

Titanium Targets

Raw Material Standard: ASTM B265 / ASTM B348 / F67/ 136, DIN, AMS

Available Grades: Gr1 / Gr2 / Gr5 /Gr7

Compliance: ISO 9001 / AS9100

Shapes: Round targets, Rectangular / planar targets, Tube targets, Special-shaped and stepped targets

Size: Customized according to drawings or technical specifications

What is a titanium target?

Ti target is a high-purity titanium material ($\geq 99.5\%$ Ti) used in PVD and sputtering systems to deposit thin titanium or titanium-based films onto substrates.

It is manufactured through advanced melting, forging, and precision machining to achieve high density, fine grain structure, and stable sputtering performance.

They are commonly used in semiconductor manufacturing, LCD & OLED displays, memory electrodes, optical coatings, and decorative PVD coatings because they provide excellent film adhesion, corrosion resistance, and coating uniformity.

Physical & Chemical Properties of Ti Targets

Property	Typical Value
Density	4.50 – 4.52 g/cm ³
Melting Point	1668 ± 5°C
Purity	99.5% – 99.99% (2N5 – 4N)
Thermal Expansion	8.6×10^{-6} / K
Microstructure & Internal Quality	Density $\geq 99.5\%$
	Uniform fine-grain structure
	No delamination
	No visible inclusions
Packaging	Vacuum sealed + desiccant + shock-proof wooden case
Lead time	2–4 weeks for most sizes

Ti Target Size Range

Planar & Round Targets

Type	Thickness	Width / Diameter
Rectangular target	≥ 0.125 inch	≤ 12 inch
Round target	≥ 0.125 inch	1.0" – 21.0" (25.4 – 533.4 mm)
Tube target	≥ 0.125 inch	≤ 12 inch

Surface roughness

Sputtering surface: $Ra \leq 1.6 \mu m$

Non-sputtering surface: $Ra \leq 3.2 \mu m$

Quality Control & Inspection

Chemical composition analysis

Mechanical property testing

Dimensional and visual inspection

If required, you can receive:

Mill Test Certificate (MTC)

Inspection reports

Titanium Target FAQ

Can Titanium sputtering target be used in high-temperature or high-power sputtering?

Yes. High-purity ti targets are suitable for most high-temperature sputtering.

For extreme power loads or continuous industrial production, Grade 5 (Ti-6Al-4V) targets provide higher mechanical strength and thermal stability.

Can titanium sputtering targets be exported internationally?

Yes. You can ship by air, sea, or express (DHL, FedEx, UPS).

All export packaging is anti-impact, moisture-proof, and oxidation-protected.

What is the difference between targets and Titanium PVD target?

Titanium PVD targets are optimized specifically for high-precision sputtering, offering better deposition efficiency and film uniformity.

Standard targets are more versatile and suitable for a wider range of industrial coating applications, though not always optimized for ultra-high-precision PVD systems.