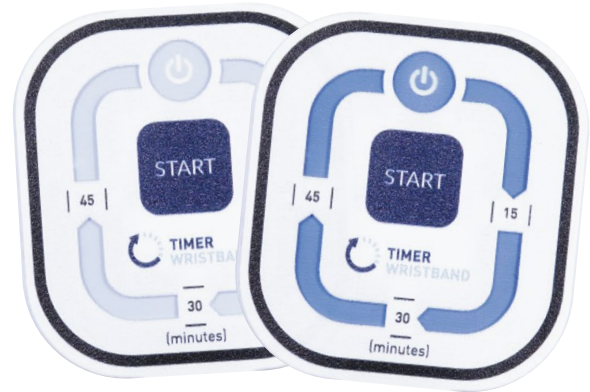
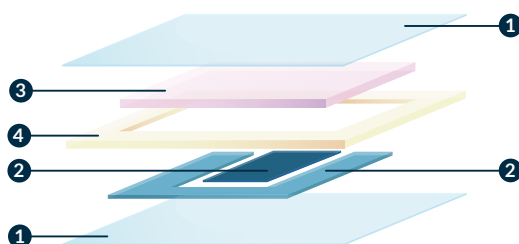


Ynvisible's printed electrochromic displays are low power, lightweight, thin, flexible, transparent and robust. These displays can be easily integrated in high volumes as a practical and dynamic visual interface to IoT and smart everyday objects.



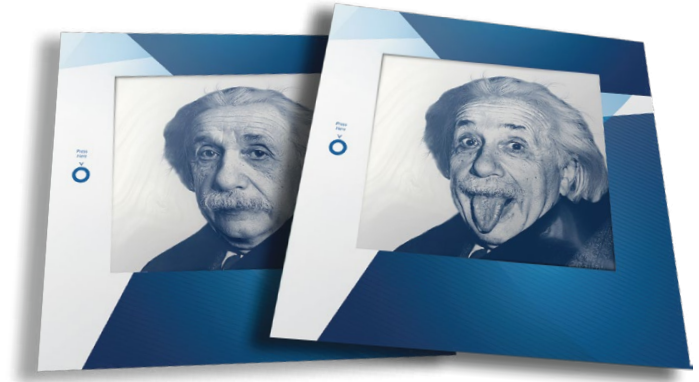
Physical	Value	
Thickness	470 μm	Typical
Materials	-	Polymer and paper-based substrates
Manufacturing	-	Printing, coating, lamination
Operating temperature	-20 to +60°C	-
Shelf life	12 months	25 °C/55% RH
Display	Value	
Minimum number of operating cycles	10,000	Typical
Switch time	1.5 s	Display size: 1 cm <sup>2</sup>
Optical memory (minimum observed)	1 h	-
Contrast	20	ΔE
Transmittance (bleached state)	~79%	-
Transmittance (colored state)	~54%	-
Colors	-	Monochromatic blue
Electrical	Value	
Switch peak current	2.3 mA/cm <sup>2</sup>	-
Sustain current	9.4 uA/cm <sup>2</sup>	To maintain full contrast
Power consumption (per switch)	0.7 μWh/cm <sup>2</sup>	-
Driving voltage	3 V	-
Power input	-	Battery, NFC, OPV and more
Driving input	-	CPU, NFC and more



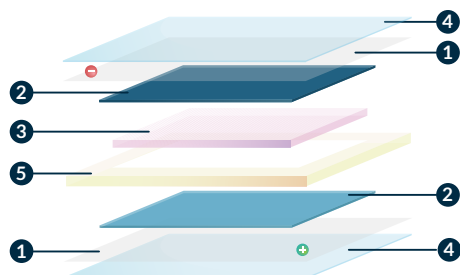
- ① Substrate
- ② Electrochromic ink
- ③ Ynvisible Electrolyte
- ④ Bi-adhesive spacer

Measurements done in laboratory conditions with a display size of 1 cm<sup>2</sup>. Characteristics may vary depending on display design. Values are based on the best current knowledge. Ynvisible reserves the right to change the information without prior or specific notice.

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Physical	Value	
Thickness	470 μm	Typical
Materials	-	Polymer and paper-based substrates
Manufacturing	-	Printing, coating, lamination
Operating temperature	-20 to +60°C	-
Shelf life	12 months	25 °C/55% RH
Display	Value	
Minimum number of operating cycles	40,000	Typical
Switch time	1.5 s	Display size: 1 cm <sup>2</sup>
Optical memory (minimum observed)	30 min	-
Contrast	45	ΔE
Transmittance (bleached state)	~72%	-
Transmittance (colored state)	~25%	-
Colors	-	Monochromatic blue
Electrical	Value	
Switch peak current	55.0 mA/cm <sup>2</sup>	-
Sustain current	4.8 uA/cm <sup>2</sup>	To maintain full contrast
Power consumption (per switch)	2.8 μWh/cm <sup>2</sup>	-
Driving voltage	1.5 V	Maximum operating voltage
Power input	-	Battery, NFC, OPV and more
Driving input	-	CPU, NFC and more



- ① Conductive layer
- ② Electrochromic ink
- ③ Ynvisible Electrolyte
- ④ Substrate
- ⑤ Bi-adhesive spacer

Measurements done in laboratory conditions with a display size of 1 cm<sup>2</sup>. Characteristics may vary depending on display design. Values are based on the best current knowledge. Ynvisible reserves the right to change the information without prior or specific notice.