CLAIMS

[Claim 1]

A ceramic containing, in mass percent:

Si_3N_4: 20.0 to 60.0%;

ZrO_2: 25.0 to 70.0%;

wherein the ceramic contains, in mass percent, 5.0 to 15.0% of:

one or more oxides selected from MgO, Y_2O_3, CeO_2, CaO, and HfO_2; and

one or more oxides selected from TiO_2, Al_2O_3, SiO_2, MoO_3, CrO, CoO, ZnO, Ga_2O_3, Ta_2O_5, NiO, and V_2O_5; and

the balance being 10.0% or less.

[Claim 2]

The ceramic according to claim 1, wherein a crystal phase of ZrO_2 is one of a crystal phase being a tetragonal crystal, a crystal phase being a tetragonal crystal and a monoclinic crystal, a crystal phase being a cubic crystal, a crystal phase being a cubic crystal and a tetragonal crystal, and a crystal phase being a cubic crystal and a monoclinic crystal.

[Claim 3]

The ceramic according to claim 1, wherein ZrO_2 is a cubic crystal.

[Claim 4]

The ceramic according to claim 1, wherein the ceramic has a coefficient of thermal expansion at -50 to 500°C ranging from 3.0×10^{-6} to 6.0×10^{-6} /°C and has a three-point flexural strength of 700 MPa or more.

[Claim 5]

A probe guiding member that guides probes of a probe card, the probe guiding member comprising:

a plate-shaped main body that is made of the ceramic according to claim 1; and

the main body includes a plurality of through holes and/or slits through which the probes are to be inserted.

[Claim 6]

The probe guiding member according to claim 5, wherein a surface roughness of inner surfaces of the plurality of through holes and/or slits is 0.25 μm or less in terms of Ra.

[Claim 7]

A probe card comprising:

a plurality of probes; and

the probe guiding member according to claim 5.

[Claim 8]

A socket for package inspection, wherein the socket for package inspection is made of the ceramic according to claim 1.

[Claim 9]

The ceramic according to claim 2, where ZrO_2 is a cubic crystal.

[Claim 10]

The ceramic according to claim 2, wherein the ceramic has a coefficient of thermal expansion at -50 to 500°C ranging from 3.0×10^{-6} to 6.0×10^{-6} /°C and has a three-point flexural strength of 700 MPa or more.

[Claim 11]

The ceramic according to claim 3, wherein the ceramic has a coefficient of thermal expansion at -50 to 500°C ranging from 3.0×10^{-6} to 6.0×10^{-6} /°C and has a three-point flexural strength of 700 MPa or more.

[Claim 12]

The ceramic according to claim 9, wherein the ceramic has a coefficient of thermal expansion at -50 to 500°C ranging from 3.0×10^{-6} to 6.0×10^{-6} /°C and has a three-point flexural strength of 700 MPa or more.