

Diamond-Like-Carbon (DLC) Coating

The application of optical infrared systems often requires the protection of exposed surfaces against extremely harsh environmental conditions. For this purpose, we apply a diamond-like carbon (DLC) coating to functional elements. In addition to an anti-reflection effect this coating is extremely mechanically stable and particularly resistant to wear.

Silicon and germanium-based optical components are coated for the wavelength ranges from 3 μm to 5 μm and 8 μm to 12 μm . In addition to standard coatings, we also offer customer-specific designs.



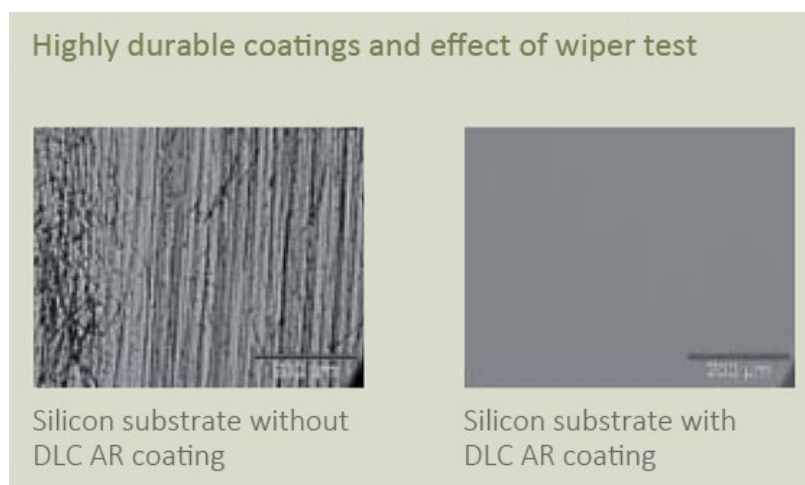
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Durability Test

To test the durability of DLC coatings, we use testing equipment specially designed for this purpose: the so-called TS 1888 P5.4.3 wiper test.

We are able to simulate high mechanical wear of the coatings to test their durability and compliance with regulation TS 1888 P5.4.3.

The effect of the wiper test on highly durable coatings is shown quite clearly in the image comparison.



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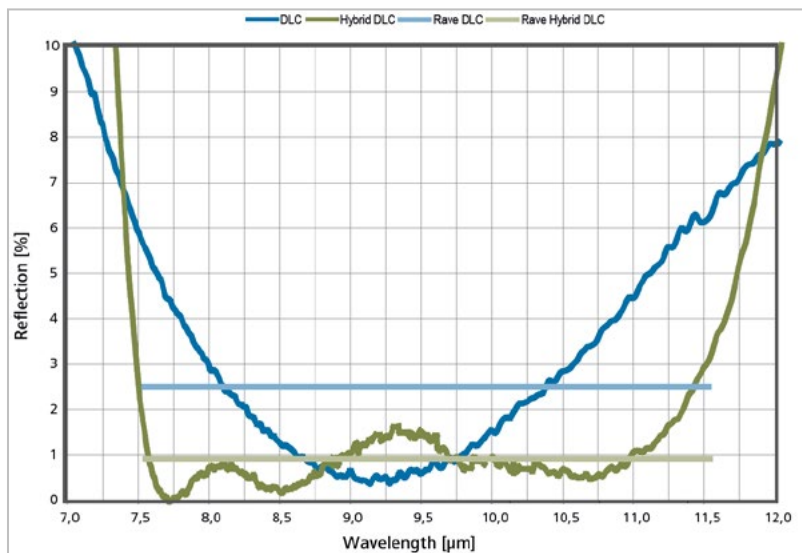
Hybrid-DLC Coatings

The newly developed Hybrid-DLC coating combines lasting resistance with the clearly improved transmittance of a dielectrical coating.

A sophisticated design and production process make it possible to minimize internal coating tensions and, hence, warrant the durability and adhesive power in accordance with such established testing standards as TS 1888 (Windscreen-Wiper Test).

In addition, these spectral properties can be achieved in two separate wavelength ranges (e.g., MWIR and LWIR). Multispectral coatings of this type provide users of coatings with new solutions in design and application.

Hybrid-DLC coatings combine the performance of conventional DLC coatings with the functionality multi-spectral high-end IR coatings.



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