

Luma Tungsten Wire

Some characteristics of tungsten:

- Tungsten has the highest melting point of all metals
- High strength at high temperatures
- Good conductivity for heat and electricity
- High absorption capacity for radioactive radiation and X-rays

Example of Applications:



Antennas



Mesh



Integrated Circuit Testing



Printing



Connectors



Fuses



Musical Strings



Medical



Technical research



Lighting



Automotive



Properties of bare Tungsten wire

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

Wire qualities:

Description

820	Standard, non-sag quality wire containing minimum 99.95 % W, doped with potassium, silicon and aluminium.
821	A wire of 820 standard quality, which has passed the requisite tests to meet the demands for wire of a higher standard below Ø 50 microns i.e. virtually free from traces of cracks or splits.
823	Has a low concentration of unfavourable impurities. Has a long grain structure, high recrystallization temperature and increased ductility.

Surface finishes

Diameter range (microns)

20	Black drawn wire for further redrawing	50 - 500
21	Black drawn wire	8 - 500
22	Black drawn wire, straightened	8 - 500
25	Black drawn wire, used as heating element	8 - 500
31	"21" wire, electrolytically cleaned	10 - 500
32	"21" wire, straightened and electrolytically cleaned	10 - 500
34	"32" wire with a highly polished surface	10 - 500
36	"32" wire with an ultra polished surface	10 - 500
37	oxidized surface	10 - 500
41	"21" wire, electrolytically etched to the final dimension	4 - 30
42	"21" wire, straightened and electrolytically etched to the final dimension	4 - 30

Wire size micron	Diameter tolerance		Weight tolerance	
	Standard	On request	Standard	On request
≥4<5	+/- 3.5%	+/- 2%	+/- 7%	+/- 4%
≥5<10	+/- 2%	+/- 0.5%	+/- 4%	+/- 1%
≥10<18	+/- 1.5%	+/- 0.25%	+/- 3%	+/- 0.5%
≥18	+/- 1%	+/- 0.25%	+/- 2%	+/- 0.5%

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 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%

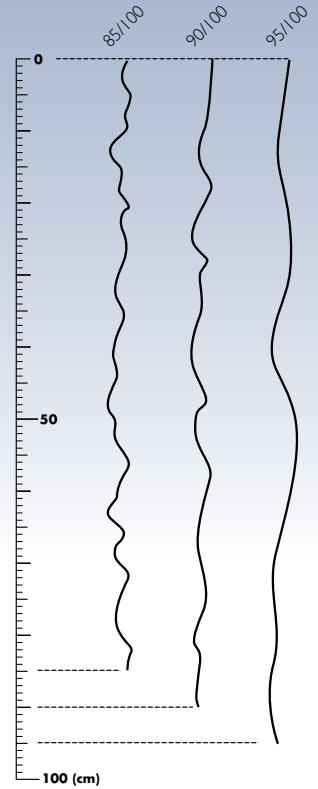
Elongation:

1 – 3%

Straightness:

Wire with a finish of 32 and 42 is available in the following grades of straightness.

Straightness grade	∅ Microns < 15	∅ Microns 15-30	∅ Microns ≥ 30
3 (85/100)	standard	-	-
2 (90/100)	on request	standard	-
1 (95/100)	not available	on request	on request



Standard tensile strength of Tungsten

Tensile strength:

