

## HiBarSens® PreConCells

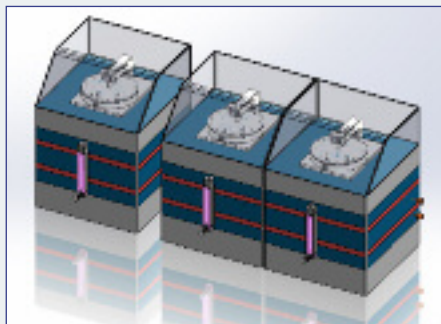
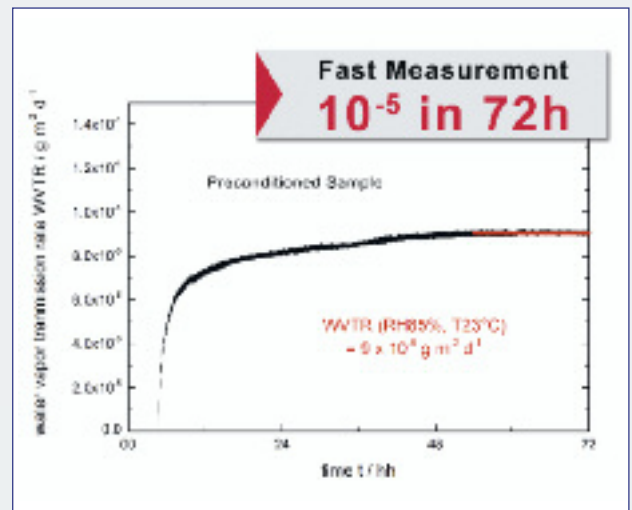
### Measuring ultra barriers within hours

Ultra Barriers having WVTR's of  $10^{-6} \text{ gm}^{-2}\text{d}^{-1}$  are the key for manufacturing durable OLED's and other flexible electronics. The challenge for metrology are manifold. HiBarSens® addresses the sensitivity and operability in a great way and the now available HiBarSens® PreConCells do resolve another requirement of barrier film manufacturers – measuring WVTR fast.

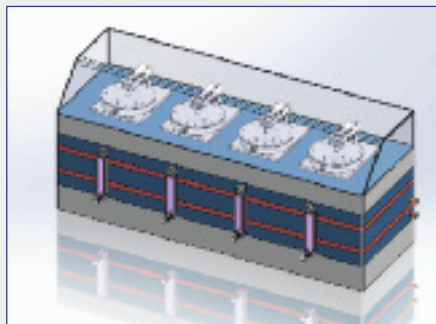
The time limiting factor in ultra barrier measurements is the establishment of a stable moisture diffusion gradient within the barrier film sample. So far precious equipment uptime is used to meet this important requirement to carry out the WVTR measurement.

Sempa has developed a preconditioning concept which enables HiBarSens® users to establish the gradient in separate PreConCell equipment, hence utilizing important HiBarSens® time more efficiently. We have shown that ultra barriers can be measured within several hours rather than weeks using PreConCells.

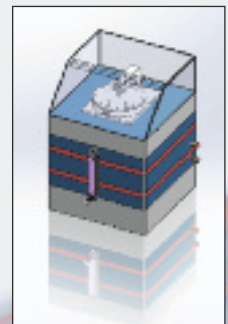
PreConCells are available in single or multichamber design meeting specific customer conditions.



Modular PreConCell setup



Multi-PreConCell Design



Single Unit setup

#### Specification

<b>Humidity range:</b>	50 % - 95 % +/- 2 % rel. humidity
<b>Cell purge:</b>	independent purge for each pre conditioning cell
<b>Setup:</b>	Single, modular or Multi-Cell design
<b>Temperature range:</b>	10 °C - 50 °C +/- 0,1°C
<b>Sample size:</b>	Ø 200 mm adaptor for smaller samples available optionally
<b>Dimension:</b>	table top device