

## **New 3M LED Chip Packaging Substrate Delivers Cost-Effective Alternative to Ceramic**

3M's innovative design delivers LED requirements as well as cost savings in materials and future reel-to-reel manufacturing opportunities

3M Electronics Materials Solutions Division today announced the launch of its new 3M™ LED Chip Packaging Substrate that provides a cost-effective alternative to ceramic substrates. The new substrate, constructed of copper and polyimide, is able to meet the electrical and thermal performance required of high-power LED chips at a competitive price compared to high performance ceramic substrates. 3M offers the substrate in a tray and a reel format. 3M's substrate in reel format will help the industry's evolution to reel-to-reel manufacturing which should result in lower manufacturing cost. This innovative chip packaging substrate will be available to view at Lightfair International, June 3-5, 2014 in Las Vegas, NV at the 3M booth (# 4821).

"LED chip manufacturers now have an alternative to ceramic substrates," said Terry Noronha, global business manager, 3M Electronics Materials Solutions Division. "3M has harnessed more than 40 years in the circuit industry and 50 years in light management to find a new way to move the LED lighting industry forward. Not only does the 3M substrate meet LED requirements at reduced cost, but it enables reel-to-reel manufacturing with precision engineering – what we believe to be the future of efficient high-volume manufacturing."

Through precision engineering, 3M's design allows the LED chip to sit directly on top of a large copper conduit area held by a robust polyimide frame without adhesive. Adhesives are not required to assemble the substrate, allowing use in higher temperatures and avoiding potential thermal barrier or quality control issues. The substrate can be used with wire bond and flip chip connections.

### About 3M

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$31 billion in sales, 3M employs 89,000 people worldwide and has operations in more than 70 countries. For more information, visit [www.3M.com](http://www.3M.com) or follow [@3MNews](https://twitter.com/3MNews) on Twitter.

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