

# From rigid towards flexible OLED lamps.

H. Lifka  
Philips Research

At the moment OLED lamps are available on the market<sup>[1]</sup>. The current devices however are still processed on glass and encapsulated with glass. Almost every OLED company has presented flexible devices fabricated within research. Flexible devices are desired for several reasons;

Not breakable, thin, light weight, shapeable etc. To fabricate flexible devices a robust extremely water tight flexible packaging is required. Since for several applications also transparency from both sides is required, the packaging should also preferably be transparent. To produce flexible devices, first, a good thin-film encapsulation (TFE) has to be developed. TFE as a route to flexible devices will be discussed.

One route to get to a cheap processing is roll to Roll (R2R) processing. Since setting up a complete R2R line is very complicated, an intermediate process will be presented. This is a sheet to sheet method to produce flexible OLEDs on a standard OLED line. This enables low amounts of flexible devices.

The last part of the presentation will deal with some of the issues of Roll to roll processing.

References;

- 1) [www.lumiblade.com](http://www.lumiblade.com)