Overview

The NovaCentrix PulseForge 3200 is a higher processing rate, lower power version of the PulseForge 3300, for curing printed conductive inks on low-temperature substrates. Applications include conductive interconnects and patterns for printed photovoltaics, displays, smart packaging, and RFID. The PulseForge 3200 is designed for roll-to-roll and conveyor-based material processing. Whereas ovens require minutes, the PulseForge tool sinters metallic inks in milliseconds on low-cost substrates such as PET and paper. This tool is ideal for full-volume production as well as application development. The PulseForge 3200 is now CE marked for sale in EU countries.
Application Performance & Versatility

- Effective with the most widely used print methods, including inkjet, flexo, gravure, aerosol, and screen print.
- Processed substrates include PET, paper, polyethylene, polyimide.
- Conductivity of inks processed in <1 sec with PulseForge 3200 meets or exceeds oven performance.
- Resistivities below 15 milliohms/square have been attained with the PulseForge 3200 on PET.
- PulseForge tools enable the use of new ink materials, including Metalon® copper inks.

Volume Manufacturing

The PulseForge 3200 commercial processing tool dries and sinters printed electronics in a wide-web format with widths from 150 mm (6") to greater than 2 m (79"). The tool is auto-synchronized to line speeds from 1 to over 100 meters/minute (300 FPM). The high pulsed power system achieves very high temperatures for very short times in the conductive film, without damaging the underlying low-temperature substrate; e.g. plastic film or paper.

Facilities Integration

- The 3200 is consists of small-footprint modules, most of which can be located away from the main manufacturing line. This eases space constraints in the critical production area.
- The modules are connected via umbilicals that house the required power, cooling, and communication cables.
- PulseForge tools can be fully integrated with existing or built-for-purpose print systems and production lines.

Pulse Waveform Shaping

The PulseForge 3200 achieves High-Temperature Processing on Low-Temperature Materials™ using pulse-width modulated light with exposures as short as 30 µs. This is accomplished using precise real-time control of the current delivered to proprietary lamps. The pulse duration and energy waveform can be adjusted on-the-fly by feedback on product processing and performance sensors.

SimPulse™ Thermal Simulation Software

Developed especially for PulseForge tools and applicable to all thermal processing methods, this integral package is an invaluable design tool for predicting processing results.

Sample Processing by Request

Contact NovaCentrix to arrange to have your application materials processed by a PulseForge 3200, or other PulseForge tool, at our facility.

Contact us today to learn more:
info@novacentrix.com
www.novacentrix.com

NovaCentrix
400 Parker Drive
Suite 1110
Austin, Texas 78728
T: 512-491-9500