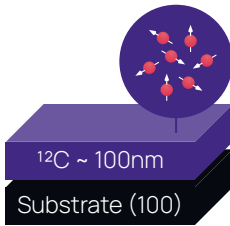


# Ensemble NVs

## SPECIFICATIONS



<sup>12</sup>C enrichment  
**0.1% – 99.99%**

Layer thickness  
**0.02μm – 5μm**

Overall diamond thickness  
**20μm – 500μm**

NV layer thickness  
**1nm-5μm**

## CORE PROPERTIES

	A	B
NV Density	10ppb	1ppm
Depth of NVs	5nm	100nm
T <sub>2</sub> (Hahn echo)	1μs	0.8μs
T <sub>2</sub> * (Ramsey)	120ns	100ns

Ensemble NV centers, mainly for magnetometry applications, are extremely popular at the moment. Due to the summed optical signal of the individual defect centers, detection in the component of a quantum sensor or computer is comparatively simple. In addition, the sensitivity is enhanced because the number of possible quantum sensors is automatically increased. NV rich layers up to 2ppm in density can be positioned close to the diamond surface or buried deeper in the diamond crystal. Alternatively, the entire diamond can be equipped with NV centers, providing the highest optical intensity available in diamond quantum technology.

## POSSIBLE NV-POSITIONS

At surface



Buried in diamond



Entire diamond



