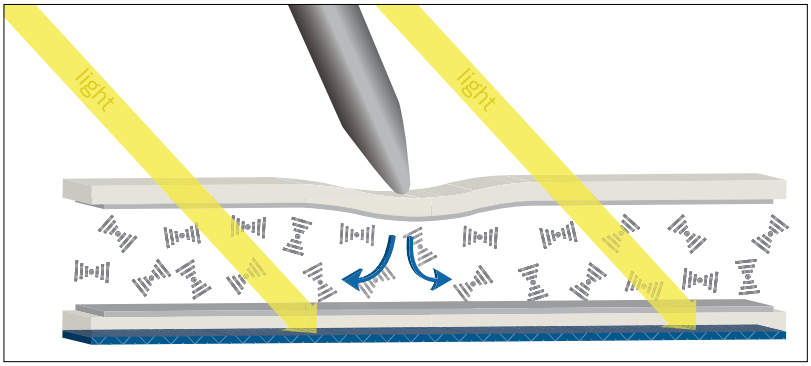
USES Reflex™ TECHNOLOGY

eTablet

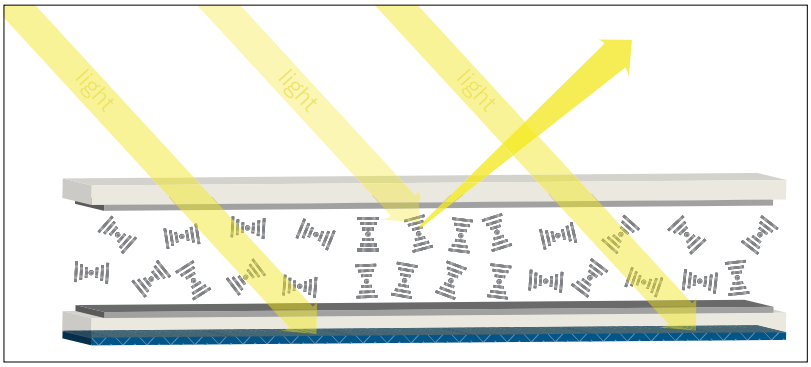
ELECTRONIC WRITING TABLET

- Instant response to pressure
- Image preserved if power is lost
- Viewable at wide angles
- Viewable in bright sunlight
- Can be dimensionally curved
- Can be made to fit any shape
- Wide range of available colors
- Thin, lightweight, rugged

The eTablet Electronic Writing Tablet allows the user to write on its screen and then erase with a push of a button. To write, a stylus or any object that will not cause damage to the screen may be used. It is designed to quickly capture writing from pressure input and to efficiently clear the screen at the user's convenience. The last image written before the power is lost is automatically preserved on the screen.



[Figure 1] Pressure is applied by stylus to the surface of the screen. The focal conic texture arranges itself into place.



[Figure 2] The new texture results in a reflective written image.

The plastic bistable LCD nano-technology, trademarked as Reflex™ by Kent Displays, Inc. in Kent, Ohio, USA, serves as the base for the eTablet. By utilizing Reflex™ technology, Kent Displays, Inc. has been able to create a display for the eTablet that provides an instantaneous optical response to pressure. Reflex™ makes it possible for a display to be viewable at wide angles and in bright sunlight, unlike conventional LCDs. Reflex™ displays are lightweight, thin, rugged, and can even be dimensionally curved.

TECHNOLOGY

Shown in the cross-section of an eTablet (Figures 1 and 2), as pressure is applied to the screen, the liquid crystal is displaced, which induces a flow to create the reflective planar texture.

APPLICATIONS

eTablet can be adapted for a range of applications, shown in Figure 3. Ideal standalone applications for an office environment are: office door signs, nametags, and box labels. Because it is lightweight and durable, it can also be clipped to or integrated into notebooks and binders. For personal use, the technology can be developed into items such as refrigerator magnets, toys, car visor accessories, and backpack accessories. It can be inserted directly into doors, electronics cases (such as a laptop keyboard), and into large appliances (such as a refrigerator door).


Laptop Keyboards


Backpacks


Storage Box Labels

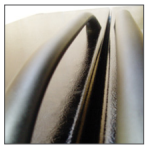

Toys


Paper Binders

Work Office Door Signs


Refrigerator Magnets


Home Office


Appliances

[Figure 3] Applications

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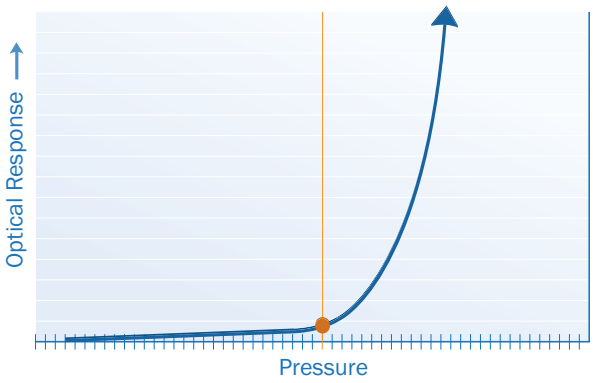
SPECIFICATIONS

Color	A wide range of hues is available. • one color for writing • one color for the background	
Contrast	legible, high-contrast	
Curvature	The display has been tested to wrap to a 25.4 cm diameter.	
Environmental	• extended UV exposure will degrade performance • UV protection is recommended for outdoor use	
Power	.019mW/cm2 for 1.8 seconds • uses power only when display is erased	
Temperature	[Storage] -10°C to 65°C	[Operation] 10°C to 40°C
Thickness	0.32 mm	
Weight	0.03 g/cm^2	



[Figure 4] Pressure Sensitivity

[Figure 5] A display cut around curves.

[Figure 6] A dimensionally curved display.

PRESSURE

Light pressure is all that is needed to create an optical response. The eTablet has an instantaneous response to localized pressure input; a concentrated area of pressure creates a more bright and intense image on the screen. Figure 4 shows that the display exhibits a threshold of pressure sensitivity. There is a critical point in the amount of pressure applied which causes a response.

INTEGRATION

The eTablet display is not bound to traditional LCD formats and shapes. Because the screen is plastic, it can be manufactured to fit any shape, including curves (Figure 5) and holes. Its flexible material also allows the possibility for dimensionally curved (Figure 6) displays.

There is a wide range of colors to choose from that can be produced for the displays, however, certain color combinations provide more visual contrast than others. One hue can be chosen for the background and one can be chosen for writing. Examples of popular color choices are: Black and Green, Orange and Red, Blue and Yellow, and Black and Blue. Contact Kent Displays, Inc. for more information about color.

AVAILABILITY

eTablet is currently in production. Availability and cost are dependent on quantity, display shape, and size. Contact Kent Displays, Inc. for more information.

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