

## Au HD5

### Gold Bonding Wire for High Electrical Performance and Low Loop



These highly doped wires of different chemical compositions are very suitable for low and long loop applications. Both wire types are comparable in their characteristics and offer outstanding material and processing properties as well as good high temperature strength.

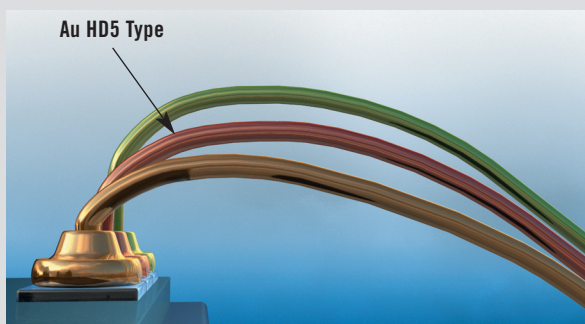
They represent an excellent bridge between doped and alloyed wires.

Areas of application

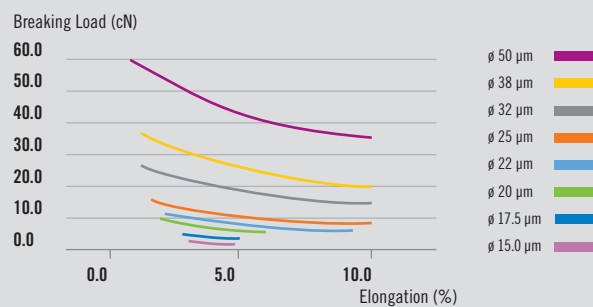
- Flat integrated circuits (BGA, MQFP, CQP, TSOP, TQFP, VSSOP, IC-cards,...)
- COB, foil frames

#### Au HD5 Benefits

- Low and long loop wire type
- Suitable for all high performance bonding machines
- Mid strength type
- Exact loop guiding
- Well proven loop stiffness and thermal stability
- Good high temperature strength



#### Breaking Load vs. Elongation



#### Recommended Technical Data of Au HD5

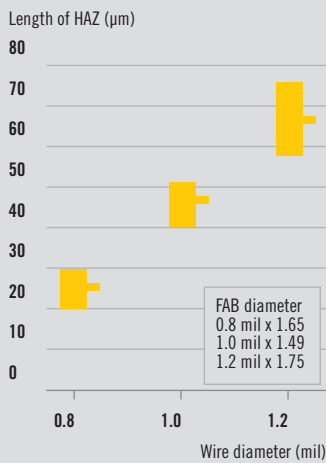
Diameter	Microns (µm)	17.5	20	23	25	30	33	38	50
	Mils	0.7	0.8	0.9	1.0	1.2	1.3	1.5	2.0
Elongation	%	2 – 5	2 – 5	2 – 8	2 – 8	2 – 8	2 – 8	3 – 8	3 – 10
Breaking Load	cN	> 5	> 6	> 7	> 9	> 14	> 16	> 20	> 35

For other diameters, please contact Heraeus Bonding Wires sales representative.

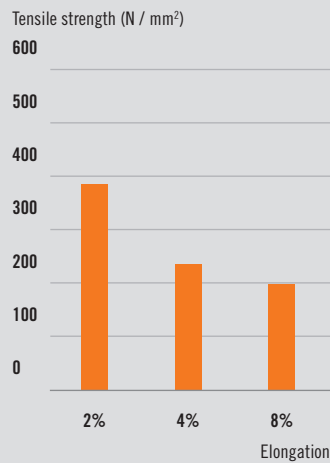
## HD5 Characteristics for 25 µm diameter

Non-Gold Elements	< 100 ppm	Heat Conductivity	3.12 W / cm-K
Elastic Modulus	> 80 GPa	Electrical Resistivity	2.3 µΩ-cm
Heat Affected Zone (HAZ)	75 – 115 µm	Coeff. of Linear Expansion (20 – 100 °C)	14.2 ppm / K
Melting Point	1063 °C	Fusing Current for 25 µm, dia 10 mm length (in air)	0.363 A
Density	19.32 g / cm <sup>3</sup>		

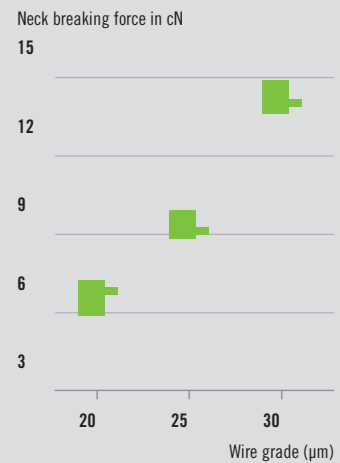
### Heat Affected Zone (HAZ)



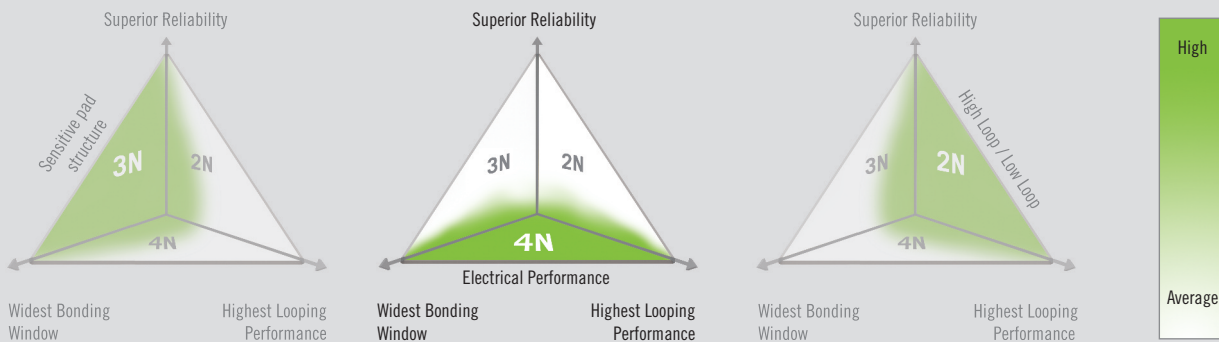
### Breaking Load vs. Elongation



### Neck Strength



## Gold Wire Segmentation by Properties



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