



Sputtering Target Technical Information

Ottamagation OÜ

www.ottamagation.com

About us

Ottamagation OÜ is a professional supplier of PVD coating materials, we have engaged in supplying the most suitable and high quality sputtering targets (pure metal, alloy, ceramic) for different fields: semiconductor and micro-electronics, optical glass coating, decoration, solar photovoltaic coating and flat panel display.

We can meet customer's challenging technical requirements and supply most of the metal materials on the periodic table, including rare earth metals. Our manufacturing partners use the proven production processes of vacuum melting and hot pressing. By controlling the technical parameters of the processes of forging, rolling and annealing, the finished sputtering target has the characteristics of high density, low gas content, uniform internal structure, our customers can obtain constant erosion rates and high pure and homogeneous thin films during PVD process.

The sputtering targets purity can be 99% to 99.999%, depending on materials. The shape can be round, rectangle, or cylindrical in accordance with customer's drawing/requests. We can provide a wide range of targets compatible for using in common coating system e.g. VON ARDENNE, LEYBOLD, AMAT, BOC AIRCO etc., and also other custom-designed coating system.

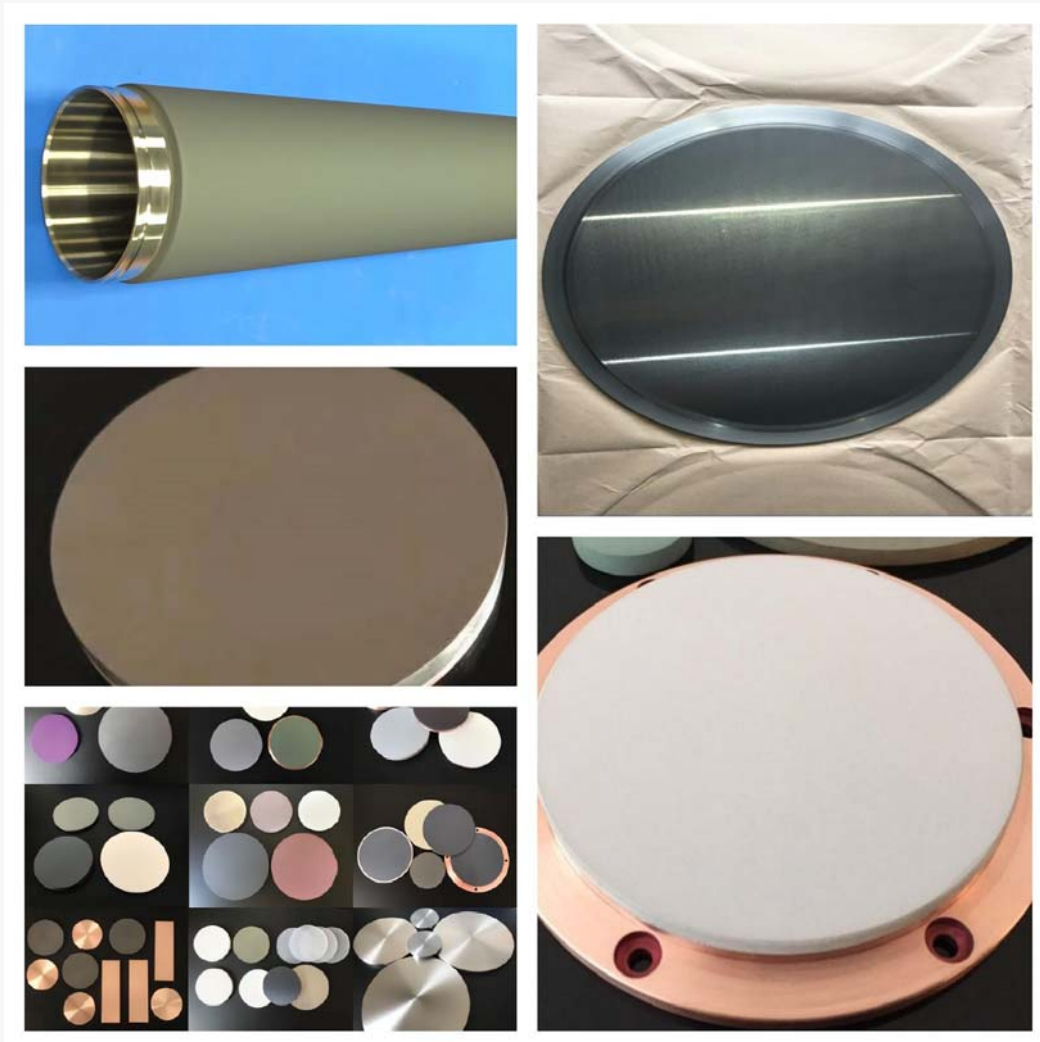


Rotary Target



Planar Target

We support your business



- High quality
- Technical options
- Competitive price
- Reliable delivery

Pure Metal Target

Formula	Name	Purity	Rotary	Planar
Ag	Silver	4N5	√	√
Al	Aluminum	5N5	√	√
Au	Gold	5N		√
Co	Cobalt	3N5	√	√
Cu	Copper	6N	√	√
Cr	Chromium	3N5	√	√
Cu	Copper	6N	√	√
Fe	Iron	4N	√	√
Ge	Germanium	6N		√
Mo	Molybdenum	3N5	√	√
Nb	Niobium	3N5	√	√
Ni	Nickel	5N	√	√
Sc	Scandium	4N		√
Si	Silicon	6N	√	√
Ta	Tantalum	4N5	√	√
Ti	Titanium	5N	√	√
V	Vanadium	3N	√	√
W	Tangusten	3N5	√	√

- Other materials available upon customer's requests

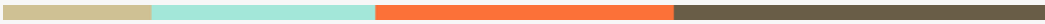
Alloy Target

Formula	Name	Purity	Rotary	Planar
Al/Cu	Aluminum Copper	5N		√
Al/Ti	Aluminum Titanium	3N		√
Al/Sn/Cu	Aluminum Tin Copper	3N		√
Co/Ta/Zr	Cobalt Tantalum Zirconium	3N5		√
Cu/Ga	Copper Gallium	5N	√	√
Cu/In	Copper Indium	5N	√	√
Cu/In/Ga	Copper Indium Gallium	5N	√	√
Fe/Co	Iron Cobalt	3N5	√	√
Fe/Co/Ta/Zr	Iron Cobalt Tantalum Zirconium	3N5		√
Fe/Ni	Iron Nickel	4N		√
Ni/Cr	Nickel Chromium	4N	√	√
Ni/Si	Nickel Silicon	4N		√
Ni/V	Nickel Vanadium	4N	√	√
Ti/W	Titanium Tungsten	4N5		√

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Ceramic Target (Oxide)

Formula	Name	Purity	Color	Density
Al ₂ O ₃	Aluminium Oxide	4N	White	3.98
ZnO/Al ₂ O ₃ 98/2wt%	AZO	4N	Green	
CeO ₂	Cerium Oxide	4N	Straw yellow	7.13
Cr ₂ O ₃	Chromium Oxide	3N	Green	5.21
Gd ₂ O ₃	Gadolinium Oxide	3N	White	7.407
Ga ₂ O ₃	Gallium Oxide	4N	White	6.44
Ga ₂ O ₃ /ZnO	GZO	4N		
HfO ₂	Hafnium Oxide	3N5	White	9.68
In ₂ O ₃ /Ga ₂ O ₃ /ZnO	IGZO	4N		
In ₂ O ₃	Indium Oxide	4N	Straw yellow	7.179
In ₂ O ₃ /SnO ₂ 90/10wt%	ITO	4N	Dark gray	
In ₂ O ₃ /ZnO 90/10	IZO	4N		
MgO	Magnesium Oxide	4N	White	3.58
MoO ₃	Molybdenum Oxide	3N	White	4.69
NiO	Nickel Oxide	3N	Green	6.7
Nb ₂ O ₅	Niobium Oxide	3N5	White	4.47
Sm ₂ O ₃	Samarium Oxide	4N	Yellow	8.347
SiO	Silicon monoxide	3N	Yellowish-brown	2.24
SiO ₂	Silicon Dioxide	4N	Colourless	2.1
Ta ₂ O ₅	Tantalum Oxide	3N5	White	8.2
SnO ₂	Tin Oxide	4N	White	6.95



TiO ₂	Titanium Oxide	3N5	White	4.29
WO ₃	Tungsten Trioxide	3N	Green	12.1
V ₂ O ₅	Vanadium Oxide	3N	Yellow	3.35
Y ₂ O ₃	Yttrium Oxide	4N	White	5.01
ZnO	Zinc Oxide	4N	Green	5.6
ZrO ₂	Zirconium Oxide	3N5	White	5.49

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Ceramic Target (Others)

Formula	Name	Purity	Color	Density
AlN	Aluminium Nitride	2N5	White	3.026
B ₄ C	Boron Carbide	2N5	Black	2.52
BaTiO ₃	barium titanate	3N5	White	6.017
BN	Boron Nitride	2N5	White	2.25
Cu ₂ ZnSnS ₄	Kesterite	3N	Black	
CuS	Copper Sulphide	3N	Black	5.5
FeS	Iron Sulfide	3N	Gray-black	4.3
LaB ₆	Lanthanum Hexaboride	4N	Purple	4.76
LaMnO ₃	lanthanum manganate	3N5	Black	
Li ₃ PO ₄	Lithium Phosphate	3N5	White	2.54
LiCoO ₂	Lithium Cobalt Oxides	3N5	Black	
LiFePO ₄	Lithium Iron Phosphate	3N5	Grey	
LiMn ₂ O ₄	Lithium Manganate	3N5	Black	
MgB ₂	Magnesium Diboride	2N5	Black	2.57
MgF ₂	Magnesium Fluoride	4N	White	3.148
MoS ₂	Molybdenum Sulfide	3N	Black	4.9

NbN	Niobium Nitride	2N5	Dark gray	8.4
PbTiO ₃	Lead Titanate	3N5	Yellow	7.52
PbZrO ₃	Lead Zirconate	3N5	White	7
Sb ₂ S ₃	Antimony Sulfide	4N	Gray-black	4.562
Si ₃ N ₄	Silicon Nitride	3N	Light grey	3.44
SiC	Silicon Carbide	3N	Black	3.2
SnS	Tin Sulphide	3N	Black	4.5
SrTiO ₃	Strontium Titanate	3N5	Black	4.81
TaN	Tantalum Nitride	2N5	Dark gray	13.4
TiN	Titanium Nitride	2N5	Golden yellow	5.43
WC	Tungsten Carbide	3N	Black	15.63
WS ₂	Tungsten Sulfide	3N	Black	7.5
YbF ₃	Ytterbium Fluoride	3N	White	4.01
YIG / Y ₃ Fe ₅ O ₁₂	Yttrium Iron Garnet	4N	Dark green	5.2
ZnS	Zinc Sulphide	3N	White	4.09

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