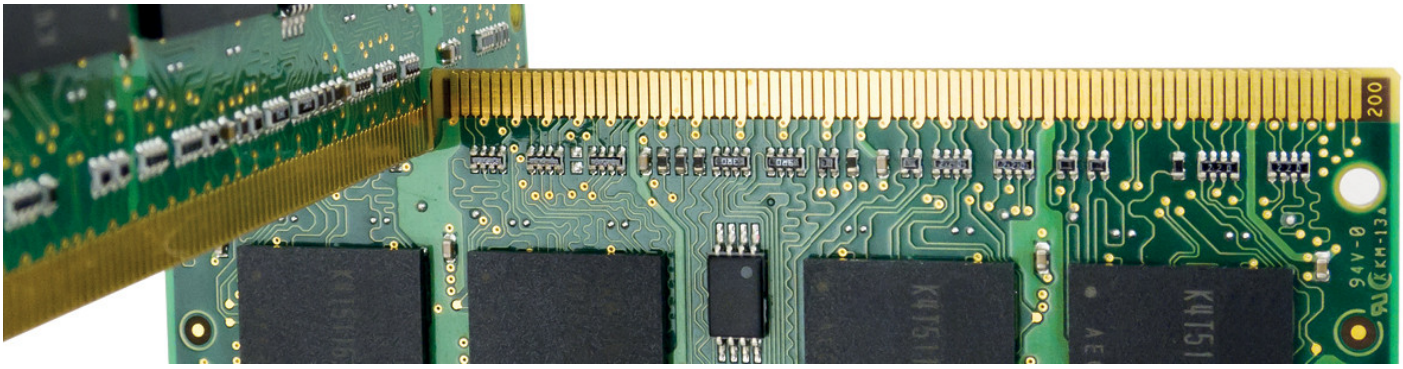
umicore
Metal Deposition Solutions



PALLUNA® ACF-200 Palladium-Nickel Electrolyte

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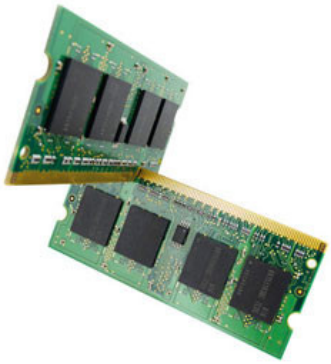

PALLUNA® ACF-200 is operated without ammonia, thus avoiding offensive smells caused by pungent ammonia gases. Since no chloride is used in the electrolyte, the lifetime of the anodes is considerably longer and equipment corrosion is strongly reduced. By means of continuous active carbon purification, interfering organic decomposition products can be effectively removed from the electrolyte.

Depending on the operating conditions, the electrolyte deposits alloy coatings containing approx. 80 % of palladium. The palladium-nickel layers are hard, resistant to wear and corrosion, they are characterized by good ductility and low internal stress. In combination with flash gold, bondabilities comparable to those of soft gold surfaces can be reached.

PALLUNA® ACF-200 has the cost advantage on its side: With contact properties similar to those of hard gold, palladiumnickel is the clearly less expensive alternative.

Electrolyte characteristics

Electrolyte type	Free from ammonia and chloride
Metal content	8 g/l Pd 7 g/l Ni
pH value	5.2
Operating temperature	62 °C
Current density range	Up to 4 A/dm²
Plating speed	0.39 µm/min at 2 A/dm²
Anode material	MMO (type PLATINODE® 187 SO)

Coating characteristics

Coating	Palladium-Nickel
Alloy composition	80 wt.% Pd 20 wt.% Ni
Colour of deposit	White
Brightness	Bright
Hardness	530 HV
Density of the coating	10.8 g/cm³
Solderability	Good
Elongation	Approx. 5 %
Bendability	2 µm crack-free

Advantages

- Palladium-nickel electrolyte free from ammonium and chloride for printed circuit board applications
- No offensive smell caused by ammonia gas
- Longer lifetime of anodes
- Reduced equipment corrosion
- Ductile and crack-free coatings
- Excellent abrasion resistance
- Constant alloy composition of the coatings
- Solder- and bondability, especially with goldflash

Applications

- Printed circuit boards
- Contacts on plug-in cards
- Smartcards

Your contact person

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