

## Press release

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### **Heraeus increases lifetime of power electronic modules with new features for DCB substrates**

**Direct Copper Bonding (DCB) substrates are an essential component for the production of modules in power electronics. Now Heraeus Electronics has developed its proven Condura product line even further. Additional services include an optimized design along with a special surface treatment to increase the service life of DCB substrates. In particular, these advances benefit automotive and industrial segments.**

Modern power electronics are already based on long-lasting direct copper bonding substrates. But load limits and demands on the surface structure of the substrate materials continue to grow. With two innovative services, Heraeus Electronics meets these dual needs by offering an optimized design along with a unique surface finish that extends the durability of the substrate.

#### **Know-how for optimal DCBs**

Thanks to so-called dimples, small etched recesses, durability can be permanently increased. Heraeus Electronics offers various patent-free shapes and layouts that can be individually adapted to customer requirements.

An additional service offered by Heraeus Electronics is grinding, a special mechanical surface treatment that ensures optimized properties. The structure of the surface must be able to accommodate the formulation and bonding technique used. "A very rough surface can lead to poorer connections during wire bonding," explains Bastian Schlüter, Product Manager for Metal-Ceramic Substrates at Heraeus Electronics. Heraeus offers various degrees of roughness that reduce unevenness and ensure an fitting surface.

#### **The power electronics expert**

The new service is available for the products Condura.classic - the proven standard for the power electronics industry - and Condura.extra, which provides improved mechanical stability, reliability and durability. The Condura family also includes Condura.prime, a substrate with silicon nitride ceramics.

With the new service for the Condura family, Heraeus is expanding its portfolio for applications in the field of power electronics and offers innovative solutions for substrates, bonding wires, pastes, platinum temperature sensors, and complete material systems in addition to materials for manufacturing processes such as soldering and sintering: "The focus is not only on optimizing individual materials or components, but also on the overall system," explains Schlüter.

More information about Condura and Heraeus services is available at PCIM in Nuremberg, May 7-9, Hall 9, Stand 9-533.

#### **About Heraeus Electronics**

Heraeus Electronics - a Global Business Unit of the Heraeus Group - is one of the leading manufacturers of materials for the packaging of integrated circuits in the electronics industry. The company deals with sophisticated material solutions for semiconductor and automotive industry, consumer goods, energy, industry electronics as well as communications and telecommunications. Core competences include bonding wires, assembly materials, thick film pastes, as well as roll clad strips and substrates. For more information, please visit [www.heraeus-electronics.com](http://www.heraeus-electronics.com).

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