Metalon® Conductive Inks for Printed Electronics

www.novacentrix.com

Metalon® JG-027UA-10

Aerosol Ink – Aqueous-based gold dispersion – formulated for IDS NanoJet

JG-027UA-10 is an electrically conductive gold nanoparticle ink designed to produce conductive traces on substrates such as paper, PET, glass, and polyimide. **JG-027UA-10** ink is specially formulated for aerosol printing using ultrasonic atomization with the IDS NanoJet system. The ink contains a polymeric additive for improved adhesion to a variety of substrates. Cured prints are also resistant to water and isopropanol. Applications for the ink include general purpose printing as well as biomedical applications, high density interconnects, and fine line printing.

Resistivity – Thermal Processing			
Cure temperature (°C)	**Cure time (minutes)**	**Volume Resistivity (Ω-cm)**	**X Bulk Gold**
140	30	4.2 E-4	187
175	30	4.0 E-5	18
200	10	2.6 E-5	12
225	5	1.9 E-5	8.4

- Data collected using #10 Meyer Rod on Melinex ST505 and polyimide substrates
- Thermally cured in a convection oven

Resistivity - PulseForge Processing			
Drying temperature (°C)	**Drying time (minutes)**	**Volume Resistivity (Ω-cm)**	**X Bulk Gold**
140	30	< 5.5 E-5	< 25

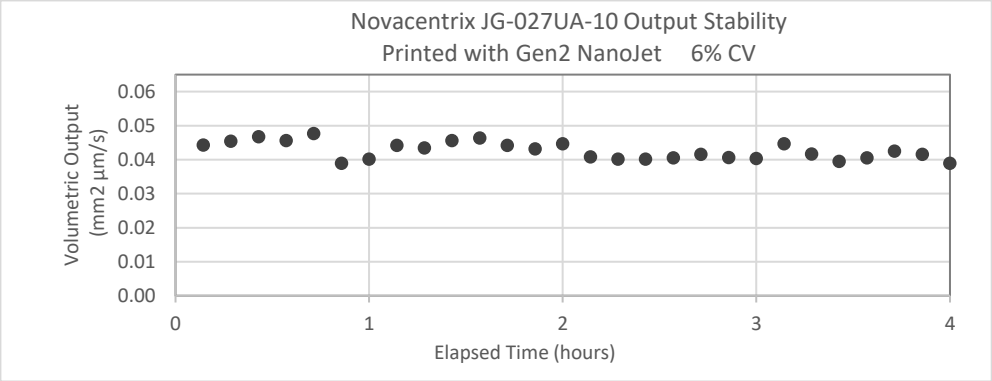
- Data collected using #10 Meyer Rod on Melinex ST505 substrates

Physical Properties	**General Description** ..... Water-based Au nanoparticle ink **Viscosity** ..... 2 – 5 cP **Specific Gravity**..... 1.1 **Flash Point**..... Non-flammable **Average dispersed particle size** ..... 30-50 nm **Au Content** ..... 10 wt% (Typical values reported)
Shipping and Packaging	Standard sample order is 3 mL. Inquire directly for packaging of larger quantities. Product should be refrigerated at ~4C for longest shelf life.

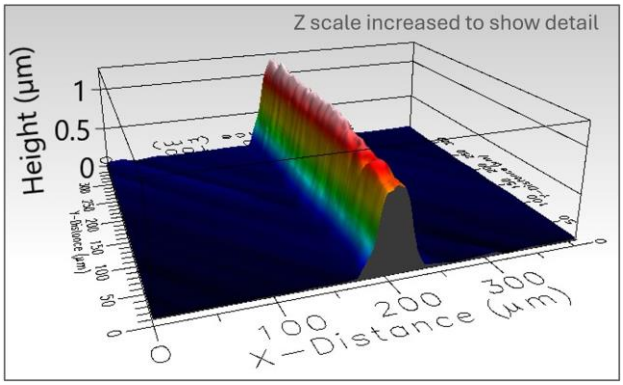
www.novacentrix.com
Contact us today to learn more.
nova.sales@novacentrix.com

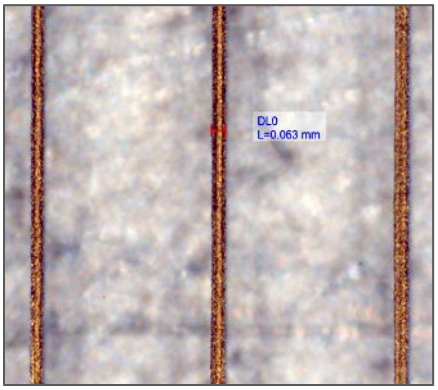
Metalon® Conductive Inks for Printed Electronics

www.novacentrix.com

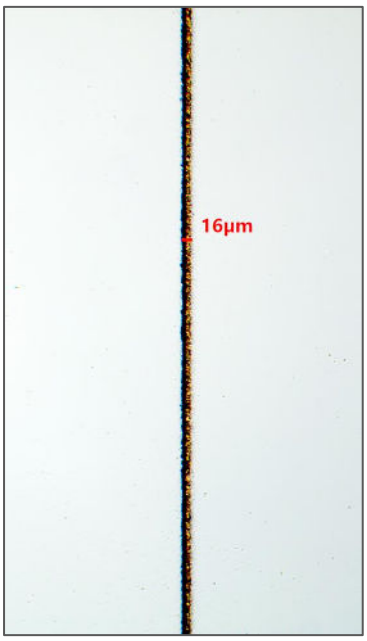


www.idsnm.com





Print Recipes Contact IDS for IDS Focus recipe files		
Parameter	**60 µm trace settings**	**16 µm trace settings**
Printhead	IDS NanoJet Gen2	
Substrate and preparation	70°C glass, 5 min. sonication in IPA	
Toolpath	6 mm/s 5 passes per trace	6 mm/s 4 passes per trace
Nozzle	150 µm plastic 3 mm standoff	100 µm metal 3 mm standoff
Material	3 ml NovaCentrix Metalon JG-027UA-10, no sheath solvent	
Ultrasonic Atomizer	35 V, 26°C	33.5 V, 25°C
Sheath Gas Flow	40 sccm (focusing ratio of 7)	25 sccm (focusing ratio of 10)
Aerosol Gas Flow	6 sccm	2.5 sccm
Post Processing	250°C bake for 1 hour	



www.novacentrix.com
Contact us today to learn more.
nova.sales@novacentrix.com