



Dow Corning
2200 W. Salzburg Rd.
PO Box 994
Auburn MI 48611

dowcorning.com

Dow Corning Further Expands Design Freedoms for LED Packaging With Five New High-Performance Optical Silicone Encapsulants

MIDLAND, MICH. – Feb. 28, 2017 – Dow Corning, a global leader in silicones, silicon-based technology and innovation and wholly owned subsidiary of Dow Chemical Company, further expanded the design flexibilities for LED packaging manufacturers today with the addition of five new optical encapsulants (OEs) to its fast-growing portfolio of advanced LED solutions. Offering extra high thermal and optical stability with optimized refractive indexes, hardness and gas barrier properties, these five new products broaden design latitudes for very high power LED packages, such as ceramic substrate-based surface mount device (SMD), chip on-board (COB) and plastic leaded chip carrier (PLCC) packaging.

All introduced under the *Dow Corning*[®] label, the five new products include OE-7840, OE-7841, OE-7843, OE-7810 and OE-7820 Optical Encapsulants. They fall into two separate categories of targeted performance properties, but all deliver superior photothermal stability and reliability at sustained temperatures of 150°C.

“As today’s LED manufacturers continue to design brighter, smaller and more cost-effective LED packages, Dow Corning is working closely with them to evolve advanced new silicone solutions to meet their most demanding challenges,” said Takuhiro Tsuchiya, global marketing manager at Dow Corning. “These five cutting-edge optical encapsulants build on the success of our industry-leading OE product family, and enable customers to continue pushing the design boundaries for their high-power LED packages.”

Three of the products – *Dow Corning*[®] OE-7840, *Dow Corning*[®] OE-7841 and *Dow Corning*[®] OE-7843 Optical Encapsulants – provide OEMs optimized refractive indexes and other features to improve both efficiency and reliability of high-power PLCC LED packages. The OE-7840 and OE-7841 products respectively offer RIs of 1.5 and 1.48 to allow designers to optimize light output while ensuring their LED packages have good gas barrier properties. OE-7843 Encapsulant rounds this category out by combining an RI of 1.5 with good anti-silver corrosion properties to enable high-power PLCC LED packages to withstand severe environmental conditions.

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The two remaining new products – *Dow Corning*® OE-7810 and *Dow Corning*® OE-7820 Optical Encapsulants – target high-power COB and ceramic substrate-based SMD LED packages, where very high thermal resistance is the priority and corrosive silver is not used. They offer a choice of durometer tailored to improve durability depending on design parameters. OE-7810 Encapsulant provides a hardness of Shore A55 for packaging applications that require higher elongation for improved durability under thermal cycling. OE-7820 Encapsulant, with a durometer of Shore A70, delivers higher hardness that can contribute to better handling and minimal dust pick up.

A market leader in materials, expertise and collaborative innovation for LED lighting concepts, Dow Corning offers solutions that span the entire LED value chain, adding reliability and efficiency for sealing, protecting, adhering, cooling and shaping light across all lighting applications.

About Dow Corning

Dow Corning (dowcorning.com), a wholly owned subsidiary of The Dow Chemical Company, provides performance-enhancing solutions to serve the diverse needs of more than 25,000 customers worldwide. A global leader in **silicones**, silicon-based technology and **innovation**, Dow Corning offers more than 7,000 products and services via the company's Dow Corning® and **XIAMETER**® brands. More than half of Dow Corning's annual sales are outside the United States. Dow Corning's global operations adhere to the American Chemistry Council's Responsible Care® initiative, a stringent set of standards designed to advance the safe and secure management of chemical products and processes.

About Dow

Dow (NYSE: DOW) combines the power of science and technology to passionately innovate what is essential to human progress. The Company is driving innovations that extract value from material, polymer, chemical and biological science to help address many of the world's most challenging problems, such as the need for fresh food, safer and more sustainable transportation, clean water, energy efficiency, more durable infrastructure, and increasing agricultural productivity. Dow's integrated, market-driven portfolio delivers a broad range of technology-based products and solutions to customers in 175 countries and in high-growth sectors such as packaging, infrastructure, transportation, consumer care, electronics, and agriculture. In 2016, Dow had annual sales of \$48 billion and employed approximately 56,000 people worldwide. The Company's more than 7,000 product families are manufactured at 189 sites in 34 countries across the globe. References to "Dow" or the "Company" mean The Dow Chemical Company and its consolidated subsidiaries unless otherwise expressly noted. More information about Dow can be found at www.dow.com.

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For further information contact:

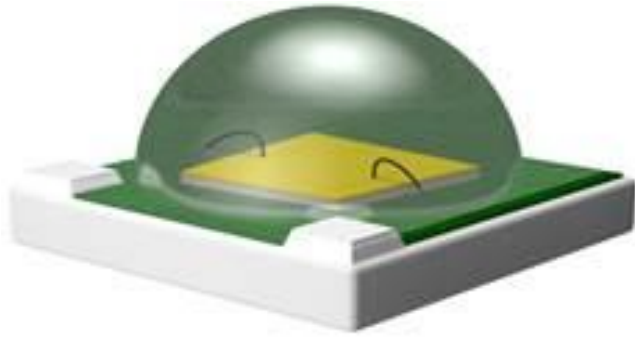
Isabelle Vanderstichelen
Dow Corning
+32.64.889.350
isabelle.vanderstichelen@dowcorning.com

Dan McCarthy
AH&M Marketing Communications
+1.413.448.2260, Ext. 200
dmccarthy@ahminc.com



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