

EPISTAR Achieves 80 lm/W Warm White LED and Expects to reach 100 lm/W in Q4 of 2009

Hsinchu, Taiwan – September 07, 2009 – EPISTAR achieves 80 lm/W warm white LED and expects to reach 100 lm/W in Q4 of 2009.

Epistar has been developing a technology to reach high CRI and high efficacy simultaneously. Efficacy and color rendering index (CRI) are the two major performance merits in the lighting industry using white light LED. Usually, these two merits work against each other and thus their combination becomes a trade-off, especially for warm white LED. To achieve better CRI, red phosphor is needed to compensate for the shortage of the red spectrum. However, the efficacy of existing red phosphor is low (roughly 40 lm/W), which results in a low overall efficacy.

The newly developed product from Epistar includes one or several high-voltage monolithically integrated DC multiple-chip arrays combined with a bridge structure for AC drive. Several Epistar's top performance red LED chips are incorporated into this design to achieve high efficacy. With the help of the world-leading high brightness red and blue LEDs, the overall efficacy is increased while high CRI is achieved at the same time. Epistar has demonstrated a white light LED with CRI of 80, CCT at 3000K and efficacy equal to 80 lm/W. In 2009 Q4, Epistar expects to demonstrate a new product with CRI better than 80 and efficacy of 100 lm/W at 3000K.

Figure 1 shows the layout of the blue monolithically integrated multiple-chip array.



Figure 1

Figure 2 shows a sample packaged with newly developed chips from Epistar.

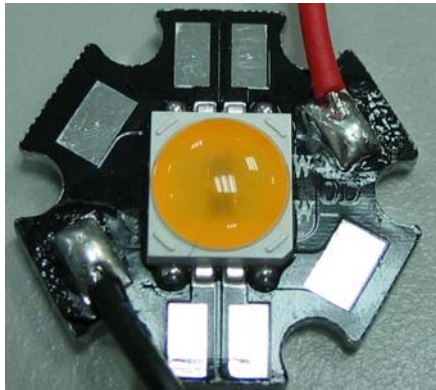


Figure 2

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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