

## **EPISTAR Achieves 110lm/W Warm White LED for 1W and 3W Operation**

Hsinchu, Taiwan – October 22, 2009 – EPISTAR achieves 110lm/W warm white LED and demonstrates these devices at LEDs 2009 conference in San Diego, California.

Epistar has developed a technology to reach high CRI and high efficacy for warm white LED to replace the low efficacy incandescent light bulbs. Efficacy and color rendering index (CRI) are the two major performance merits in the lighting industry using white light LED, nevertheless these two merits usually work against each other. Epistar's approach enables improvement of these two merits simultaneously.

The 1W package has the CRI of 90 and efficacy up to 110lm/W for lower voltage (15V) operation while the 3W package has the CRI of 90 and efficacy up to 105lm/W for higher voltage (50V) operation. Both these packages have the CCT of around 3000K. The 1W lamp combined several Epistar's blue and red LED chips in the same package, coated with yellow/green phosphor. The power consumption and total lumens can be adjusted by modifying the combinations of the LED chips. The 3W lamp used one high-voltage monolithically integrated DC multiple-chip array combined with several Epistar's red LED chips. Yellow-green phosphors were used in both 1W and 3W packages. A bridge structure can be used with the 3W lamp to achieve the AC drive. These packages can be used in the E12/E14 candle light, E26/E27/GU10 light bulbs, PAR light and other applications for high efficacy warm white.



Fig. 1 1W package without phosphor.

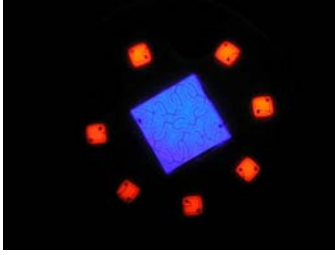


Fig. 2 3W package without phosphor.

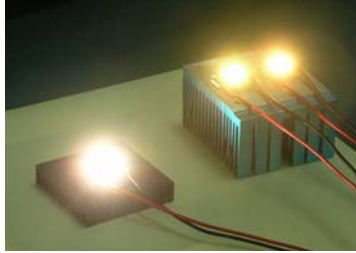


Fig. 3 Light-up packages

### **About Epistar Corporation**

Epistar Corporation, headquartered in the Hsinchu Science-based Industrial Park, Taiwan since September 1996, focuses on developing, manufacturing and marketing high brightness Light Emitting Diode (LED) products. Applying its own proprietary Metal Organic Vapor Phase Epitaxy (MOVPE) technology, Epistar has successfully commercialized the full spectrum range of high brightness LEDs with the characteristics of compact size, low power consumption and long operation lifetime. For further information, please visit:

<http://www.epistar.com.tw/news-e.htm>

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