NanoJet™ Free-Standing System

AEROSOL PRINTING MADE EASY

The NanoJet™ free-standing system is the leading industry aerosol-based solution for printed electronics applications or biotech dispense application, delivering superior performance for a variety of substrate shapes, ink types, and electronic requirements. The NanoJet™ standalone printer integrates IDS' highly reliable, next-generation aerosol printing technology into a fully functional printer providing improved print performance in a reliable, user-friendly configuration for production quality printing.

ADVANTAGES

Superior Printing Performance

- Satellite-free
- Conformal
- High Accuracy

Production-Oriented Solution

- Mean-Time Between Assist >4 hour
- Line pitch standard dev. +/-5µm
- <5% variation for key performance parameters: linewidth & resistance
- Quick material changeover

Features:

- 300 x 300 x 200 mm travel
- Industrial G-code control
- CAM toolpath generation
- 300 x 300 mm heated vacuum chuck
- Plug and play installation
- Point of use aerosol generation
- Interchangeable ink cartridges
- Compact print head
- Reliable, easy operation
- Easy to clean
- 1 or 2 material print head

NanoJet ™ Printer Utility Interface

POWER - 120/240VAC - 5/3A 50/60 Hz
GAS - Dry air or N_2 - 10 psig/0.7 Bar, 200 sccm
COOLING - 2 lpm flow, 60 W min.

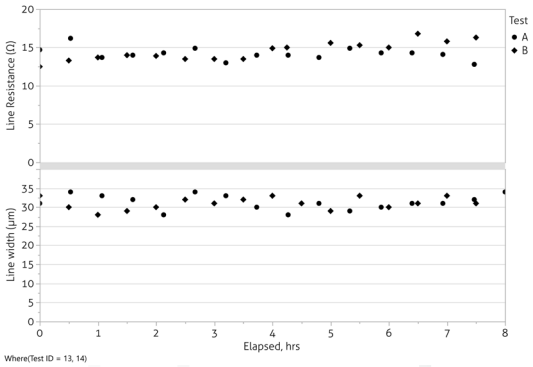
Process Capabilities

PRINT STABILITY

Demonstrated 8-hour unattended print stability
Ag nanoparticle ink
Continuous operation

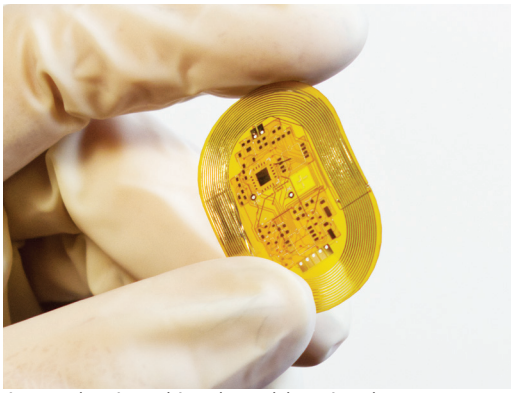
MEASURED PRINT PROPERTIES

Line width 50 µm ±4µm
Resistance 73Ω ±5Ω



8 hour stability performance

Conformal aerosol printed strain gauge on top of aerosol-printed dielectric



Aerosol-printed implantable stimulator with wireless power coupling

PROCESS ATTRIBUTES

Inks
Polymer, Metal, Resistive, Magnetic

Line
10 - 1000µm

Single Pass Line Thickness
100 nm to 4 µm

Working Distance
2 - 10 mm

Print Speed
5 - 50 mm/s