List of Characteristic Values (for Glazed Substrates)

■Characteristic Values

Item / Unit				General
				HA-96-2
				Al_2O_3=96%
Color			-	White
Reflectivity			%	70
Bulk Density			g/cm^3	3.75
Surface Roughness			μm	0.4
Mechanical Characteristics	3-Point Bending Strength		MPa	450
	Young's Modulus		GPa	340
	Vickers Hardness		GPa	14
Thermal Characteristics	Coefficient of Thermal Expansion	40-400℃	$\times 10^{-6}$/K	6.9
		40-800℃	$\times 10^{-6}$/K	7.8
	Thermal Conductivity	25℃	W/(m・K)	24
		300℃	W/(m・K)	12
	Specific Heat		J/(kg・K)	750
Electric Characteristics	Dielectric Constant	1MHz	-	9.8
	Dielectric Loss	1MHz	$\times 10^{-4}$	3
	Volume Resistivity	25℃	Ω・cm	$> 10^{14}$
		300℃	Ω・cm	10^{10}
		500℃	Ω・cm	10^{8}
	Dielectric Breakdown Voltage		kV/mm	> 15

■Standard Tolerances

Item	Unit	Type
		HA-96-2
Dimension	inch (max)	4"×16"
	Tolerance	±0.6%, NLT:±0.05mm
Thickness	mm	0.25～1.20
	Tolerance	±10%, NLT:±0.04mm
Hole	mm	φ0.2～
	Tolerance	±0.6%, NLT:±0.05mm
Warp	mm	0.003/mm