

MACHINING PHOTOVEEL N[®] - GLASS CERAMICS

High-performance ceramic material.

For decades, we have specialized in the high-precision machining of glass ceramics. The hard ceramic material Photoveel N[®] has an extremely high bending

strength, and offers enormous advantages for a wide range of applications (especially high vacuum, aerospace and nuclear technology).



Technical information

| PHOTOVEEL N [®] | | | | | | |
|--------------------------|-------------------------------|----------|--------------------------|------------------|---------|-----|
| General properties | Main component purity | | % by weight | - | | |
| | Color | | | White | | |
| | Density | | g/cm ³ | 2.59 | | |
| | Water absorption | | % | 0 | | |
| Mechanical properties | Bending strength | | MPa | 150 | | |
| | Modulus of elasticity | | GPa | 66 | | |
| | Vickers hardness | | GPa | 2.2 | | |
| Thermal properties | Maximum working temperature | | °C | 1000 | | |
| | Thermal expansion coefficient | RT~500°C | 1/°C(x10 ⁻⁶) | <RT~400 °C> 7.8 | | |
| | Thermal conductivity | | W/m·K | 1.5 | | |
| | Thermal shock resistance | | T (°C) | 150 | | |
| Electrical properties | Volume resistance | 25 °C | Ω·m | 10 ¹⁵ | | |
| | | 300 °C | | 10 ¹⁰ | | |
| | | 500 °C | | 10 ⁷ | | |
| | | 800 °C | | - | | |
| | Dielectric constant | 10 GHz | | <1 MHz> | 6.4 | |
| | Dissipation factor(tan δ) | | | 10 ⁻⁴ | <1 MHz> | 60 |
| | Dissipation factor(1/tan δ) | | | 10 ⁴ | <1 MHz> | 0.2 |
| | Dielectric strength, voltage | | | kV/mm | | 20 |

Photoveel N[®] Ferrotec Ceramics Corporation