

Transparent conductive films are primarily employed as contact films for CIS thin-film solar cells and modules. An experimental sputtering plant and an in-line plant for substrates up to 30 cm x 40 cm are available for film deposition. The films are sputtered using either ceramic targets or metallic targets in a reactive process.

Specifications

Equipment:	In-line sputtering plant Experimental sputtering plant
Materials:	ZnO, ZnO:(Al,Ga,B), ITO
Deposition parameters:	DC, MF and RF modes
Deposition rates:	up to 100 nm m/min
Substrate heating:	up to 300 °C
Substrate pre-treatment:	Plasma etching
Film homogeneity:	+/- 5 %

Options

Coating of glass substrates, metal and polymer foils
The film properties can be adjusted through the deposition parameters.
Reactive deposition with plasma emission monitor (PEM) control
Process analysis with a Langmuir probe and a plasma process monitor.

Requirements

Vacuum-capable substrates up to 30 cm x 40 cm

Transmission spectrum of a typical ZnO:Al window layer

