

Dear Ladies and Gentlemen

In today's edition 2/2016 we would like to inform you about an innovation out of our E-Paper portfolio. After presentation of tiny PMOLEDs and FSTN displays in our previous newsletter, here the other extreme. PCB based flexible E-Paper Segment displays in almost DIN A2 size!

The second part provides interesting details about the construction and operation of E INK based EPDs.

With kind regards  
Your ADKOM Team

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## A new dimension of E-Paper Displays!

### Flexible, E INK based Segment-EPDs in size 550x400mm

Electrophoretic displays always win more areas of application in industry for themselves. Our recent E-Paper product can open up new ways for future application. The E INK based EPD is flexible by its PCB assembly. Its dimensions – 538x380mm by its VA – at an overall size of 550x400mm. As segment EPD developed, the display is designed as a battery application with 2x1.5 Volt. Control board and power supply are hereby placed on the back of the display.



Regardless of the viewing direction this display is easy to read, even from a distance by its enormous segments. It is basically suitable for products which need to display information unchanged over a long period. In operation of the presented watch, only the segment in the second range which varies is renewed. Up to the point the clock reaches the full minute – all the segments are subject to a refresh, and are going to be renewed.

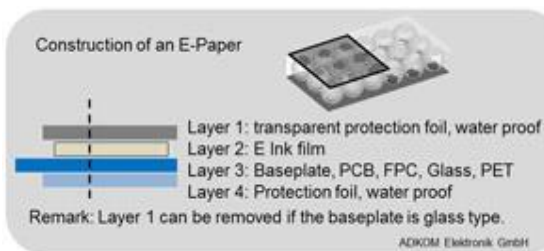
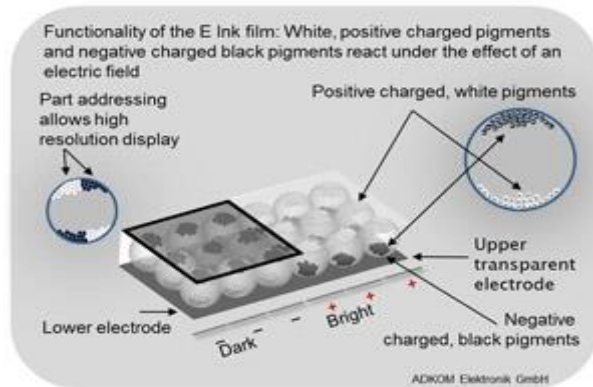
[Please contact us](#), if you require further information.

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## Design and function of an E-Paper

The original e-paper technology was developed in 1975 at Xerox Palo Alto Research Center. The invention was called at the time "Gyricon" and featured many of today's e-paper topics. Founded, out of the MIT, the spin-off E INK with its e-paper technology entered into market within the late 1990s. With E INK, the fluid consists beads, which contain negatively and positively charged white flakes.

The media (beads) in turn is embedded in a fluid or light oil. By applying voltage, to represent the desired content the flakes can be drawn either to the front or back of the fluid.



The construction of an e-paper is clearly arranged. Layer 1 represents a transparent, waterproofed protective film. The actual E INK fluid follows in layer 2. The third layer is the basic substrate, which could be made out of PCB-, FPC-, PET-material or glass. To finalize the composition, layer 4 comes in turn also with a waterproof protector. Graphic E - Paper offer high resolution and enable part addressing of the particles for multiple grayscales.

Under the category: „[Press Releases](#)“ on our website, you can find further interesting bulletin for this display technology – so just have a visit there!

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