

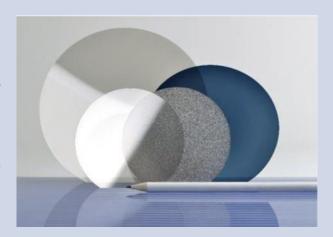
Innovative material to outperform natural diamond properties



Specialised in manufacturing diamond discs with similar or even better properties than natural diamond, Diamond Materials improves the transmission of high-power beams. Such an innovation shows great potential for application in a wide variety of fields of interest.

Value proposition

In addition to obtaining similar or even better properties than natural diamond (low absorption, hardness, the extremely high thermal conductivity, broad band optical transparency, chemical inertness), this innovative technology offers the possibility to manufacture diamond in the form of plates up to $100 \, \text{mm}$ in diameter and $1500 \, \mu \text{m}$ in thickness.







Original/Potential Field of Application



Diamond discs are produced through an industrial process based on chemical vapour deposition (CVD) which slowly grows diamond coating on an appropriate substrate at temperatures around 800°C.

After the coating process the diamond layer is separated from the substrate to form a freestanding disk of pure diamond This material will show full potential in applications such as windows for high power radiation (microwave, X-ray, laser), Heat Spreaders, Speaker Membranes, Optical Elements (lenses, ATR Crystals, beam splitters for space applications) and Fluorescence screens, opening new markets and widening the scope of innovative business opportunities.



IPR Status & Contact Information



As an innovative company Diamond Materials is open to seek and develop new applications in close collaboration with existing and new customers.

For further information, the contact point is

Eckhard WOERNER and Christoph WILD Diamond Materials GmbH woerner@diamond-materials.de

