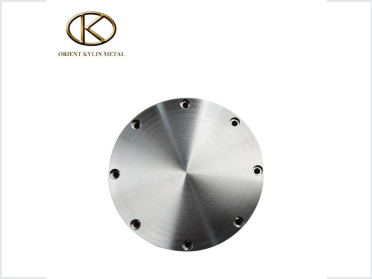
Tantalum Sputtering Target for Semiconductor Applications

This tantalum sputtering target is designed for semiconductor applications requiring thin film deposition. It provides a uniform and consistent tantalum layer.



ADDITIONAL IMAGES

Product Overview

High-Purity Tantalum Sputtering Solutions

These tantalum sputtering targets are engineered specifically for demanding semiconductor and micro-electronics applications. Produced via vacuum electron beam melting, they offer exceptional density and a uniform microstructure to ensure constant erosion rates and homogeneous layer deposition. With high natural strength and a low thermal expansion coefficient, these targets serve as an ideal diffusion barrier between copper and silicon.

Material Properties

Material	High-purity steel gray tantalum metal
Physical Characteristics	Ductile, Very Hard, High Density, Refractory Metal, High Thermal Conductivity, High Electrical Conductivity
Corrosion Resistance	Immune to normal aqua regia at temperatures below 150°C

Technical Specifications

Typical Purity

3N5 (99.95%) • High Purity

Analytical Methods

- Metallic elements: GDMS and ICP-OES
- Gas elements: LECO

Manufacturing Process	Vacuum Electron Beam (EB) Melting

Applications

Primary Industries	Semiconductors, Micro-electronics, Thin Film Resistors, Magnetic Recording Media, Flat Panel Displays, Optics

Manufacturing Workflow

Production Sequence

- Sintering of high-purity powder
- Vacuum Electron Beam Melting
- Plastic Deformation
- Annealing
- Metallographic Inspection
- Machining & Dimensional Inspection
- Cleaning & Final Packaging

Available Alloys

Other Alloy Forms	Tantalum Tungsten, Tantalum Niobium, Tantalum Aluminum, Tantalum Silicon, Tantalum Hafnium