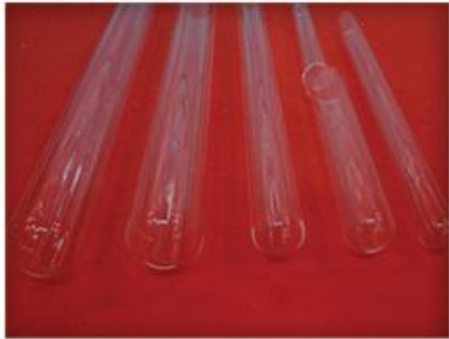


Industrial Ceramics

QUARTZ INDUSTRIAL PRODUCTS

Transparent Tube



Transparent Tube

Translucent Tube



Power Controller

Quartz Rod



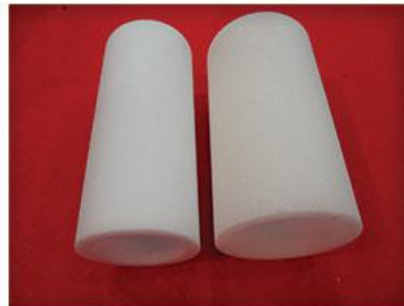
Quartz Rod

Quartz Plate



Quartz Plate

Quartz Milky Crucibles



Quartz Milky Crucibles

Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

In addition to the world class heating solutions, INDUSTRIAL CERAMICS also specializes in providing a variety of other equipment that can be used in industrial processes as well as semiconductor based applications. These tools include the Transparent Tube, Translucent Tube, Quartz Rod, Quartz Plate, Quartz Milky Crucibles and a lot more. Each of these products is manufactured to meet the prevalent standards of quality so that they are able to support the desired application in the best possible way.

Here is a brief preview about the uses of these devices:

Transparent tube: Made out of several types of synthetic materials, the primary usage of this device is in industrial processes conducted in a high heat environment. Thanks to their specific engineering, these tubes are highly resistant to the temperature variations.

Translucent tube: With high heat handling ability and temperature resistance, these tubes are used in microwave, heating ovens and similar devices.

Quartz rod: Available in diameter of 2 to 70 mm with Length 1200mm, these rods are designed to exhibit a low co-efficient of thermal expansion making it an ideal choice for a wide variety of industrial applications.

Quartz plate: Made to undergo a series of quality control tests, these plates are robust and durable making it a long term investment and therefore a preferred choice for the business owner.

Quartz milky crucibles: These are specifically designed to meet the requirements of the semiconductor industry. They have excellent heat resistance capability and are used to manufacture high quality wafers which support a series of electronics applications.

**Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.**

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

TRANSPARENT TUBE



The transparent quartz tube is obtained through different types of raw materials that include natural or synthetic quartz sand. Quartz tube have ultra high purity, good spectral transmission, well controlled dimensions and lower (OH) Hydroxyl.

Some of the other properties include

- These are highly resistant to thermal shock due to extremely low coefficient of thermal expansion
- They have excellent electrical strength that offer stability under temperature variation

They are available from 2mm inside diameter to 200mm outside diameter up to 3000mm length.

Applications :

NC-100 Chemical element composition (ppm)

| Type | Al | Fe | Ca | Mg | Ti | Mn | B | K | Na | Li | Oh |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| NC-100 | 16 | 1.2 | 0.8 | 0.4 | 0.1 | 0.1 | 0.8 | 0.2 | 2.3 | 0.5 | 125 |

Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

Physical Property

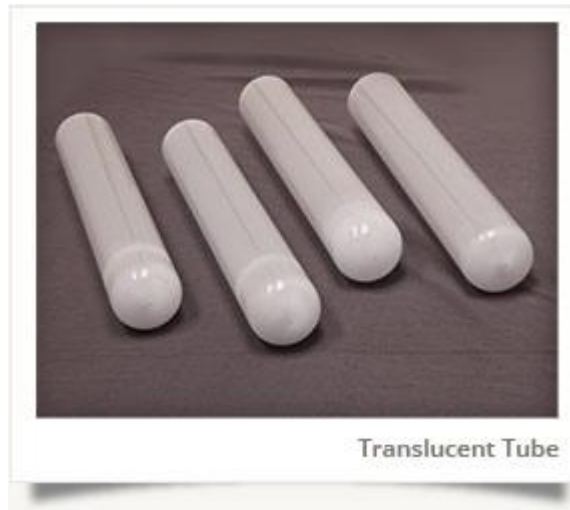
| Property | Standard | Remarks |
|--|--|---|
| Density | 2.2 x 10 ³ kg/m ³ | Thermal stability : cooling from 1100C to 20C for three times, no crack |
| Hardness | 550KHN100 | |
| Tensile Strength | 4.7 x 10 ¹ Pa (N/m ²) | Heating to 1100C for one hour, No color changes. |
| Compression strength | > 1.1 x 10 ⁹ Pa | |
| Coefficient of Thermal Expansion(20C-300C) | | 5.5 x 10 ⁻⁷ cm/cmC |
| Thermal Conductivity (20C) | | 1.4 W/Mc |
| Specific Heat (20C) | | 660J/kgC |
| Softening Point | | 1630C |
| Annealing Point | | 1150C |

Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

TRANSLUCENT TUBE



The translucent tubes have typical characteristics of precise dimension, strong heat resistance and high thermal stability. It serves as material of infrared heating for heaters, microwave oven, electrical baking oven, car painting and baking. These tubes can also be used as silica immersion heater with one end of glass tube closed. With precise dimension and high thermal stability, the translucent tubes are used as heating elements in microwave, oven, heaters and a whole lot of other devices. Thanks to the strong heat resistance, these tubes are able to facilitate the flow of heat through the entire device. As a result of the flow, the tubes are able to increase the overall efficiency of the entire device. These tubes are made of high quality material that guarantees there is no compromise on the overall quality measures being adhered to as part of the process.

What are the advantages?

There are several advantages of using translucent tubes as heating elements. Here is a brief preview of some of them:

- They are compact, easy to use and therefore highly effective.
- The tubes are a long term investment because they help in increasing the overall efficiency of the process.
- It's a safer option when compared to the other methods.
- The tube can be used in a variety of industrial applications.

Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

- Thanks to the high durability of the tubes they come across as a long lasting investment for the industrial processes.

Implementation

As one of the most experienced firms in the category, Ace Heat Tech specializes in providing quality heating instruments that help in accomplishing industrial process in a shorter duration of time. Also, we provide all the support needed to ensure smooth implementation of the equipment along with guaranteeing that they adapt to the existing process.

We use a multifaceted approach that blends Innovation, Reliability, Affordability and round the clock Customer support.

Chemical element Composition (ppm)

| Type | Al | Fe | Ca | Mg | Ti | Mn | B | K | Na | Li |
|--------|----|-----|------|-----|-----|------|-----|-----|-----|-----|
| NC-500 | 36 | 1.3 | 1.28 | 0.8 | 3.9 | 0.05 | 0.2 | 5.0 | 2.8 | 2.0 |
| NC-510 | 36 | 1.3 | 1.28 | 0.8 | 3.9 | 0.05 | 0.2 | 5.0 | 2.8 | 2.0 |

Physical Property

| Property | NC-500 | NC-510 | Remarks |
|---|-------------------------------|-------------------------------|--|
| Density | 2.15 x 103 kg/m ³ | 2.15 x 103 kg/m ³ | Thermal stability : cooling from 1000C to 20C for three times, Nocrack |
| Compression Strength | > 1.0 x 109 Pa | > 1.0 x 109 Pa | |
| Coefficient of ThermalExpansion (20°C – 30°C) | 5.4 x 10 ⁻⁷ cm/cmC | 5.4 x 10 ⁻⁷ cm/cmC | |
| Thermal Conductivity (20°C) | Low | Low | |
| Specific Heat (20°C) | 640 J/KGC | 650 J/kg C | |
| Softening Point | 1580 C | 1600 C | |
| Annealing Point | 1100 C | 1120 C | |

Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound, Rakhial Road, Ahmedabad - 380021.

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

QUARTZ ROD



We manufacture and supply Quartz Rod that has high purity, excellent temperature characteristics and low coefficient of thermal expansion and offers excellent dimensional stability. These Quartz Rods are available in diameter of 2 to 70 mm with Length 1200mm.

Properties

- High purity
- Abrasion resistance
- Low co-efficient of thermal expansion

Applications

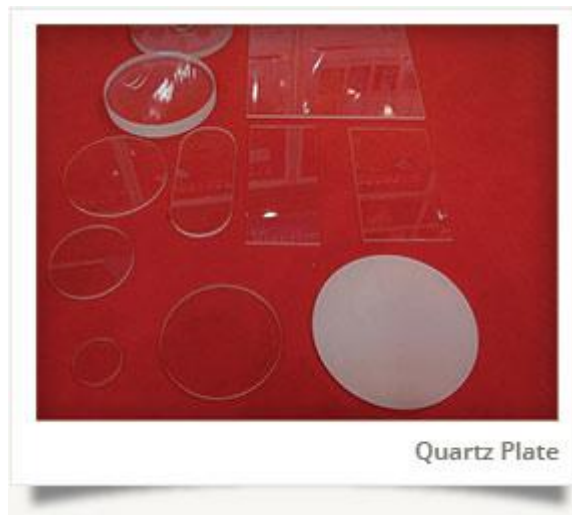
Quartz Rods are used to fabricate Silicon Wafer Carriers in the semi conductor industry and as handles in fiber optic manufacturing industry.

Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

QUARTZ PLATE



We are manufacturer and supplier of quality range of Quartz Plates. Which is made up of high quality raw material, which are quality tested and are completely useful in Quartz Industrial Application. These are extremely robust and are highly durable in nature.

Applications

- Aircraft
- High Temperature Thermal Insulation
- Satellite & Antennas
- Structural Material Technology
- Thermal Insulation for Semiconductor Industry

Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

QUARTZ GLASS CRUCIBLES



These are used in Semi Conductor industry to produce semi conductor wafer applications.

For Production of high Quality wafers, starting materials are added to a heating to high temperatures and take out as single crystal, Quartz Glass is a best suitable material that is having the high purity and high temperature properties required for this process.

It has the advantage as - of high purity, high temperature resistance with big size, good thermal insulation, economization on energy, quality stability etc.

We also can produce various specifications of transparent and translucent crucibles

Semi conductor Industries - In the Semi conductor industry, a combination of high purity and excellent high temperature properties make fused Quartz tubing all ideal furnaces chamber for processing silica wafers. This material can withstand the wide temperature gradients and high heat rates of the process. It's high purity creates the low contamination environment required for achieving superior wafer yields.

Our clear fused Glass with large diameter are used by semi conductors industry for diffusion, oxidation and LPCVB processing.

**Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.**

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com

Industrial Ceramics

Fiber Optic Tubing

Clear Quartz Glass used as a Deposition tubing in the process of producing optical wave guides, this process called as a modified chemical vapour deposition (MCVD) process. In Optical fiber industries for this application we supply high quantity Quartz tubing, this is air line free, with tight dimensional tolerance and low(OH). This combination of characteristic translate into excellent attention for the manufacturer.

Fiber optic tubing is produced by naturally or synthetic Quartz. We also supply high quality Quartz tubes with larger diameter and Quartz rods for furnace used in optical fiber industries.

Reg Add : FF-03, Pusp Industrial Park, Near Shital Cinema, Opp. Patel Mill Compound,
Rakhial Road, Ahmedabad - 380021.

Mob : +91 9022387905 / 9987787905 Email Id : info.indcera@gmail.com