



ООО КВАНТУМ

ОПТИЧЕСКИЕ КОМПОНЕНТЫ

Материалы для нанесения оптических покрытий

ООО «КВАНТУМ»

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1. Материалы для нанесения оптических покрытий



CeO₂



ITO Tablet



Nb₂O₅



Al₂O₃



SiO



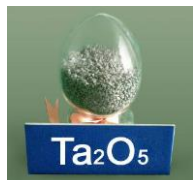
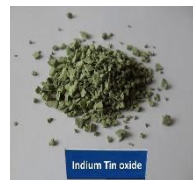
ZrO₂



Fused Quartz Ring

Substance	Formula	Products form	Refractive Index	Transmission Range	Evaporation Temperature	Application
Aluminum oxide	Al ₂ O ₃	1-3mm,99.99%,Granule	1.62/500nm	200-5000nm	2000-2200°C	A.R.Coatings Multilayers
		3-5mm,99.99%,Granule				
		Dia.10*3mm,99.99%,Tablet				
Cerium oxide	CeO ₂	1-3mm,99.99%,Granule	2.35/500nm	400-16000nm	1950°C	A.R.Coatings
		3-5mm,99.99%,Granule				
		Dia.10*3mm,99.99%,Tablet				
Hafnium oxide	HfO ₂	1-3mm,99.99%,Granule	1.95/500nm	230-7000nm	2500°C	U.V.-NIR Multilayers
		Dia.8*5mm,99.99%,Tablet				
		Dia.20*8mm,99.99%,Tablet				
I.T.O (In ₂ O ₃ /SnO ₂) (wt%)	(86:14) (90:10) (95:5)	1-3mm,99.99%,Granule	2.0/500nm	400-800nm	1450°C	Conductive transparent coatings
		Dia.10*5mm,99.99%,Tablet				
		Dia.7*5mm,99.99%,Tablet				
Magnesium oxide	MgO	1-3mm,99.99%,Granule	1.7/500nm	200-8000nm	2000°C	Multilayers
		Dia.10*3mm,99.99%,Tablet				
		Dia.22*8mm,99.99%,Tablet				
ZrO ₂ /TiO ₂ (90:10wt%)		1-3mm,99.9%,Granule	2.1/500nm	400-7000nm	2300°C	A.R.Coatings
		Dia.15*8mm,99.9%,Tablet				
		Dia.18*8mm,99.9%,Tablet				
ZrO ₂ /Ta ₂ O ₅ (70:30wt%)		Dia.10*4mm,99.99%,Tablet				
TiO ₂ /Ta ₂ O ₅ (70:30wt%)		Dia.10*4mm,99.99%,Tablet				
Scandium oxide	Sc ₂ O ₃	1-3mm,99.99%,Granule	1.89/500nm	250-5000nm	2430°C	U.V.

1. Материалы для нанесения оптических покрытий



Substance	Formula	Products form	Refractive Index	Transmission Range	Evaporation Temperature	Application
Silicon oxide	SiO ₂	Dia.10*3mm,99.9%,Tablet	1.45/500nm	200-2000nm	1600-2200°C	Multilayers
		1-3mm,99.99%,Granule				Multilayers
		3-5mm,99.99%,Granule				Multilayers
		5-8mm,99.99%,Granule				Multilayers
		∅ 2*2mm, 99.99%,Cylindric				Multilayers
Silicon monoxide	SiO	∅ 3*3mm, 99.99%,Cylindric	1.55/550nm	600-8000nm	1200-1600°C	A.R.Coatings Protective films
		Dia.3mm, 99.99%,Pellet				
		1-3mm,99.99%,Granule				
		3-5mm,99.99%,Granule				
		10-15mm,99.99%,Block				
Titanium monoxide	TiO	15-20mm,99.99%,Block	2.1/500nm	400-7000nm	1950°C	A.R.Coatings
		20-30mm,99.99%,Block				
Tantalum oxide	Ta ₂ O ₅ (White& Black)	200mesh, 99.99%,Powder				
Titanium monoxide	TiO	1-3mm,99.9%,Granule	2.35/500nm	400-12000nm	1700-2000°C	Multilayers Beam-splitters
		Dia.8*4mm,99.9%,Tablet				
		Dia.10*5mm,99.9%,Tablet				
Titanium oxide	TiO ₂	1-3mm,99.9%,Granule	2.35/500nm	400-12000nm	2200°C	A.R.Coatings Multilayers
		Dia.9*3mm,99.9%,Tablet				
		Dia.15*5mm,99.9%,Tablet				
		Dia.18*6mm,99.9%,Tablet				
Titanium(III) oxide	Ti ₂ O ₃	1-3mm,99.99%,Granule	2.35/500nm	400-12000nm	1800-2000°C	A.R.Coatings Multilayers
		1-3mm,99.99%,Granule				

