Rotary Gravure-Offset Printing System for Electronic Devices

Technology Overview

- R2R based gravure offset printing system to fabricate multi-layered (3 layers) electronic devices at low cost
- Multilayer printing accuracy (< 10μm) can be obtained by high resolution vision system and active control of motor motion
- Fine / sharp features (100~150μm) on plastic substrates can be produced at the speed of 1~15meter /min

Core Technologies

- Precise observation of align marks by high resolution vision system
- Active compensation as the position of align marks
- Perfect pattern transfer at low pressure by using blanket cylinder coated with soft silicon rubber
- Easy control of impression pressure by using pressure control system

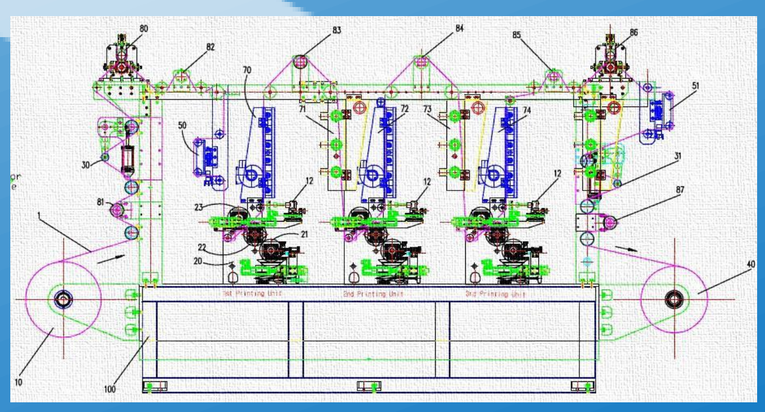
Application Area and Advantages

- Fabrication of single- and multi-layered electronic devices (ex. RFID tags, solar cells, sensors, batteries, etc.)
- Large production of electronic devices at low cost

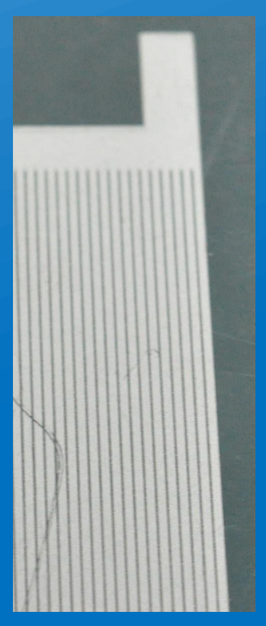
Accomplishments

- >20 patents related with this system have been filed

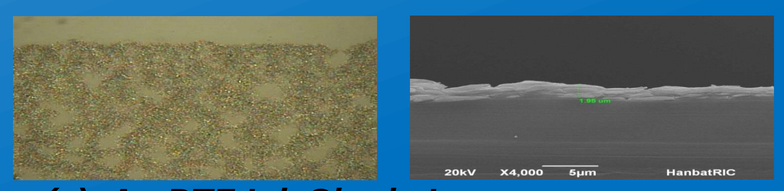
Multi-Unit Gravure-Offset Printing Press (MUGOP)



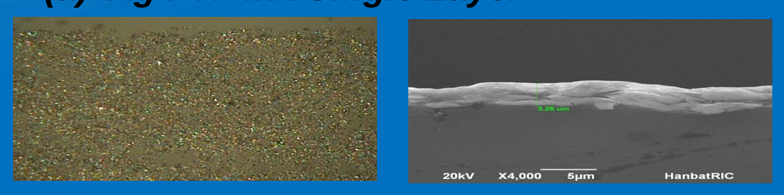
Printed pattern



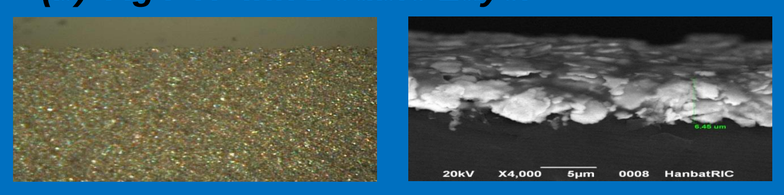
Multi-layered printed pattern



(a) Ag PTF Ink Single Layer



(b) Ag PTF Ink Double Layer



(c) Ag PTF Ink Triple Layer