

Flexible “electronic ink” watch

Watchmakers *Seiko* have teamed up with *E Ink Corporation* to produce the first wristwatch using “electronic ink”, a technology which offers the possibility of ultra-thin displays printed onto any surface – including curved or flexible materials such as plastic, fabric or even paper

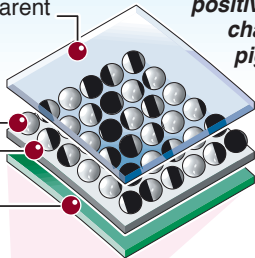
DISPLAY CROSS-SECTION

Top transparent electrode

Micro-capsules

Bottom electrode

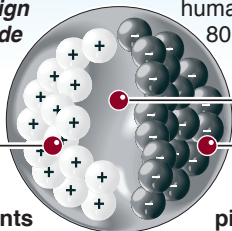
Flexible organic transistors



Electrodes can be positively or negatively charged to align pigment inside micro-capsules

MICROCAPSULE

100 microns wide – human hair is 80 microns wide



Clear liquid

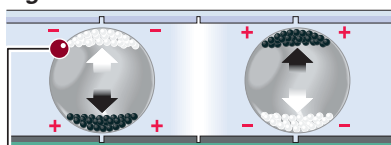
White pigments
Positive charge

Black pigments
Negative charge

Screen:
High-contrast, readable in low or bright light

Light state

Dark state



Negatively charged top electrode attracts white pigment – surface appears white

Black pigment attracted to positive charge

Low power consumption: Stable “memory effect” of electronic ink requires no power to maintain image

Seiko Spectrum SVRD001

