

AZO COATED GLASS

USER MANUAL

Call Us: +91-8007799090 | +91-9765849656

Website: www.techinstro.com | E-Mail: info@techinstro.com

Working

AZO (Aluminum Doped Zinc Oxide) films have become technologically crucial because of their wide range of electrical and optical properties, besides their high chemical & mechanical stability. These glasses are rising as the transparent conductive substrate is used in applications like the thin-film solar cell, OLED, electrochromic glass, etc. They are also used in various applications like flat panel display electrodes and gas sensors.

■ Product Series: AZO

Technical Properties:

Specified AZO Sheet resistivity – ≤ 10 ohms/sq

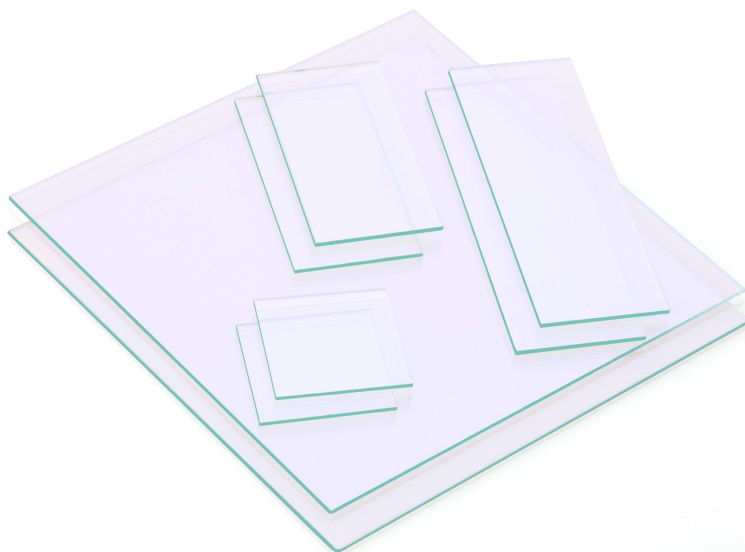
Typical AZO Sheet resistivity – 7.7 - 10.9 ohms/sq

Transmittance at 550nm – $\geq 83\%$

Operating Temperature – 450 °C

AZO film Thickness – 8000 - 8500 Å

Glass Thickness – 3.2mm



Specification	Tolerance	Inspection Method	Average Value	Quality Rating
Dimension (Length/Width)	±1mm	Caliper	±0.2mm	A
Thickness	±0.15mm	Micrometer	3.2mm	A
Squareness	± 0.2mm	Plug Gauge	≤ 2 mm	A
Warpage	±0.005%	Dot Board	0.06%	-
Flatness	± 0.008%	Surface Profilometer	0.05%	A
Surface Quality	-	Visual Inspection	Ok	A
Adhesion	-	Adhesive Tape	Excellent	A
AZO Thickness	±25	Surface Profilometer	800-850 nm	A
Sheet Resistance	± 1 Ω/sq	4-Point Probe	7.7-10.9 Ω/sq	A
Uniformity of Resistance	± 1%	4-Point Probe	≤ 10%	A
Transmittance (400-1000nm)	± 2.5%	Spectrometer	81.93-82.43%	A
Haze	±1%	Spectrometer	≤ 10%	A

Size Variant

25mm x 25mm | 50mm x 25mm | 50mm x 50mm | 75mm x 25mm

100mm x 100mm | 405mm x 355mm

■ Important Note:

1. Customization can be provided as per size or specifications.
2. Patterning is also done as per the design given by the client.

AppliCations

1. Digital microfluidic devices
2. Display and other Optoelectronic devices
3. Solar cell fabrication
4. As substrates for Barium Vanadate films
5. EMF/EMI/EMC/RFI/HF Shielding applications
6. Flat antennas for mobile communication
7. De-icing applications
8. Organic Light Emitting Diode [OLED] and Electro-Luminescent Display [ELD]
9. Photovoltaic cell making
10. Switchable Windows
11. Biological devices and use as a cell culture substrate
12. Display technology such as LCD, Plasma Display, Flat Panel Display

Storage And Stability

This product should be stored at room temperature and Pressure, and its stability is indefinite. It should be placed in a clean environment.

Precautions and Disclaimer

These products are for R&D and industrial use, not for drug, household, personal, or other uses.

Packaging

It is supplied in bundles with highly-protective layers between individual slides within a light-protected, moisture-free, specially manufactured paper sheet.

Handling

At the time of slide handling, the researcher should use powder-free non-latex gloves, which should be handled carefully. While experimenting, if researched using a substrate with bare hands, the chances of contamination of coated surface due to finger oil are very high. Therefore it is advised to use nylon or polyester gloves. Each slide is well packed in moisture-free paper, so they should not rub each other.

If any researcher wants to check the resistivity, it is advisable to measure with the help of 4 probe methods to get an accurate result.

Cleaning Procedure

While cleaning AZO slides, safety apparel and protection should be worn. The cleaning process should be done in a fume hood to avoid contamination and maintain an impurity-free environment.

1. Sonication of the sample plays an essential role in the cleaning process of the substrate.
2. Initially, take acetone and mix it with the substrate, which is to be cleaned, and it will sonicate approximately for 20 minutes.
3. Then, take the sample out of the sonicator and dry it.
4. Take Isopropyl alcohol (IAP) and AZO plate for re-sonication for 20 minutes.
5. The sample is placed in a UV-ozone instrument to remove the remaining organic contaminant. It also increases the hydroxyl concentration due to oxidation on surfaces.
6. Then, place the substrate in a vacuum oven to remove the organic solvent used during the cleaning process.
7. After proper cleaning, place the sample in the desiccator until its use.

Feel Free to Reach Us

+91-8007799090 | +91-9765849656
www.techinstro.com | info@techinstro.com