

TOPFLIGHT INNOVATIONS

Printed Conductives

Printed circuits are often a time- and cost-saving alternative to traditional production methods for applications such as sensors, diagnostic devices, antennae, RFID tags, flexible displays, transistors, shields, resistors, and dielectrics. By using a variety of materials, inks and processes, Topflight can develop the right solution for your custom application.

Polymer Thick Films (PTF). Utilizing PTFs, fine line traces to 6 mils can be achieved. Ink compounds, such as silver, carbon, and silver/silver chloride, can be custom blended to attain specific resistivity values.

Etching. If applications require higher conductivity, then copper and aluminum etching can be done on a variety of substrates, including polyester (PET), polyethylene naphthalate (PEN), and polyimide (Kapton).

Nano-Particle Inks. Space Saver, our silver nano-particle technology offering, delivers high-performance at a 50% lower cost than conductive inks with similar resistivity. Printed layers are flexible and can be wrapped around an object without cracking. The water-based process is more environmentally friendly than etching, since it doesn't require chemical processing. Graphene (carbon-nanoparticle) inks are also available with a lower cost and comparable resistivity to PTFs. Lower costs and finer lines (as low as 3 mils) mean that components can be smaller than ever.

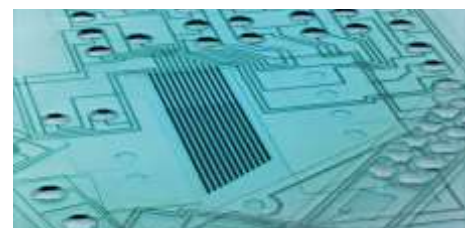
Up to 12 rotary print stations give us the capability to combine conductive components with printed dielectrics, graphics, brand authentication elements; or to laminate additional materials in-line. After printing, we can die-cut and convert your component into a custom form factor.



Screen printed flexible circuitry delivered on rolls allows for high volume production at a lower cost.



Topflight has worked with every generation of RFID tag, from the earliest EPC Class 1 to Gen 2 and beyond.



Conductives are typically produced on polyester, but we have achieved successful results on thinner films and even paper.