THIN-FILM MATERIALS
32 N Gould St., Sheridan, WY 82801, USA
Tel.: +1 (786) 825 8645
WhatsApp: Keyue Advanced Materials
Email: sales@thinfilmmaterials.com
Website: www.thinfilmmaterials.com

Certificate of Analysis (CoA)

Dec. 25, 2025

Product Name: Indium Tin Oxide (ITO) Sputtering Target
Chemical Formula: In_2O_3:SnO_2
Composition: 90 wt% In_2O_3 / 10 wt% SnO_2
Purity: 99.99% (4N, oxide basis)
Dimensions: Ø76.2 mm × 1.59 mm
Bonding: Indium-bonded to Copper (Cu) Backing Plate, 1.59 mm thick
Lot Number: CSFM-251225086TB
Quantity: 1 piece
Manufactured by: Thin-Film Materials

Physical Description

- Form: Oxide ceramic sputtering target, bonded
- Appearance: Grayish-yellow, dense ceramic
- Crystal Structure: Cubic bixbyite (In_2O_3 structure with Sn doping)
- Theoretical Density: ~7.1 g/cm³
- Resistivity: < 5.0 × 10^{-4} Ω·cm (for sintered target)
- Fabrication: Powder synthesis, pressing, sintering, precision grinding, and bonding

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Total Impurities (by ICP-OES / GDMS)

Element	Symbol	Max. Content (ppm)
In_2O_3, SnO_2	**In, Sn**	**Balance (>99.99%)**
Lead	Pb	< 5
Iron	Fe	< 5
Silicon	Si	< 5
Aluminum	Al	< 5
Zinc	Zn	< 5
Copper	Cu	< 5

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Element	Symbol	Max. Content (ppm)
Other Metallic (each)	-	< 2

Handling & Storage

- This is a brittle ceramic material. Handle with care to avoid chipping or cracking.
- Store in a dry, clean environment to prevent moisture absorption and contamination.
- Avoid thermal shock.

Declaration

We certify that this ITO target meets the specified composition and 4N purity, ensuring consistent performance for depositing highly transparent and conductive thin films in display, touch panel, and photovoltaic applications.

Authorized Signature:

Inspection Certificate by: **Nancy Liu**

Approver by: **Chen Qiang**