PHOTOVOLTAICS:

DEPOSITION

For thin-film on glass - SNU Precision supplies highly productive in-line coaters) in all customary sizes for TCO-layers, backside contacts and semiconductor layers based on TF-Si, CIS/CIGS or CdTe. This equipment combines dedicated vacuum transport systems with optimized processes which include fast PVD deposition, wide-distance co-evaporation and thin-film encapsulation. In addition, a wide variety of other lines are also available, including cluster-type pilot production equipment and flexible R&D Tools.

For thin-film on foil - To meet the raising demand of serious reduction in the production costs, a growing number of companies are looking into the prospects of producing thin-film solar cells on flexible substrates. SNU Precision acknowledges this by transferring their innovative technologies into industrial reel-to-reel tools - in R&D, pilot line and mass production configurations.

INSPECTION

Optical inspection more and more plays an important part in today's production of high-quality thin-film solar modules. SNU Precision's turnkey vision systems offer reliable quality control and continuous monitoring to improve yield and maximize the output quality. The combined contribution of SNU's proprietary software engine including pattern recognition, defect classification, measurement modules and modular system design maximizes the inspection performance. Based on a modular concept using high resolution cameras and high performance LED illumination units, the tools can be tailored and optimized for various applications and inspection tasks within the production process.

STRUCTURING

Laser scribing is rapidly emerging as one of the most significant of all these processes as it is critically enabling high-volume production of next-generation thin-film devices, surpassing mechanical scribing methods in quality, speed and reliability.

OPTEK Systems produces a range of machine tools for laser processing of materials used in PV cell production. The range includes bench-top, R&D, reel-to-reel and in-line sheet production tools for all common substrate formats. Applications include cutting, scribing, drilling and contact firing, and tool designs will accommodate silicon wafers, large area glass panel and flexible substrates. Tools can be supplied as stand alone processing cells including material handling stages, or as line-integrated modules. In addition to standard and bespoke tool supply, OPTEK undertakes process and module design and provides sampling service to assist in process and product qualification. Applications include cutting, drilling and scribing for c-Si, a-Si, CIS, CIGS, DSSC and BIPV, laser welding, trimming, marking and firing are also applied in some cases.

For thin-film scribing steps not yet reaching mass production reliability and quality, SNU Precisions offers mechanical scribers with unreached uptime and performance.

OLED & Organic PV :

SNU Precision offers an entire turnkey lineup to produce complete organic devices - OLED displays, OLED lighting panels and organic solar cells, comprising the encapsulation part. The product line includes flexible R&D tools for materials development, cluster systems for low volume production and an inline system for mass production up to Gen.5 glass size. In order to meet the raising demand for producing organic devices on flexible substrates, SNU is transferring their innovative technologies into industrial reel-to-reel tools - in R&D, pilot line and mass production configurations. All these systems utilize SNU Precision's proprietary linear organic evaporation sources with unreached deposition rates, material efficiencies, and with "zero" damage to the material.

For a detailed overview of our product portfolio please check here.

For any technical questions or to discuss your specific requirements please contact Mr. Gerhard Koelz at: Email: gkoelz@ams.de
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