1. Материалы для нанесения оптических покрытий



Substance	Formula	Products form	Refractive Index	Transmission Range	Evaporation Temperature	Application
Titanium pentoxide	Ti3O5	Dia.10*6mm,99.99%,Tablet	2.25/500nm	400-12000nm	1750-2200°C	Multilayers Beam-splitters
		0.1-3mm,99.99%,Granule 2-4mm,99.99%,Granule				
Yttrium oxide	Y2O3	1-3mm,99.99%,Granule Dia.10*3mm,99.99%,Tablet	1.87/550nm	400-8000nm	2500°C	A.R.Coatings Multilayers
Zirconium oxide	ZrO2 (White&Black)	1-3mm,99.9%,Granule	2.05/500nm	250-7000nm	2500°C	A.R.Coatings Multilayers
		2-4mm,99.9%,Granule				
		Dia.10*6mm,99.9%,Tablet				
		Dia.13.5*8mm,99.9%,Tablet				
		Dia.15*6mm,99.9%,Tablet				
		Dia.18*8mm,99.9%,Tablet				
Dia.20*5mm,99.9%,Tablet Dia.22.5*6mm,99.9%,Tablet						

1. Материалы для нанесения оптических покрытий



Substance	Formula	Products form	Refractive Index	Transmission Range	Evaporation Temperature	Application
Barium fluoride	BaF2	1-3mm,99.99%,Granule	1.4/10600nm	220-11000nm	1280°C	U.V.-FAR multilayers Multilayers A.R.Coatings
Lanthanum fluoride	LaF3	1-3mm,99.99%,Granule	1.58/500nm	220-14000nm	1450°C	A.R.Coatings
Yttrium fluoride	YF3	1-5mm,99.99%,Granule	1.49/632.8nm	220-15000nm	1100°C	I.R. multilayers A.R.Coatings
Praseodymium fluoride	PrF3	1-5mm,99.9%,Granule	1.51/632.8nm	220-15000nm	1400-1600°C	I.R. multilayers A.R.Coatings
Aluminum fluoride	AlF3	1-3mm,99.99%,Granule	1.35/500nm	200-8000nm	800-1000°C	U.V.coatings
Lead fluoride	PbF3	1-3mm,99.99%,Granule	1.76/470nm	220-9000nm	700-1000°C	U.V.coatings
Calcium fluoride	CaF2	1-3mm,99.95%,Granule	1.23-1.42/500 nm	150-12000nm	1280-1400°C	A.R.Coatings
Magnesium fluoride	MgF2	1-3mm,99.99%,Granule	1.38/550nm	130-7000nm	1300-1600°C	A.R.Coatings Multilayers
Cerium Fluoride	CeF3	1-3mm,99.99%,Granule	1.63/500nm	300-5000nm	1429°C	A.R.Coatings Multilayers
		2-5mm,99.99%,Granule				
		3-8mm,99.99%,Granule				
Cryolite	NaAlF6	1-3mm,99.99%,Granule	1.33/500nm	250-14000nm	1000°C	A.R.Coatings
		3-5mm,99.99%,Granule				
		5-10mm,99.99%,Granule				

1. Материалы для нанесения оптических покрытий



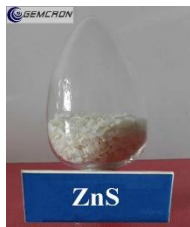
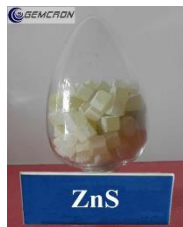
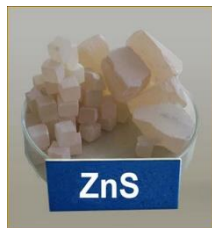
TiO₂/La₂O₃ SiO₂+Al₂O₃ Al₂O₃/La₂O₃



