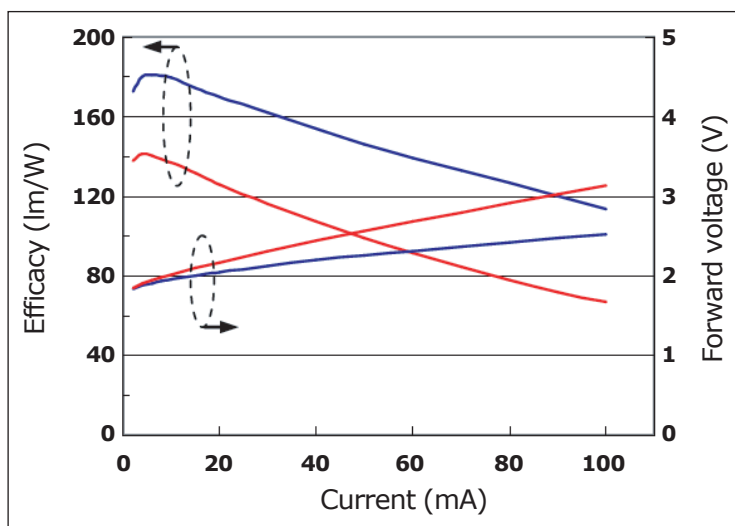


Epistar raises AlGaInP LED efficiency record for 0.35mm² chip at 20mA by 26% from 133 to 168lm/W

Taiwan's largest LED chipmaker Epistar Corp of Hsin-chu Science-based Industrial Park has announced the development of a new generation of its Aquarius-series AlGaInP LEDs that emits at an efficacy boosted by 26% from the previous record of 133lm/W (from Epistar's AX14 LED, announced in March) to 168lm/W.

Applying novel light-extraction technology from Epistar Lab, the new LED's Lambertian transmission raises efficacy to 168lm/W at a dominant wavelength of 610nm when driven by a current of 20mA (or 180lm/w at 6mA) from a 0.35mm x 0.35mm chip. The horizontal chip structure was designed to satisfy chip-on-board packages for lighting applications that require multiple chips in series on non-conductive substrates.

Epistar reckons that the new LED's performance promises to make the small chips a preferred choice for outdoor displays and



New Aquarius-series chips have higher efficacy and lower forward voltage than AX14.

red-green-blue (RGB) backlight unit (BLU) applications. It also adds that the development allows warm-white LED solutions with higher efficacy and better color rendering index (CRI) to be provided via color mixing than can be achieved through conventional

is developing higher-efficacy AlGaInP LEDs that should facilitate lighting solutions with both high-CRI and high-efficacy warm-white light for lighting applications as well as high performance in RGB BLUs.

www.epistar.com.tw

conversion of blue LEDs with phosphors. So far, the new generation of Aquarius-series AlGaInP LED has been demonstrated primarily in Epistar Lab, but plans are in motion to transfer the technology to Epistar's production line. Moreover, Epistar Lab

Tyntek to set up China LED-making JV in Fuzhou 60–70% of Taiwan LED makers' investment going into China in 2010

Taiwan-based LED chipmaker Tyntek has announced plans to invest 153m yuan (US\$4.94m) to set up a LED-making joint venture with the Fuzhou regional government in China, reports Taiwan's Digitimes. Total investment will be 353m yuan.

First-phase development will focus on LED epitaxial wafer and chip production, with plans to install 30 MOCVD reactors and to start production in December 2012. The second phase will install LED packaging equipment, with the aim of gaining market share in the backlighting and general lighting markets in China. Tyntek notes that capacity may expand to 100 MOCVD reactors in three and a half years time, depending on the market situation.

Investments by Taiwan LED firms in China totaled about US\$240m in 2009 and have risen to US\$1.17bn so far in 2010 (up to the end of August) including almost US\$1.1bn for upstream LED epiwafer and chip production, according to industry statistics.

By the end of 2009 about half of Taiwan-based LED firms' investment had shifted to China. Taiwan's LED industry value is expected to increase to US\$2.7bn in 2010, with as much as 60–70% of the investment going into China

Taiwan's LED industry value in 2009 was about US\$2.17bn, accounting for 25% of the global LED industry. By the end of 2009 about half of Taiwan-based LED firms' investment had shifted to China. Taiwan's LED industry value is expected to increase to US\$2.7bn in 2010, with as much as 60–70% of the investment going into China.

The main reason for Taiwan-based LED players investing in China is the Chinese government's subsidy of 10m yuan per MOCVD reactor installed (about half of the cost) amid significant market demand, notes the report.

www.tyntek.com.tw
www.digitimes.com/news/a20101012PD224.html