The diamond is considered a room temperature insulator and a high temperature semiconductor. Although it has been mainly used in passive applications - without considering jewelry applications - because of its hardness and thermal conductivity in the development of cutting tools and heat sinks, it is now used for the realization of UV and VUV detectors in transistors MESFET for high frequency and high power applications, such as dosimeters in radio and adrotherapy applications, as 2D and 3D detectors for elementary particles, as the robustness and low noise electronic characteristics determine the choice of material in this market niche. Despite the cost of technology being still high enough, the diamond looks a very "brilliant" future.