



August 21, 2014

SemiLEDs Launches EF FlipChip LED Series

Enhanced Flip Chip Approach Maximizes Lumen Density and Simplifies Integration

CHUNAN, Taiwan, Aug. 21, 2014 (GLOBE NEWSWIRE) -- SemiLEDs Corporation (Nasdaq:LEDS), a global provider of vertical LED technology solutions, today announced sampling and volume availability of the first in its new Enhanced FlipChip, or EF, LED series. The series launches with the EF-B40, a blue 40-mil flip chip that simplifies the packaging and integration process by eliminating wire-bonding while increasing both lumen-density and decreasing the lumen-per-dollar value proposition while enabling packagers to use standard surface mount assembly techniques.

Regarding the technical advantages of the EF Series, Mark Tuttle, General Manager for SemiLEDs Optoelectronics Co., Ltd., explained, "SemiLEDs' unique flip chip approach combines a sapphire front surface and proprietary back side architecture that provides the electrical contacts exclusively on the bottom of the chip, making it fully compatible with chip-on-board (COB) surface mount processes. Eliminating wire-bonds also lowers the profile of the chips, and allows them to be placed more closely together, which results in higher lumen-density and reduces the complexity of the optics. The EF series is an ideal platform for COB assemblies, or really for any approach that calls for either secondary optic design or high-density mounting."

Flip chip construction presents what was originally the bottom sapphire layer in a horizontal LED structure as the top surface of the chip. By "flipping" the chip in this manner, the electrical pads become part of the bottom of the device rather than running bonding wires from the top surface of the chip down to the package or board. Not only are delicate areas of the chip protected by the clear sapphire layer, but by eliminating wire bonds, arguably the most failure-prone part of any LED assembly, both reliability and overall design flexibility of the packaged device are increased. In addition, individual chips may be more closely mounted, opening the door to more densely packed arrays of LED chips. The nearly continuous light emitting surface, unbroken by gaps, bonding wires, or top electrodes, can greatly simplify the mounting and mixing requirements of the optics, producing smooth lighting effects. In addition, in a flip chip structure, the heat-generating junction is positioned adjacent to the substrate, increasing thermal conductivity and allowing improved device performance at high currents.

The EF-B40 is available in wavelengths from 445 to 460nm, with outputs of up to 300 lumens at 1A as a packaged emitter. The SAC compatible chips are offered with standard Au bonding pads, or are available with an AuSn option to further reduce thermal resistance and add to system reliability. A 140-degree viewing angle makes the EF ideal for general and commercial lighting, while the lowered profile addresses the application needs of LED backlight, smartphone flash or LED projector.

SemiLEDs' EF series of LED chips are RoHS compliant with production quantities available now.

About SemiLEDs Corporation

SemiLEDs develops and manufactures LED chips and LED components primarily for general lighting applications, including street lights and commercial, industrial and residential lighting, along with specialty industrial applications such as ultraviolet (UV) curing, medical/cosmetic, counterfeit detection, and horticulture. SemiLEDs sells blue, white, green and UV LED chips. For complete product information, please visit www.semileds.com, email sales@semileds.com, or tel +866 (37) 586-788 (Taiwan).

Forward Looking Statements

This press release contains statements that may constitute "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and as defined in the U.S. Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact could be deemed forward-looking, including, but not limited to, any projections of future revenues, income, margins or other financial information; any statements about historical results that may suggest trends for SemiLEDs' business; any statements of the plans, strategies and objectives of management for future operations; any statements of expectation or belief regarding recovery of the LED industry, market opportunities and other future events or technology developments; any statements regarding SemiLEDs' position to capitalize on any market opportunities; and any statements of assumptions underlying any of the foregoing. These forward-looking statements are based on current expectations, estimates, forecasts and projections of future SemiLEDs' or industry performance based on management's judgment, beliefs, current trends and market conditions and involve risks and uncertainties that may cause actual results to differ materially from those contained in the forward-looking statements. SemiLEDs' Annual Report on Form 10-K filed with the Securities and Exchange Commission (the "SEC") and other SemiLEDs filings with the SEC (which you may obtain for free at the SEC's website at <http://www.sec.gov>) discuss some of the important risks and other factors that may affect SemiLEDs' business, results of operations and financial condition. SemiLEDs

undertakes no intent or obligation to publicly update or revise any of these forward looking statements, whether as a result of new information, future events or otherwise, except as required by law.

CONTACT: For more information

Media contact:

Veriphos Communications

+1 512-257-9888

tong@veriphos.com

Additional information:

Connie Chen

+886 (37) 586-788 ext8121

connie.chen@semileds.com



Source: SemiLEDs

News Provided by Acquire Media