electronic efficiency as high as 95%, also allows increasing the electronic reliability (longer MTBF). The PFC stage, based on the **L6562A** 8-pin controller, and the main PWM stage – controlled by the **L6599A** – driving power MOSFET belonging to the **SuperMesh3** and **MDMesh2** families, generate a DC bus, where independent LED strings can be connected. The L6562A can be also used to control SMPS for lower power streetlight application in both isolated single-stage solutions and not-isolated DC-DC converter.

As concerning the switching regulators solutions, the high efficiency boost converter LED770x family, together with the new **L598x and ST1Sxx**, the coming **L798x** and the high-runner **L597x** families, offer a wide range of DC-DC converters solutions for the LED driving market.

To remotely switch or dim multiple light points, ST offers the **SPZ260-PRO** – a low power consumption ZigBee module optimized for embedded applications; the new **STM32W10x** – a IEEE 802.15.4 wireless system-on-chip based on ST ARM Cortex-M3 that supports the most popular protocol stacks such as RF4CE, ZigBee-PRO; and the power-line-modem family ST75xx with different baud-rates and modulation techniques.

A very wide offering of orderable reference designs facilitates the development of end customer projects.



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The STEVAL-ILL015V1 is a standalone compact solution for LED color display modules based on the 24-channel LED drivers (STP24DP05) for precise LED current driving, the STM32F103 32-bit microcontroller for high resolution control of each LED color, and the ST1S10 monolithic switching converter for wide range of input DC voltages.