

Titanium Sputtering Targets

When you need stable, high-performance thin films for semiconductor, optical, or industrial coating, your sputtering target quality determines everything.

Ti sputtering targets are the primary source material used in magnetron sputtering (PVD) to deposit pure titanium, TiN, TiAlN, and functional titanium-based films on your substrates.

At Baoji Zecheng Metal Materials Co., Ltd., you get high-purity titanium sputtering targets engineered for long service life, uniform erosion, and consistent film performance.

Ti Target Specifications

Item	Specification
Material	Commercially pure titanium (Grade 1, Grade 2) or titanium alloys
Purity	3N5 (99.95%), 4N (99.99%), 4N5 (99.995%), 5N (99.999%) for semiconductor
Density	$\geq 4.51 \text{ g/cm}^3$
Impurities Controlled	Fe, Cr, Ni, O, N, C, H (controlled per purity grade)
Shapes	Round, rectangular, rotary (cylindrical), custom profiles
Round Targets	Ø50 – Ø300 mm, thickness 3–10 mm
Rectangular Targets	Custom length up to 4000 mm
Rotary Targets	Ø50–300 mm, length 1000–4000 mm
Bonding Options	Copper or aluminum backing plate, mechanical clamping, monolithic
Surface Finish	Machined, sandblasted, polished, acid-cleaned, vacuum packed

Types of Ti Sputtering Targets You Can Choose

No.	Material	Composition	Key Features	Typical Applications
1	CP Titanium (Gr1 / Gr2)	$\geq 99.5\% \text{ Ti}$	Low impurities, stable sputtering	Electronics, decorative coatings
2	High Purity Titanium (4N / 5N)	$\geq 99.99\% \text{ Ti}$	Ultra-clean films	Semiconductor, optical coatings
3	Ti-6Al-4V Target	Ti-6Al-4V	Alloy film deposition, high strength	Functional and structural coatings
4	TiAl / TiAl ₃ Target	30–50% Al	Produces TiAlN super-hard coatings	Cutting tools, molds
5	TiN Ceramic Target	Ti + N	Deposits gold-colored TiN films	Wear resistance, decorative coatings
6	TiSi ₂ Target	Ti:Si $\approx$ 1:2	Low resistivity silicide films	Semiconductor contacts and gates

How Your Titanium Targets Are Manufactured

To ensure film quality and long target life, your titanium sputtering targets are produced through:

- Vacuum Melting – Removes gas and metallic impurities
- Hot Isostatic Pressing (HIP) – Eliminates internal porosity and improves density
- CNC Precision Machining – Guarantees dimensional accuracy and flatness
- Ultra-Clean Packaging – Vacuum or nitrogen sealing prevents oxidation and contamination

- This ensures you get high-density, low-particle, and stable sputtering performance every time.

What You Should Specify When Ordering

To get the exact target you need, simply provide:

1. Material & grade (Ti 99.99%, Ti-6Al-4V, TiAl, etc.)
2. Shape (round, rectangular, rotary, custom)
3. Size & tolerance (diameter × thickness or length × width × thickness)
4. Required purity and impurity limits
5. Surface cleaning & packaging
6. Quantity and target delivery date
7. Your sputtering system model and application

1. What is the delivery time for ti sputtering targets?

Standard sizes: Ship within 2 weeks

Custom targets: 2–4 weeks, depending on size, purity, and bonding method

2. Can You Customize Titanium Sputtering Targets?

Yes. You can fully customize your targets, including:

Dimensions and thickness

Purity and alloy composition

Surface finish and cleaning level

Backing plate or mounting method

3. Where Your Titanium Targets Are Used

Semiconductors: conductive layers, IC contact films

Optical coatings: anti-reflection and decorative films

Industrial PVD coatings: TiN, TiAlN, wear-resistant layers

Automotive, aerospace & energy: high-performance functional coatings