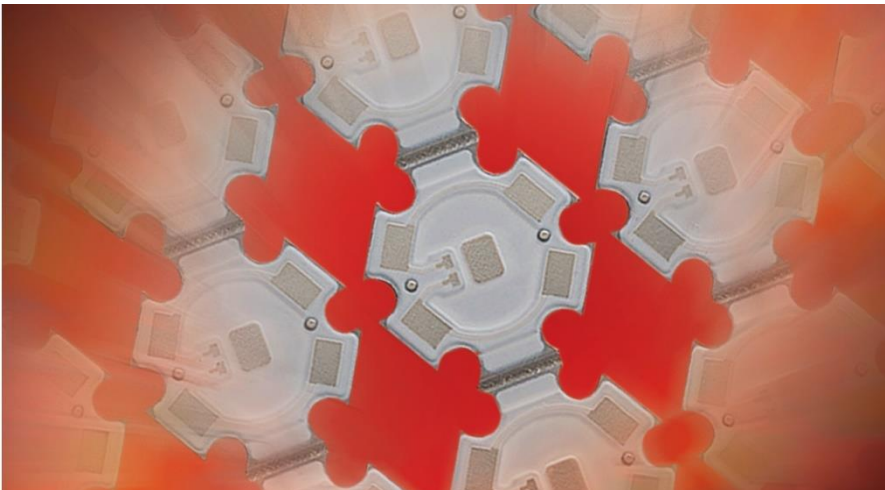


## Trade Press Release

Hanau, Incheon 02.02.2015

### **Heraeus CoolStrates™ - Thick Film on Aluminum Thermal Substrates**

For the first time, Heraeus will present the new material system CoolStrates™ at LED Korea 2015 show (February 4.–6.). Heraeus CoolStrates™ utilizes Celcion™ thick film materials to provide customers with superior thermal performance for LED circuits. CoolStrates™ combines Heraeus' thick film expertise with the service to provide ready to use, customized circuit boards, primarily for LED applications. CoolStrates™ are applicable for chip-on-heatsink, chip-on-board or standard packaging technology. The components of CoolStrates™ are recognized by Underwriter Laboratories (UL®).



*CoolStrates™ combines Heraeus' thick film expertise with the service to provide ready to use, customized circuit boards.*

Able to take the same fit and form as traditional Metal Core Printed Circuit Boards (MCPCB), CoolStrates™ provides improved thermal management, performance and cost over competing board technologies. Additionally, CoolStrates™' design flexibility allows for reduced module complexity by integrating the LED and driver circuitry directly on a heat sink decreasing manufacturing steps and overall cost of the light engine. Now, a further step forward: Using proven thick film materials and a customized design layout, Heraeus is able to provide a unique package of materials:  
Celcion™ + Aluminum = CoolStrates™

#### **Presentation and demonstration**

Visitors of LED Korea are encouraged to visit Heraeus booth number 4722 in hall B, where they will find demos with the new CoolStrates™ boards.

Additionally Carsten Mohr (Project Manager CoolStrates™), will hold a 20 minute presentation about “Thermal Management System for High Power LEDs”. Venue will be at the Heraeus booth each exhibition day at 3:20 pm.

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Heraeus, the technology group headquartered in Hanau, Germany, is a leading international family-owned company formed in 1851. We create high-value solutions for our customers, strengthening their competitiveness for the long term. Our activities focus on a number of markets: chemical and metals, energy and the environment, communications and electronics, health, mobility, and industrial applications. In fiscal year 2013, Heraeus achieved product revenue of €3.6 billion and precious metals trading revenue of €13.5 billion. With some 12,500 employees in over 110 subsidiaries worldwide, Heraeus holds a leading position in its global markets.

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