

SURFACE FINISHES FOR SOLDERING AND BONDING

	HAL leaded	HAL lead-free	Chem. Sn	Chem. Ni / Au	Org. surface Entek	Nanotechnology (Orme-Star Ultra) as alternative for chem. Ni / Au	Chem. Ag
Available	yes	yes	yes	yes	yes	validation process	no
RoHS conformity	no	yes	yes	yes	yes	yes	yes
Coating thickness	1 – 25 µm hole; 1 – 40 µm surface	1 – 25 µm hole; 1 – 40 µm surface	0.80 – 1.20 µm	Ni 3 – 5 µm / Au 0.05 – 0.15 µm	0.20 – 0.50 µm	45 – 65 nm	0.10 – 0.50 µm
Press-fit technology	yes	yes	yes	no	yes	yes	yes
Aluminium wire bonding	no	no	no	yes	no	yes	no
Storage period	> 12 months	> 12 months	9 months	9 months	9 months	> 12 months	9 months
Intermediate between the individual soldering processes	uncritical	uncritical	critical	uncritical	critical	uncritical	critical

ADDITIONAL SURFACES:

Galv. Ni / Au-standard Ni 3 – 5 µm / Au > 0.80 µm (upon customer demand) – unsuitable for soldering – only plug contact

Galv. silver-standard Ag > 10 µm (upon customer demand) – suitable for soldering