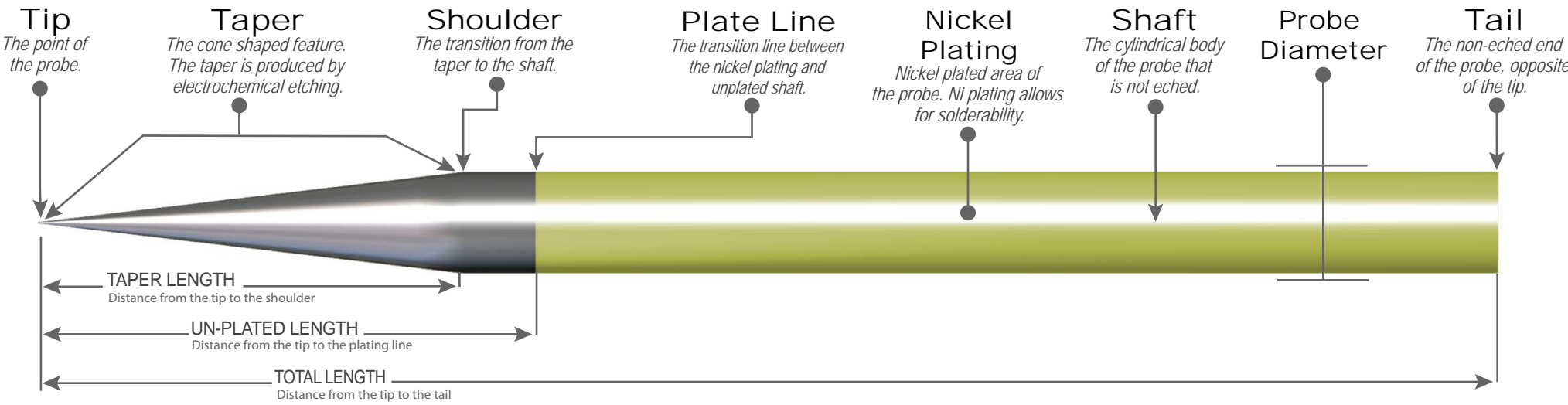
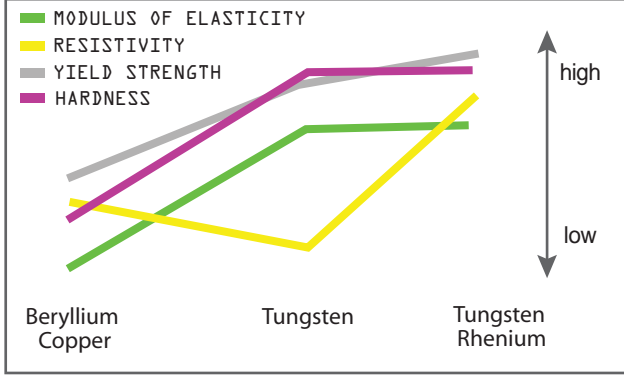


Semiconductor Probe Needles: Part Number Definition, Material Properties and Measuring Style

Point Technologies, Inc.
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| Material | CODE | DENSITY g/cm ³ | RESISTIVITY μΩ/CM | YIELD STRENGTH MPa | HARDNESS KNOOP | MODULUS OF ELASTICITY GPa | COMPOSITION | PROPERTIES |
|------------------|------|---------------------------|-------------------|--------------------|----------------|---------------------------|--------------------------------|--|
| Beryllium Copper | (BC) | 8.2 | 6.0 | 1640 | 325 | 131 | Copper 98.00%, Beryllium 1.90% | Softer than tungsten, low contact resistance, high electrical conductivity |
| Tungsten | (W) | 19.3 | 5.65 | 2900 | 800 | 400 | Tungsten 99.95% | Hard material, high contact resistance, low fatigue |
| Tungsten Rhenium | (WR) | 19.3 | 9.65 | 3360 | 815 | 410 | Tungsten 96.67%, Rhenium 3.30% | Hardest material, higher contact resistance than pure tungsten |



Example Part Number

WNP5-110-01X3-M-A

PROBE DIAMETER (MILS*)
2-20 MILS

TAPER LENGTH (MILS*)
40-300 MILS

TIP SHAPE
01= SHARP POINT
025R= 0.25 MIL RADIUS
1.2D= 1.2 MIL DIAMETER
FLAT TIP

TOTAL LENGTH (INCHES)
.5-5 INCHES LONG

REVISION LEVEL

MATERIAL
W= TUNGSTEN
WR= TUNGSTEN-RHENIUM
BC= BERYLLIUM-COPPER (SILVER PLATING STANDARD ON BC)
NP= NICKLE PLATING

FINISH
M= MATTE
P= POLISH

*1MIL = 0.001"
1MIL = 25.4 microns

