

rdot[•]

Printed Electrochromic Displays

- ✓ Energy Efficient
- ✓ Ultra-low Cost
- ✓ Flexible Form Factor



Printed Flexible Display

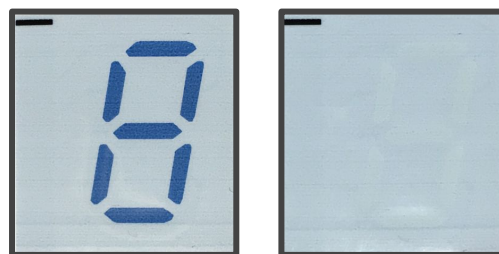
rdot's printed display is the most cost-effective display on the market. It is reflective, flexible, ultra-thin, and consumes close to zero energy.

Ultra-Low-Cost and Flexible Form Factor

The manufacturing process can be sheet-to-sheet or roll-to-roll screen printing on plastic substrates. This gives a flexible form factor and an unrivaled low cost in large-scale production.

Energy-Efficient Memory Display

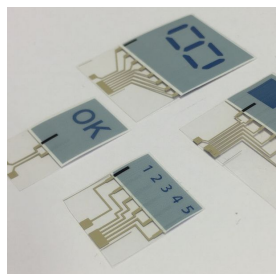
The rdot display is the most energy efficient choice for several applications. The displays have a memory, which means that they will retain the image for an extended period of time (typically above 15 minutes). Almost all energy is consumed when the display is updated and very little for a static image. The rdot display is the preferred option in the range ≈3-500 updates per day in terms of energy consumption.



ON

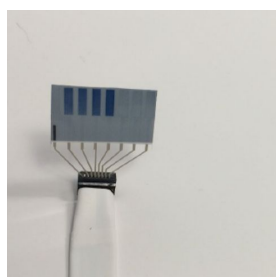
OFF

- ✓ Energy Efficient
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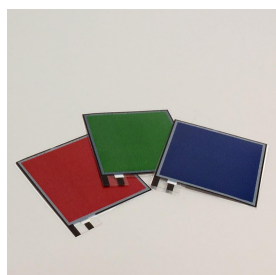
Versatile Design

The design choices are close to endless and can be modified to a very low cost



Intuitive Drive Protocol

Direct driven segments with any MCU or GPIO with $\approx \pm 3V$. Connected with standard FPC-sockets



Color Availability

Screen printed, flexible, and energy-efficient color surfaces that are switchable from a predefined color to almost black

Example Specifications

White State Reflectance	43%
Contrast Ratio	> 1:3
Switching time	<100 ms*
Bistability time	≈15 minutes**
Energy consumption	1 mJ/cm ²
Pulse Energy	0.1 mJ/cm ²
Thickness	120μm
Driving voltage	±1V to ±3V
Driving method	Direct drive
Viewing Angle	Almost 180°
Segmented or graphic?	Segmented. Passive matrix under development

* Dependent on applied voltage and segment size. Can go down to 10ms for small segments.

** After 15 minutes, a pulse consuming about 0,1 mJ/cm² is required to maintain the contrast.