ELECTRONIC DISPLAY SURFACES

ANTI-MICROBIAL GLASS
Multipurpose, Anti-Bacterial, Anti-Viral, Anti-Fungal

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An **electronic visual display**, informally a **screen**, is a display device for presentation of still or moving images, text, or video transmitted electronically, without producing a permanent record.

Electronic visual displays include television sets, computer monitors, personal computers, smartphones, and digital signage as well as many types of medical, transportation and industrial equipment.
TYPES OF FULL-AREA 2-DIMENSIONAL DISPLAYS

Light-emitting diode display (LED)
Electro-luminescent display (ELD)
Electronic paper, E Ink
Plasma display panel (PDP)
Liquid crystal display (LCD)
  High-Performance Addressing display (HPA)
  Thin-film transistor display (TFT)
Organic light-emitting diode display (OLED)

Digital Light Processing display (DLP)
Laser TV (forthcoming)
Carbon nanotubes (experimental)
Quantum dot display (QLED)
Interferometric modulator display (IMOD)
Digital micro-shutter display (DMS)
**Smart glass** or switchable glass, is a unique type of glass that is able to change its light transmission properties, based on external stimuli.

Smart glass is typically classed into active and passive glass, with active smart glass responding to a user-initiated electrical current, and passive smart glass responding to environmental factors like heat or UV light (Ultra-Violet).
ELECTROCHROMIC MATERIALS

Electrochromism was discovered in 1968 by S.K. Deb and J.A. Chopoorian and has a broad range of commercial applications. Some of those applications are smart windows and mirrors (e.g. darkening a window to control the inlet of sunlight), active optical filters (e.g. sunglasses), displays and computer data storage.

Siemens engineers have produced extremely thin, miniature colour displays that can be printed onto paper or foil, enabling production at very low cost compared to conventional LCD panels. The flexible miniature displays operate using electrochromic materials that change their color when an electrical voltage shifts charges in their molecules.
**SPD-(Suspected Particle Device) SmartGlass**

SPD-SmartGlass technology uses suspended microscopic particles in the form of a thin layer between layers of glass.

It is translucent in the unpowered state and turns transparent when its transmittance is raised because the aligning of particles by the electrical current. The amount of light, glare, and heat passing through the smart glass is controlled by the user.

The primary difference between electrochromic, LC and SPD smart glass is that the latter two require a continuous electrical current to stay in their modified state, and revert back as soon as the power is switched off.
Passive Smart Glass

Passive smart glass changes its properties according to the presence of external stimuli such as heat and light. Based on the stimulus, it can be categorized into the following types:

**Thermochromic Glass**

As its name suggests, thermochromic smart glass changes its light transmission properties according to the amount of heat absorbed. It is mainly used in self-tinting smart windows to reduce the energy consumption of buildings and control the amount of heat entering a room.

Currently, thermochromic smart glass is the most widely used smart glass in architecture because of its low cost and ease of installation compared with other glass.

**Photochromic Glass**

Photochromic smart glass changes its light transmission properties according to the amount of UV light.

It is used in color changing lenses for sunglasses, data storage, novelty items, and super-molecular chemistry; however, its biggest commercial application is in the form of smart windows for architectural glazing.
LIQUID CRYSTAL DISPLAYS

Liquid crystal displays (LCDs) are lightweight, compact, portable, cheap, more reliable, and easier on the eyes than cathode ray tube screens.

LCD screens use a thin layer of liquid crystal, a liquid that exhibits crystalline properties. It is sandwiched between two electrically conducting plates.

They are used in various electronics like watches, calculators, and notebook computers.

An LCD screen used as a notification panel for travelers.
AMAZING TECHNOLOGY INVENTED BY MIT
TANGIBLE MEDIA DISPLAY

https://www.youtube.com/watch?v=lvtfD_rJ2hE
IRON MAN 2 AMAZING INTERFACES AND HOLOGRAMS.

https://www.youtube.com/watch?v=mRi1dmFgRfo
XPERIA TOUCH, SONY'S PORTABLE ANDROID 7.0 PROJECTOR.

https://www.youtube.com/watch?time_continue=1&v=ik11LORvt6c
https://www.youtube.com/watch?v=4MVm4coBnrl
SAMSUNG’S SMART WINDOW

https://www.youtube.com/watch?v=m5rlTrdF5Cs
SMARTGLASS CAN FADE FROM TRANSLUCENT TO OPAQUE IN A SECOND

https://www.youtube.com/watch?v=G_6DfedKqWU
SMARTGLASS - ELECTRONIC SWITCHABLE GLASS

https://www.youtube.com/watch?v=tbj9hZAF4I4
THE FUTURE OF SKIN ELECTRONIC DISPLAYS

https://www.youtube.com/watch?v=zpGujcLRHNw
https://www.youtube.com/watch?v=4oqf--GMNrA
THE DYNAMIC DESKTOP IN THE OFFICE OF THE FUTURE

https://www.youtube.com/watch?v=m9lZfnRrM4Y
THE FUTURE OF HEALTHCARE BY MICROSOFT

https://www.youtube.com/watch?v=6aKNK7OTHKs
A DAY MADE OF GLASS BY CORNING GLASS CO.

https://www.youtube.com/watch?v=X-GXO_urMow
OUTSIDE BATHROOM (LOO) WITH REFLECTIVE OUTSIDE WALLS AND CLEAR GLASS INSIDE, IN LONDON

https://www.youtube.com/watch?v=QAWv3eFwLZA