

© Bonwire - Bonding Wire

Comparison of Phsyscal properties							
Item	Unit	Gold	Silver	Copper	Aluminum	Al-1% Si	Palladium
Element Symbol	/	Au	Ag	Cu	Al	/	Pd
m.p (℃)	℃	1,063	962	1,083	660	630	1,555
b.p (℃)	℃	2,860	2,163	2,595	2,767	/	3,167
Density @ 20℃	g/cm ³	19.32	10.43	8.96	2.70	2.70	12.60
Electrical resistivity	Ω.cm	2.30	1.62	1.70	2.70	2.80	10.30
Thermal conductivity @ 20℃	W/mK	295	420	395	236	196	75
Coefficient of Linear Expansion @ 0℃	/	14.2	18.9	17.5	24.6	24.5	11.5
Young's modulus	kN/mm ²	78	83	128	71	65	126
Rigidity modulus	kN/mm ²	27	31	45	26	26.2	55

Pd-Cu wire

Diameter		Elomgation	Breeaking Load (g)
μm	mil	%	BWCu-d
20±1	0.80	7.0~17.0	> 4.0
23±1	0.90	8.0~18.0	> 5.0
25±1	1.00	9.0~19.0	> 7.0
30±1	1.20	10.0~20.0	> 10.0
38±1	1.50	13.0~23.0	> 15.0
40±1	1.60	13.0~23.0	> 15.0
50±2	2.00	15.0~25.0	> 28.0

Silver wire

Diameter		Weight	Elomgation	Breeaking Load
μm	mil	mg/20cm	%	cN
15±1	0.80	1.62~2.12	> 3.0	> 2.0
18±1	0.90	2.39~2.99	> 5.0	> 4.0
20±1	0.80	2.99~3.85	> 6.0	> 5.0
23±1	0.90	4.00~4.76	> 7.0	> 7.0
25±1	1.00	4.76~5.59	> 8.0	> 9.0
30±1	1.20	6.69~7.95	> 10.0	> 12.0
38±1	1.50	11.32~12.58	> 12.0	> 18.0
50±2	1.60	19.06~22.37	> 20.0	> 30.0
75±3	2.00	42.88~50.32	> 20.0	> 75.0