TiO₂/Ta₂O₅ Cr+SiO ZrO₂/TiO₂

Substance	Refractive Index @550nm	Transmission Range (μm)	Evaporation
SiO ₂ /Al ₂ O ₃	1.48-1.50	0.20-7	EB, 1600°C
Al ₂ O ₃ /Pr ₆ O ₁₁	1.7-1.9	0.38-9	EB, 2100-2200°C
Al ₂ O ₃ /La ₂ O ₃	1.7-1.8	0.21-10	EB, 2100°C
ZrO ₂ /Ta ₂ O ₅	2.05	0.35-10	EB, 2100°C
ZrO ₂ /TiO ₂	2.1	0.40-7	EB, 2200-2400°C
ZrO ₂ /MgO	2.1	0.35-10	EB, 2100°C
ZrO ₂ /Al ₂ O ₃	1.68-1.75	0.35-10	EB, 1850-2200°C
TiO ₂ / Pr ₆ O ₁₁	2.1	0.40-7	EB, 2200-2400°C
TiO ₂ /Al ₂ O ₃	2.2	0.40-7	EB, 1700-1800°C
TiO ₂ /La ₂ O ₃	2.1-2.2	0.40-7	EB, 2200-2300°C

1. Материалы для нанесения оптических покрытий



Substance	Formula	Products form	Refractive Index	Transmission Range	Evaporation Temperature	Application
Zinc Selenide	ZnSe	20-30mm, 99.99%, Block	2.58/550nm	600-15000nm	600-900°C	I.R. coatings
		1-3mm, 99.99%, Granule				
		3-5mm, 99.99%, Granule				
Zinc sulfide	ZnS	5-10mm, 99.99%, Granule	2.4/1200nm	400-14000nm	1100°C	Multilayers
		15-20mm, 99.99%, Block				
		20-30mm, 99.99%, Block				
		10*10*10mm, 99.99%, Cube				
		8*8*8mm, 99.99%, Cube				
		30*30*20mm, 99.99%				

2. Материалы для нанесения оптических покрытий

Металлические гранулы



Material	Formula	Form	Typical purity, %
Aluminum	Al	1-3mm, Granule	99.999
		Dia.3*3mm, cylindric	99.99
		Dia.3*6mm, cylindric	
Antimony	Sb	1-3mm, Granule	99.9999
		5-10mm, Granule	99.999
Arsenic	As	Lump	
		3-12mm, Granule	99.9999
Barium	Ba	5-10mm, Granule	99.999
		2-6mm, Granule	99.9
Bismuth	Bi	15mm, Granule	
		2-4mm, Granule	99.9999
Boron	B	2-12mm, Granule	99.999
		3-8mm, Granule	99.999
Cadmium	Cd	1-3mm, Granule	99.999
		3-6mm, Granule	
Calcium	Ca	1-3mm, Granule	99.99
		3-12mm, Granule	
Carbon	C	200mesh	99.999
Cerium	Ce	1-3mm, Granule	99.999
		3-12mm, Granule	
Cesium	Cs	Solid ingot	99.99

2. Материалы для нанесения оптических покрытий

Металлические гранулы



Material	Formula	Form	Typical purity, %
Chromium	Cr	1-3mm, Granule	99.99
		2-4mm, Granule	
		3-6mm, Granule	
		25mm, Lump	
Cobalt	Co	3-12mm, Granule	99.99
		Dia. 6mm, Pellet	99.9
Copper	Cu	1-3mm, Granule	99.999
		2-6mm, Granule	99.99
		Dia. 3*3mm, Cylindric Dia. 3*6mm, Cylindric	
Dysprosium	Dy	1-3mm, Granule	99.9
		3-12mm, Granule	(REO basis)
Erbium	Er	1-3mm, Granule	99.9
		3-12mm, Granule	(REO basis)
Europium	Eu	1-3mm, Granule	99.9
		3-12mm, Granule	(REO basis)
Gadolinium	Gd	1-3mm, Granule	99.9
		3-12mm, Granule	(REO basis)
Gallium	Ga	1-3mm, Granule	99.9999
		Solid ingot	99.999

