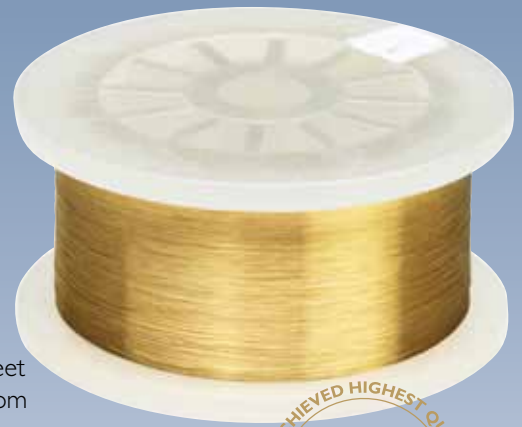


Luma Gold Plated Tungsten Wire alloyed with 3% Rhenium



For some applications tungsten rhenium wire has to be plated to meet special requirements. This may be for instance to protect the wire from corrosion or to solder it to other metals.

Example of Applications:



Printing



Technical research



Antennas

Wire qualities:

Wire qualities:	Description
861/60	Treatment before plating: Etched Type of strike: Gold
861/65	Treatment before plating: Etched Type of strike: Gold <i>This quality is processed to meet demands for medical use.</i>
861/66	Treatment before plating: Ultra polished Type of strike: Gold
861/67	Treatment before plating: Ultra polished Type of strike: Nickel

Wire dimensions: 5 – 500 microns

Diameter tolerances: +/- 4% by weight as standard
Minimum +/- 1.5% available on request

Gold coat thickness: For wire dimensions below 50 microns, the coat thickness corresponds to 3 – 5% by weight as standard. For wire dimensions from 50 microns the coat thickness is 0.5 micron as standard. The coat thickness can be adjusted to meet your requirements

Properties of tungsten wire alloyed with 3% Rhenium

Purity of tungsten before rhenium addition	99.95% W
Melting point	3380 °C
Density	19.22 g/cm ³
Specific electrical resistance at 20 °C	0.092 Ohm x mm ² /m
Modulus of elasticity at 20 °C	430 kN/mm ²

Examples of wire dimensions

with coat thickness as per Luma standard

Wire dimension (microns)	Wire dimension (mils)	Au coat thickness (microns)	Au coat by weight (%)
25	0.984	0.25 +/- 0.07	3.0 - 5.0
50	1.97	0.5 +/- 0.1	3.0 - 5.0
75	2.95	0.5 +/- 0.1	2.2 - 3.2
100	3.94	0.5 +/- 0.1	1.6 - 2.4
150	5.91	0.5 +/- 0.1	1.0 - 1.6

LUMA METALL ^W/_{Mo}
Fine wire products

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Certified in accordance to ISO 9001:2008

Ovality (out of roundness):

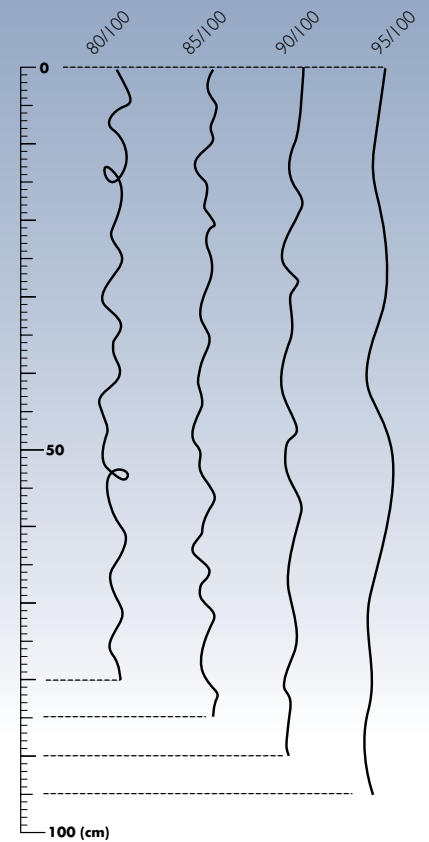
∅ Microns	Standard	Available on request
< 15	Max 6%	Max 3%
≥ 15	Max 5%	Max 2%

Elongation:

1 – 3%

Straightness:

Straightness grade	∅ Microns < 15	∅ Microns ≥ 15
4 (80/100)	standard	-
3 (85/100)	on request	standard
2 (90/100)	on request	on request
1 (95/100)	not available	on request



Standard tensile strength of Gold Plated Tungsten alloyed with 3% Rhenium

Tensile strength:

