<table>
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<th>Model</th>
<th>Description</th>
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| SmartWeb™ SL | Modular roll-to-roll sputter system with 3 separated cathode compartments and a large variety of process tools:  
  - Pre-heating and glow discharge pre-treatment  
  - Planar or rotating targets  
  - DC, DC pulsed, AC, bipolar pulsed power supplies  
  - In-situ spectral photometer for transmission and reflection |
| SmartWeb™ XL | Same modular architecture as SmartWeb SL, but with 6 cathodes per process module and 1400 mm usable web width. Offers same tools as SmartWeb SL plus:  
  - Scanning optical measurement system for full web width control  
  - Linear Ion Source for pre-treatment and other pre- and post-treatment tools |
| SmartWeb™ WF63 | Based on the successful SmartWeb design extended to 63 inch (1600 mm) usable web width. Optimized for deposition of optical multi-layer stacks, like Low-e for car windows. |
| SmartWeb™ WF88 | An advanced design of the chamber separation structure enables the scale up of the SmartWeb WF63 to 88 inches, a size required for architectural window films. |
NEW ROLL-TO-ROLL PROCESSES

Meeting the diverse demands for a variety of applications, new roll-to-roll processes serve rapidly developing markets for flexible electronics and advanced optical industries.

Mobile devices and the "Internet of Things" are driving growth for flexible electronics, RFID, bio-medical devices and batteries.

Touch panels are shifting from glass-based to polymeric web-based substrates

Truly flexible, bendable, foldable androllable displays are emerging

Advanced window films are being used for buildings and cars to effectively reduce energy consumption

SMARTWEB™ XL ROLL-TO-ROLL SPUTTER SYSTEM

The benchmark system for touch panel, optical multilayers and barrier coatings

- Modular platform architecture with one or two process modules supports broad range of applications
- 6 or 12 individually controlled compartments for AC and DC sputter cathodes permit deposition of film layer stacks within a single pass
- Low particle generation during coating
- Use of rotatable cathodes: Highest productivity, lowest cost of ownership with minimum defects
- Bipolar pulsed generators for excellent arc suppression
- Minimized winding defects
- Configuration of interleaf feature protects films
- Winding architecture features minimum number of guide rollers
- Proprietary In-situ process monitoring and control for consistent product quality

APPLIED FLEX ELECTRONIC/OPTIC PRODUCTION SOLUTIONS

Addressed Markets/End Products

- Multi-touch panels
- Flexible Display
- Window Film
- Bendable mobile Phone
- SmartWeb™ 63
- SmartWeb™ XL
- SmartWeb™ 3-400

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APPLIED FLEX ELECTRONIC/OPTIC PRODUCTION SOLUTIONS

- Multi-touch panels
- Flexible Display
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- Flexible Display
- SmartWeb™ WF 63
  - 1600 mm width
  - 6 or 12 cathodes, 1 or 2 drums
  - High volume production
  - Flexible Electronics, PV, Displays, Window Films
- SmartWeb™ XL R2R sputtering
  - 1000, 1400 mm width
  - 6 or 12 cathodes, 1 or 2 drums
  - High volume production
  - Flexible Electronics, PV, Displays
- SmartWeb™ 3-400
  - 400mm width
  - 3 cathodes per drum
  - Modular platform
  - Flex Electronics R&D

ADDED MARKETS/END PRODUCTS

- Multi-touch panels
- Flexible Display
- Window Film
Modular roll-to-roll sputter system with 3 separated cathode compartments and a large variety of process tools:
- Pre-heating and glow discharge pre-treatment
- Planar or rotating targets
- DC, DC pulsed, AC, bipolar pulsed power supplies
- In-situ spectral photometer for transmission and reflection

SmartWeb™ SL
For R&D and Pilot production

SmartWeb™ XL
Same modular architecture as SmartWeb SL, but with 6 cathodes per process module and 1400 mm usable web width. Offers same tools as SmartWeb SL plus:
- Scanning optical measurement system for full web width control
- Linear Ion Source for pre-treatment and other pre- and post-treatment tools
For large volume production

SmartWeb™ WF63
Based on the successful SmartWeb design extended to 63 inch (1600 mm) usable web width. Optimized for deposition of optical multi-layer stacks, like Low-e for car windows.
For Window Films up to 63 inches width

SmartWeb™ WF88
An advanced design of the chamber separation structure enables the scale up of the SmartWeb WF63 to 88 inches, a size required for architectural window films.
For Window Films up to 88 inches width

ROLL-TO-ROLL WEB COATING TECHNOLOGY
FOR FLEXIBLE ELECTRONICS AND OPTICAL MULTILAYERS
WEB Coating Products