

The Best Target Materials Under the Sun



Sputtering Targets for Solar Applications

- Rotary
- Planar
- Bonded Assemblies

Your Source for the Best Target Materials Under The Sun

For more than 35 years, Tosoh SMD has produced the highest quality sputtering targets from ceramic, metal (non-refractory and refractory metals) and transparent conductive oxide for Thin Film Photovoltaic, Flat Panel Display, Architectural Glass, and Semiconductor applications worldwide. Our design and manufacturing capabilities, quality assurance procedures and global service and support allow us to offer our customers the lowest cost of target ownership through:

- Enhanced Target Life Designs
- Target Consistency, Lot-to-Lot and Throughout Target Life
- Global Supply Chain Management



Cylindrical target manufacturing capabilities

The Total Solution for Photovoltaic Materials

From raw material through target reclaim, we provide a total solution for the thin film photovoltaic marketplace.

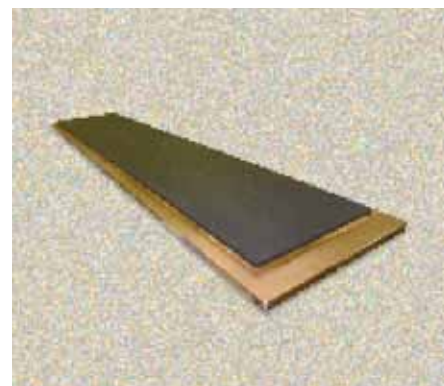
- **Improve Your Process/Material Development** —
Tosoh's Applications Lab performs sputter testing and thin film characterization.
- **Achieve Rapid Powder Metal Prototyping and Alloy Development** —
Powder and metal production capabilities include casting, forging, rolling, VHIP and HIP.
- **Gain More Confidence in Your Process** —
Our complete in-house manufacturing process control assures your success.
- **Expect the Highest Quality Targets** —
Tosoh offers non-destructive testing, GDMS, AA, ICP, XRF, XRD, LECO, SEM and OIM.
- **Rely on Worldwide Technical Support from a Global Company** —
Access local support where you need it.



Applications lab for product and process development



Planar target manufacturing capabilities



In-house bonding for faster turnaround and better consistency

Thin Film Material Solutions for Photovoltaics

Product Range

Target Material	Planar	Rotary
Aluminum, Aluminum alloys	✓	✓
Titanium	✓	✓
Chromium	✓	✓
Copper, Copper alloys	✓	✓
Indium Tin Oxide (ITO)	✓	✓
Indium	✓	✓
Tin	✓	✓
Molybdenum, Molybdenum alloys	✓	✓
Nickel Vanadium	✓	✓
Aluminum Zinc Oxide (AZO)	✓	✓
Tungsten Titanium Alloys	✓	✓
ZnO	✓	✓
Silver	✓	✓
Silicon	✓	✓
CdTe	✓	✓
Custom	✓	✓



TOSOH

Tosoh SMD – The Global Leader in Target Technology

Tosoh SMD, Inc. is a wholly owned subsidiary of TOSOH Corporation, a diversified international producer of chemicals and high purity materials. TOSOH Corporation has a long and successful history in the production of specialty materials, sputtering targets, silica glass, quartzware products, scientific, and diagnostic instruments and systems.

Together, Tosoh SMD and TOSOH Corporation are dedicated to reinvesting in the thin film materials business for long-term growth, forging partnerships with both suppliers and customers, and providing the highest quality products.

Tosoh SMD services its customers locally through its global sales network. Its close proximity and relationship with the global customer base is part of what makes Tosoh SMD “The Global Leader in Target Technology™”.

■ Manufacturing ■ Sales Offices



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