2. Материалы для нанесения оптических покрытий

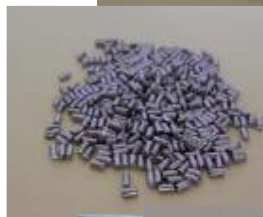
Металлические гранулы



Material	Formula	Form	Typical purity,%
Germanium	Ge	1-3mm,Granule	99.999
		3-6mm,Granule	
		6-12mm,Granule	
Gold	Au	2-8mm,Granule	99.999 99.9
Hafnium	Hf	1-3mm,Granule	99.9
		3-6mm,Granule	
Holmium	Ho	1-3mm,Granule	99.9
		3-12mm,Granule	
Indium	In	Dia.1-3mm,Wire	99.9999 99.999
Iron	Fe	3-12mm,Granule	99.95
		Dia.3mm pellet	
Lanthanum	La	3-12mm,Grnaule	99.9 (REO basis)
Lead	Pb	1-3mm,Granule	99.9999
			99.999
Lithium	Li	1-3mm,Granule	99
Lutetium	Lu	3-12mm,Grnaule	99.9 (REO basis)
Magnesium	Mg	1-3mm,Granule	99.99
		3-12mm,Granule	
Manganese	Mn	3-12mm,Granule	99.99
Molybdenum		Dia.12*6mm,Cylindric	99.95
		Dia.6*6mm,Cylindric	
		Dia.3*3mm,Cylindric	
		1-3mm,Granule	

2. Материалы для нанесения оптических покрытий

Металлические гранулы



Material	Formula	Form	Typical purity, %
Neodymium	Nd	3-12mm, Granule	99.9 (REO basis)
Nickel	Ni	Dia.6*6mm, Cylindric	99.999
		Dia.3*3mm, Cylindric	99.9
Niobium	Nb	3-12mm, Granule	99.99
		Dia.6*6mm, Cylindric	99.9
Palladium	Pd	3-6mm, Granule	99.95
Phosphorus	P	2-6mm, Granule	99.999
Platium	Pt	3-6mm, Granule	99.95
Praseodymium	Pr	3-12mm, Granule	99.9 (REO basis)
Rhenium	Re	3-12mm, Granule	99.99
Samarium	Sm	3-12mm, Granule	99.9 (REO basis)
Scandium	Sc	3-12mm, Granule	99.9
Selenium	Se	1-3mm, Granule	99.999
		Dia.1-3mm, irregular	99.99
Silicon		1-3mm, Granule	99.999
		3-6mm, Granule	
Silver	Ag	1-3mm, Granule	99.999 99.99
Sulfur	S	3-6mm, Granule(Soft)	99.999
Tantalum	Ta	1-3mm, Granule	99.99
		Dia.6*6mm, Cylindric	

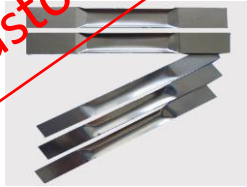
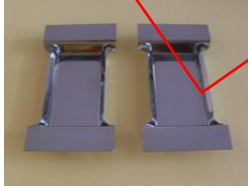
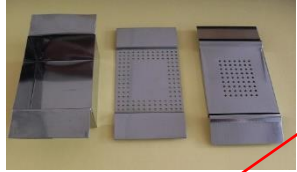
2. Материалы для нанесения оптических покрытий

Металлические гранулы



Material	Formula	Form	Typical purity, %
Tellurium	Te	1-3mm, Granule	99.9999
		3-6mm, Granule	99.999
Terbium	Tb	3-12mm, Granule	99.9 (REO basis)
Thulium	Tm	3-12mm, Granule	99.9 (REO basis)
Tin	Sn	1-3mm, Granule	99.999
		Dia. 2-4mm, Pellet	99.99
Titanium	Ti	Dia. 3-6mm, Pellet	99.999
Tungsten	W	1-3mm, Granule	99.99
		Dia. 6-12mm, Pellet	99.99
Vanadium	V	2-6mm, irregular	99.99
Ytterbium	Yb	1-3mm, Granule	99.9
		3-12mm, Granule	(REO basis)
Yttrium	Y	1-3mm, Granule	99.9
		3-12mm, Granule	(REO basis)
Zinc	Zn	1-3mm, Granule	99.9999
		2-4mm, Granule	99.999
		3-6mm, Granule	99.99
Zirconium	Zr	1-3mm, Granule	99.9
		3-6mm, Granule	
		Dia. 3mm, Pellet	

3. Вкладыши/Лодочки



Custom-made

Custom-made

Materials	Purity	Density (g/cm ³)	Melting Point (°C)	Size
Molybdenum	99.97%	10.20	2610	Изготовление в соответствии с чертежом или образцом заказчика
Tantalum	99.97%	16.68	2996	
Tungsten	99.95%	19.30	3380	
Copper (OFC)	99.99%	8.96	1083	
Graphite	99.99%	2.30	3850	
.....	

