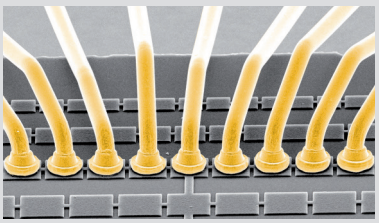
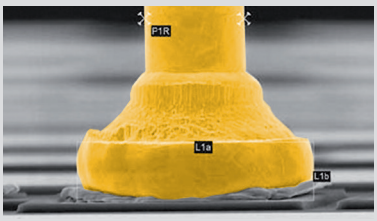
Au HA3

Low Loop • High Reliability • Bumping





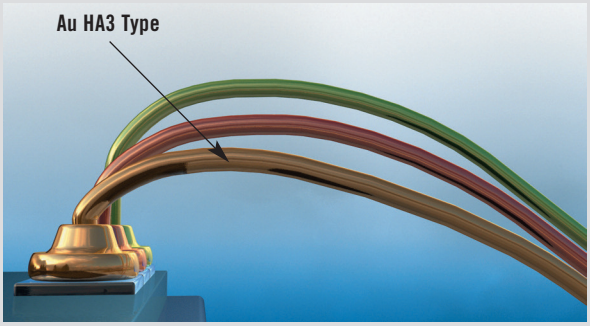
Au HA3 Benefits

- High reliability wire type
- Increased strength, high loop stiffness
- Very good pull strengths and shear
- Long & low loop geometries
- Optimum stabilized phase formation
- High thermal stability

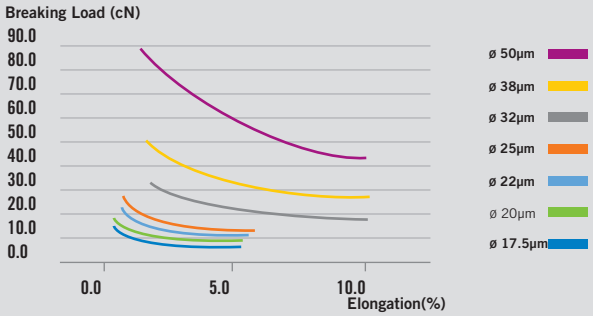
In contrast to doped Au wires, alloyed wire types contain a low percentage of alloying elements. This results in markedly higher wire strength, shorter heat affected zones and better thermal stability without a significant increase in electrical resistance. The increased wire strength, while maintaining all other mechanical properties, permits a reduction of wire diameter together with a marked saving in precious metal costs.

Areas of application

- High frequency bonding
- Low temperature bonding
- Low- and long-loop bonding
- High speed bonding
- Ultra fine pitch bonding
- Ball bumping



Breaking Load vs. Elongation



Recommended Technical Data of Au HA3

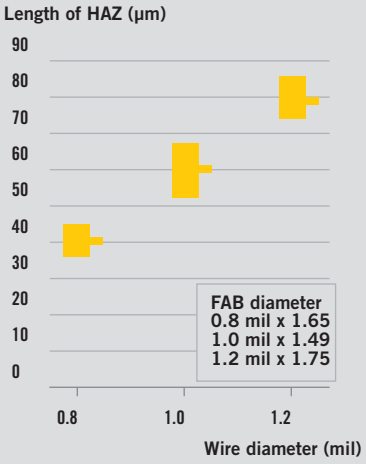
Diameter	**Microns (µm)**	17.5	20	23	25	30	33	38	50
	Mils	0.7	0.8	0.9	1.0	1.2	1.3	1.5	2.0
Elongation	**%**	2 - 6	2 - 6	2 - 6	2 - 8	2 - 8	3 - 8	3 - 8	3 - 8
Breaking Load	**cN**	> 5	> 6	> 8	> 10	> 15	> 18	> 22	> 40

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

HA3 Characteristics for 25 µm diameter

Non-Gold Elements	< 1.03wt %	**Heat Conductivity**	**3.03 W/cm.K**
Elastic Modulus	> 90 GPa	**Electrical Resistivity**	**2.9µΩ-cm**
Heat Affected Zone (HAZ)	60 - 100µm	**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)**	**0.35 A**
Density	19.2g / cm^3		

Heat Affected Zone (HAZ)



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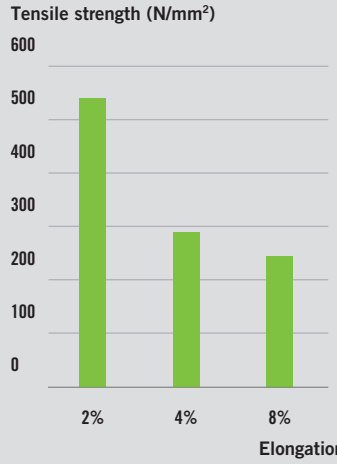
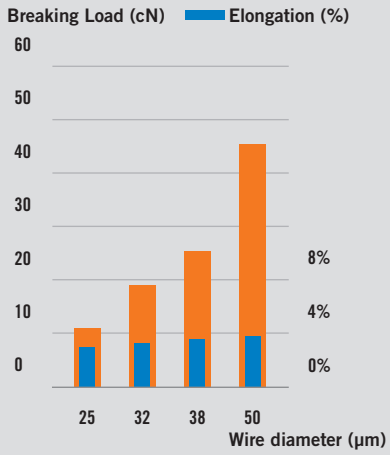
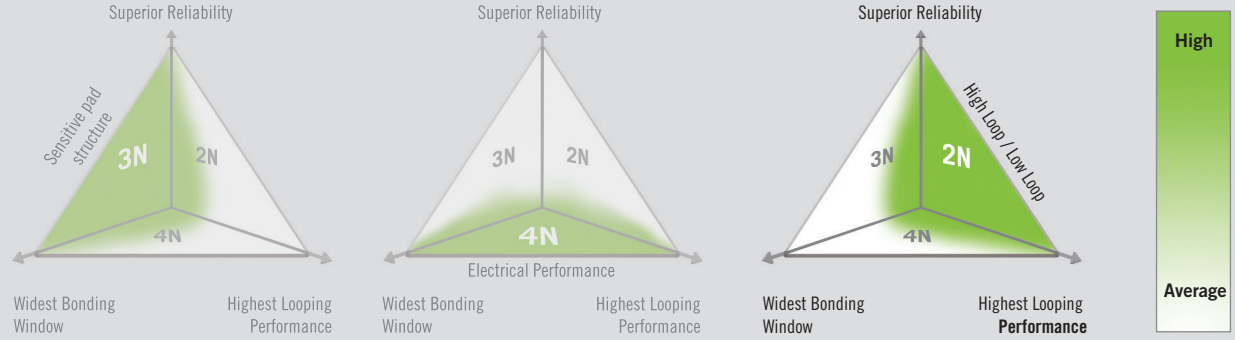


High Temperature Strength (HTS)



Gold Wire Segmentation by Properties



The data given here is valid. We reserve the right to make technical alterations.

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