Metalon® JPT-710UA-P

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

JPT-710UA-P is an electrically conductive platinum nanoparticle ink designed to produce conductive traces on substrates such as polyimide, glass, alumina, and silicon. **JPT-710UA-P** ink is specially formulated for aerosol printing using ultrasonic atomization with the IDS NanoJet system. Applications for the ink include general purpose printing as well as biomedical, aerospace, and extreme high temperature environments.

Resistivity – Thermal Processing of Deposition on Kapton Polyimide			
Cure temperature (°C)	Cure time (minutes)	Volume Resistivity (μΩ-cm)	X Bulk Platinum
150	15	1340	127
175	15	1110	103
200	15	887	84
250	15	582	55

Resistivity – Thermal Processing of NanoJet Printed Lines			
Cure temperature (°C)	Cure time (minutes)	Volume Resistivity (μΩ-cm)	X Bulk Platinum
500	60	156	14.7
700	60 (additional)	96	9.1
900	60 (additional)	54	5.1
1100	60 (additional)	37	3.5

Physical Properties	**General Description** ..... Water-based Platinum nanoparticle ink **Viscosity** ..... 2 – 5 cP **Specific Gravity**..... 1.1 **Flash Point** ..... Non-flammable **Average dispersed particle size** ..... 50-80 nm **Pt 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.
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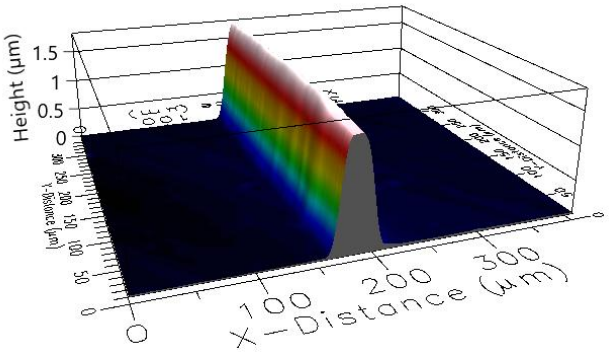
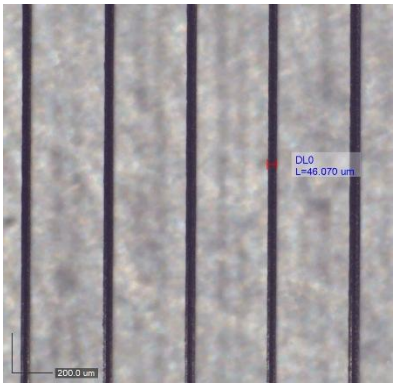
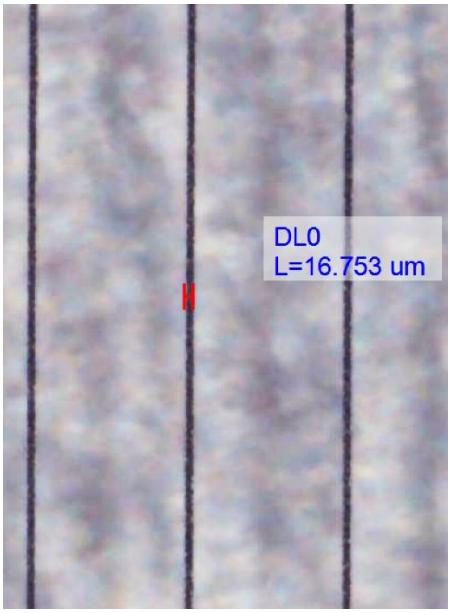




Print Recipes Contact IDS for IDS Focus recipe files		
Parameter	**46 µm trace settings**	**16 µm trace settings**
Printhead	IDS NanoJet Gen2	
Substrate and preparation	80°C glass (increase temperature, e.g. 200°C to reduce any cracking) Clean with 5 minute sonication in IPA before printing	
Toolpath	10 mm/s 4 passes per trace	15 mm/s 3 passes per trace
Nozzle	150 µm plastic 3 mm standoff	100 µm metal 3 mm standoff
Material	3 ml NovaCentrix Metalon JPT10UA-P, no sheath solvent	
Ultrasonic Atomizer	35 V, 22°C	35 V, 22°C
Sheath Gas Flow	50 sccm (focusing ratio of 10X)	40 sccm (focusing ratio of 20X)
Aerosol Gas Flow	5 sccm	2 sccm
Post Processing	120°C bake for 1 hour for traces shown. See resistivity chart for specifics.	



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