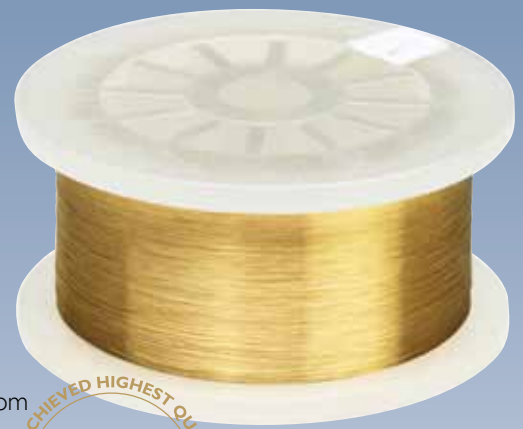


# Luma Gold Plated Tungsten Wire

For some applications tungsten wire has to be plated to meet special requirements. This may be for instance to protect the wire from corrosion, to solder it to other metals or to reduce the secondary emission of electrons.



## Example of Applications:



Printing



Medical



Connectors



Technical research



Antennas



Fuses

## Wire qualities:

821/60

### Description

Treatment before plating: Etched  
Type of strike: Gold

821/65

Treatment before plating: Etched  
Type of strike: Gold  
*This quality is processed to meet demands for medical use.*

821/66

Treatment before plating: Ultra polished  
Type of strike: Gold

821/67

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

## 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

## Properties of bare Tungsten wire

Purity	99.95%W
Melting point	3410 °C
Density	19.17 g/cm <sup>3</sup>
Specific electrical resistance at 20 °C	0.055 Ohm x mm <sup>2</sup> /m
Modulus of elasticity at 20 °C	410 kN/mm <sup>2</sup>

**LUMA METALL**   
Fine wire products

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Certified in accordance to ISO 9001:2008

**Ovality (out of roundness):**

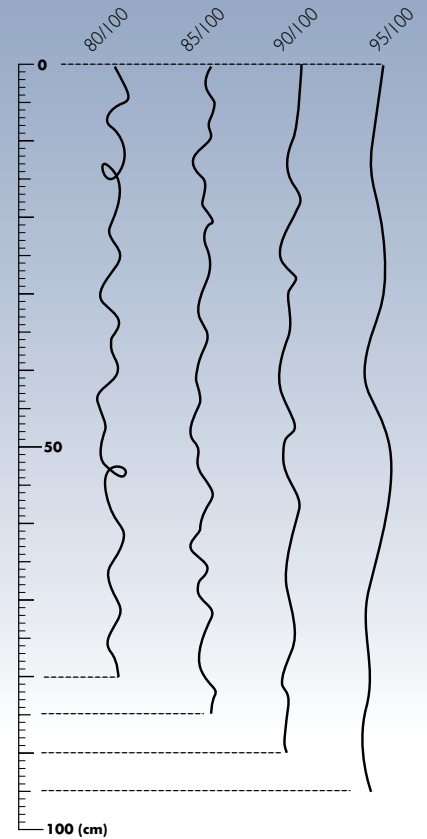
∅ Microns	Standard	Available on request
< 15	Max 6%	Max 3%
≥ 15	Max 5%	Max 2%

**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



**Tensile strength of Gold Plated Tungsten**

**Tensile strength:**

