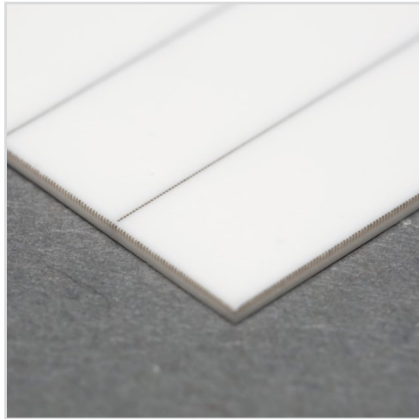


## 3YSZ - Sensor

3mol% Ytria Stabilized Zirconia



3YSZ is a special partially stabilized zirconia which is used for thin film applications. Among others, it can also be used as an ion conductive ceramic membrane for Solid Oxide Fuel Cells (SOFC). This material is characterized by its excellent flexibility, extremely high bending strength and high fracture toughness. Another advantage is that this material can be manufactured in small thicknesses. The standard substrate thickness is 0.15 mm. Other dimensions are possible. Please send in your inquiry.

 **We lasercut** the material according to your wishes!

Please send in your CAD data.

Typical characteristics	Unit	Value
Colour	-	white
Density	g/cm <sup>3</sup>	6.03
Surface roughness R <sub>a</sub>	µm	< 0.1
Bending strength	MPa	> 1.000
Thermal expansion coefficient	10 <sup>-6</sup> K <sup>-1</sup>	~ 11
Thermal conductivity	W/mK	5.3
Standard dimension	mm	101.6 x 101.6
Thickness	mm	0.15 / 0.12
Structure	-	dense
Main components	%	95% ZrO <sub>2</sub> + 5% Y <sub>2</sub> O <sub>3</sub>
Dielectric strength at 20°C	kV/mm	> 10

## Advantages

- very fine-grained homogeneous grain structure of 1 µm
- good electric insulation properties at room temperature
- extremely good mechanical strength
- can be cut by laser or waver saw
- good evenness
- standard thickness of 0.15 mm with high flexibility



## Applications

- sensor substrate for thin film application
- sensor protection plate

**NOTE:**

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. KERAFOL® is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. All specifications are subject to change without notice. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded. In case KERAFOL® would be nevertheless held liable, on whatever legal ground, KERAFOL®'s liability will in no event exceed the amount of the concerned delivery. All KERAFOL® products are sold pursuant to the Kerafol's Terms and Conditions of sale and delivery in effect from time to time, a copy of which will be furnished upon request.