上海奥普特科晶体材料有限公司

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Silicon oxide SiO 2：

The thermal oxide layer of the silicon wafer is an oxide layer or a silicon dioxide layer formed on the surface of the bare silicon wafer under the condition of high temperature with an oxidizing agent. The thermal oxidation layer of silicon wafers is usually grown in a horizontal tube furnace, and the growth temperature range is generally 900°C~1200°C. There are two growth methods: "wet oxidation" and "dry oxidation".

A thermal oxide layer is a "grown" oxide layer that exhibits greater uniformity and higher dielectric strength than CVD-deposited oxide layers. Thermal oxide layers are excellent dielectric layers as insulators and play an important role as doping stop layers and surface dielectrics in many silicon-based devices.

Product parameters:

Oxidation TechniqueOxidation process	Wet oxidation or Dry oxidation wet oxidation / dry oxidation
Diameter Wafer Diameter	2″/3″/4″/6″/8″/12″ inches
Oxide ThicknessOxide layer thickness	100Å ~ 15µm 10nm ~ 15µm
Tolerance tolerance range	± 5%
Surface surface	Double Sides Oxidation (DSO)
Furnace oxidation furnace type	Horizontal tube furnace
Gas type	Hydrogen and Oxygen gas
TemperatureOxidation temperature	900°C ~ 1200°C 900 ~ 1200°C
Refractive indexRefractive index	1.456