LAYTEC

MEMBER OF THE NYNOMIC GROUP

Flames

Non-destructive optical in-line thickness measurement based on white-light reflectance

Applications

- Automated film thickness and uniformity monitoring
- Applicable for virtually all compounds with partial transparency in the VIS and / or NIR spectral range, such as perovskite, ITO, ZnO, CdTe, CIGS and many more
- Sheet-to-sheet monitoring of individual layer thicknesses in multi-layer stacks
- Also applicable for roll-to-roll applications
- Installation on top of conveyor or inside the deposition chamber or inert atmosphere compartments
- Optional feed-back to process conditions via customer MES

Features

- Available for VIS (400-1100nm) or NIR (900-1600nm)
- 1-7 heads per control unit
- Sampling frequency of 10-100 Hz
- Optional feed-forward to and from related process preceding and subsequent process steps
- Can be combined with LayTec's photoluminescence systems PearL and *t*-PearL for additional composition control
- Customizable GUI with different user level views
- Data saved to local network or directly fed into MES (optional)
- The thickness measurement accuracy is typically 1–2 %

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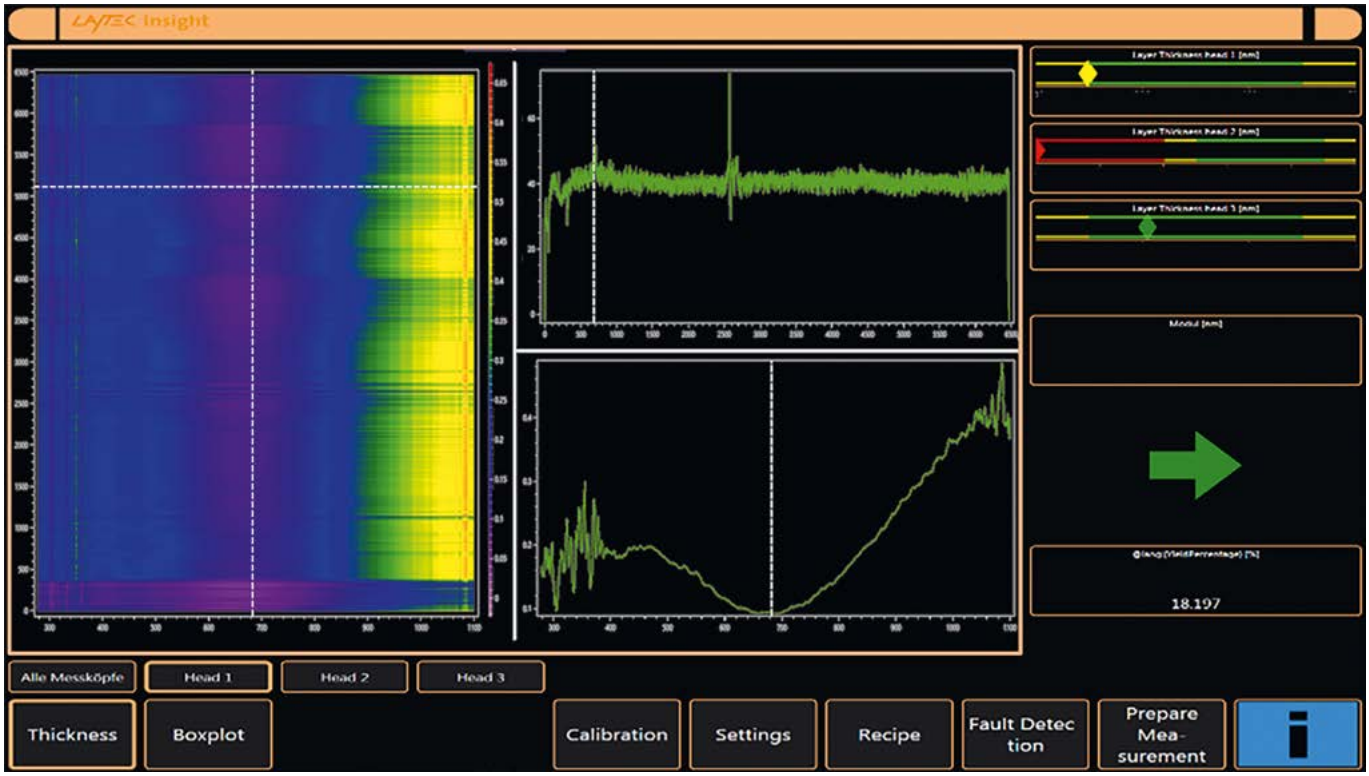
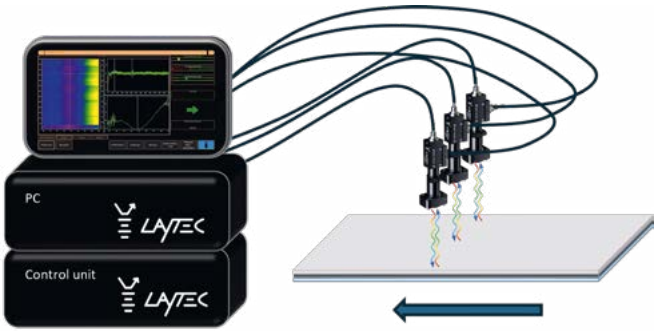


Exemplary data from in-line monitoring of an electron-transport layer on PET / IMI (ITO-metal-ITO) for OLED production: Graphical user interface of LayTec's in-line monitoring software displaying the color-coded time-evolution of the spectra measured on subsequent positions and / or samples (left), the evolution of the deduced thickness (upper center), the current spectrum (lower center) and the process specifications for the current process (right).

Process requirements

- Perpendicular view on the sample
- Communication interface to automation system for Sample ID or web position
- For combination with photoluminescence systems PearL / *t*-PearL laser protection measures need to be taken (full enclosure, interlock implementation)



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