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/cm3	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 6)		10^{-4}	<1 MHz>	60
	Dissipation factor(1/tan 6)		10^{4}	<1 MHz>	0.2
	Dielectric strength, voltage		kV/mm	20	

Photoveel N® Ferrotec Ceramics Corporation

MANSER

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