3. Вкладыши/Лодочки



Custom-made

Materials	Purity	Density	Size	Melting point
Molybdenum	99.97%	10.20g/cm ³	Изготовление в соответствии с чертежом или образцом заказчика	2610°C
Tantalum	99.97%	16.68 g/cm ³		2996°C
Tungsten	99.95%	19.30g/cm ³		3380°C
Copper (OFC)	99.99%	8.96 g/cm ³		1083°C
Graphite	99.99%	2.30 g/cm ³		3850°C
Quartz	99.99%	2.65 g/cm ³		1770°C
Alumina	99.99%	3.95 g/cm ³		2250°C
Boron Nitride	99.99%	2.27g/cm ³		3000°C (Nitrogen)
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4 Вольфрамовые проволоки/нити

$\Phi 0.7\text{mm}$



110mm

I1003130

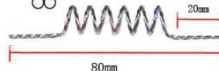
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130mm

I1003130

$\Phi 0.75\text{mm}$



80mm

I075362080

$\Phi 0.8\text{mm}$



70mm

I080372070

Custom-made

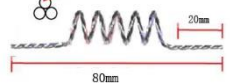
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155mm

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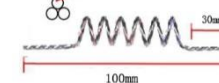
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80mm

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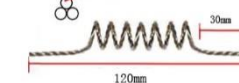
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100mm

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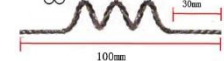
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120mm

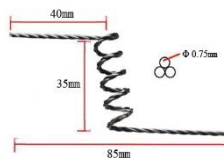
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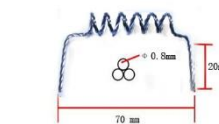


100mm

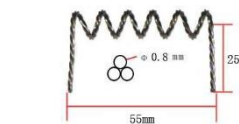
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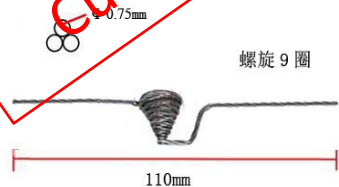


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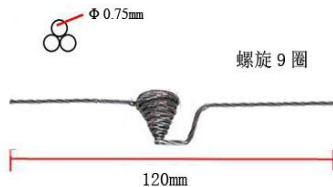
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4. Вольфрамовые проволоки/нити

Custom-made



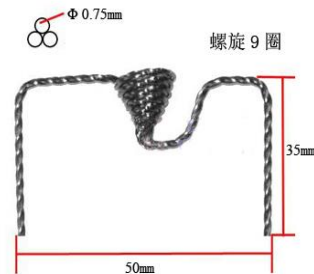
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V07539120



V08535532



V075393550

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5. Нити накала электронной пушки

Custom-made

EB080U8



EB055BY



EB080U8Q



EB055WX



EB080U10



EB065WX



EB080WX



EB080PX



EB080U10



6. Распыляющие мишени

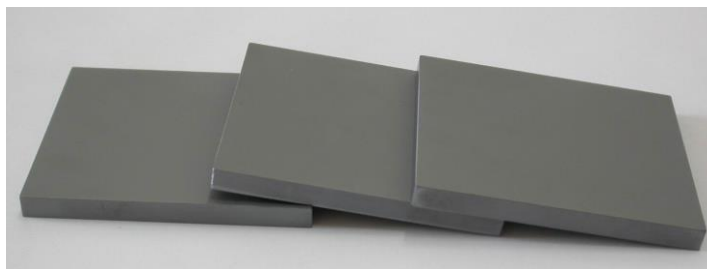
CuO



Cr



ITO



Ni/Cr Alloy



Mo



Zr