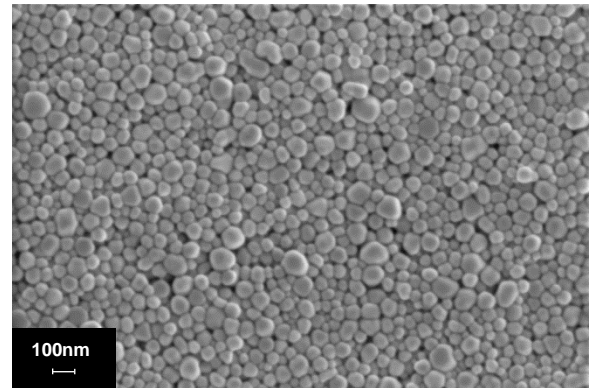


General Information

Sicryst™ I20DM-206, a conductive ink based on single-crystal **silver nanoparticles** in diethylene glycol monomethyl ether (DGME), is designed for digital inkjet printing, for use with printheads that require low viscosity inks, like Epson printheads. The ink offers low viscosity, long shelf life, storage at ambient conditions, robust jetting and good printability. Printed patterns, sinterable at low temperatures, provide low electrical resistivity and good adhesion to a range of substrates.

Ink Properties

Properties	Typical Values
Metal Loading, Ag (w/w)	20 %
Particle Size (Lumisizer®)	d50 = 70 nm d90 = 125 nm
Specific Gravity	1.25 g/ml
Viscosity (Brookfield, Cone Spindle 40, 25°C)	5 cP
Surface Tension (Pendant Drop Method)	34 dyn/cm
Open Time (Ricoh E3 printhead, 25°C)	15 min
Particle Size and Morphology (HRSEM)	See HRSEM Image



Nano Ag, HRSEM Image, x100,000

Electrical and Adhesion Properties

Sintering Profile	Resistivity (4PP)	Sheet Resistance
150°C / 30 min	≤10 μΩ·cm (≤6.3 bulk)	10 mΩ/□ (10 μm)
130°C / 30 min	≤12 μΩ·cm (≤7.5 bulk)	12 mΩ/□ (10 μm)

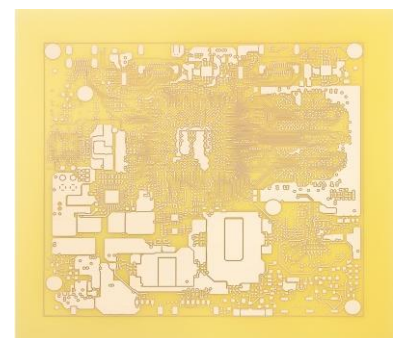
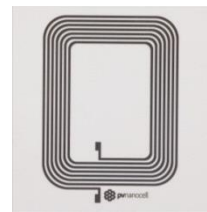
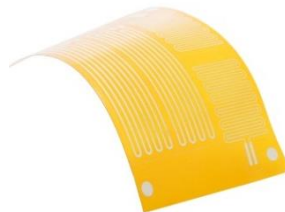
Adhesion (not limited) to: ITO, Glass
(ISO-2409, no cuts)

Compatible printheads[#]

Ink works well, among others, with printheads: **Epson**

Product Applications

Digital Printing (Inkjet)
Printed Electronics



[#] - Printheads listed here were tested and perform well. Other compatible printheads may also be applicable.