Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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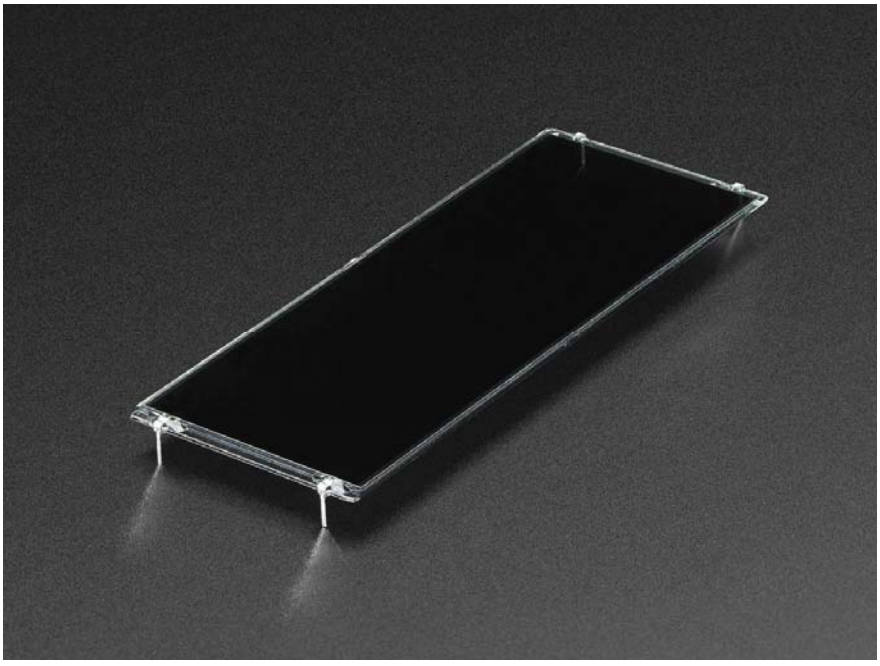
Liquid Crystal Light Valve - LCD Controllable Black-out Panel

PRODUCT ID: 3330



Description

What do you get when you power a layer of liquid crystal material sandwiched between two sheets of glass? A **Liquid Crystal Light Valve** (a.k.a a LCD Controllable Black-out Panel)! They're often used for electric welding helmets because they can protect the welder's eyes from the bright sparks. *Or* – if you aren't a welder – they can be used to provide a "reveal" effect for your project, as you can control the opaqueness of the LCD.

A Liquid Crystal Light Valve (LCLV) is a device that uses the properties of liquid crystals to control the level of illumination passing through an optical system. It's basically what goes on in your LCD monitor/TV/projector etc, but for each individual pixels.

In this product, we have one huge LCD piece, which will filter what you see through it. Normally, its a tinted gray color (because the light around us is not polarized, it is not completely clear). There are two sets of electrodes, on the left and right. The two pins closest to each other (on the edges) are the same electrode, and the LCD is symmetric so you can use either one as positive/negative.

By changing the voltage applied, it will block light more and more. Starting at about 1.0VDC the glass will start darkening. At about 4.0V the glass will be opaque. 5V is the max recommended voltage. In between you will get darker shades. Note that it is not capable of blocking 100% of light, but it looks like it blocks at least 95%. If you put a bright light behind it, you will see some light shine through!

Almost no current is used and one the LCD, once activated with a voltage, will stay at that darkness level even if the voltage is removed. So, if you want to have it turn on and off, you'll need to drive it with a 0V signal to 'open' it up, or connect a draining resistor between the two pins to leak the voltage off when not powered.

Please note that this is a thin piece of glass, you can't bend it and its very delicate! Use care when working with this item.

Technical Details

- Outline size: 96.5 x 38.0 x 2.0 mm
- View area: 88.5 x 34.5 mm
- Driving voltage: 5.0V
- LCD type: TN, transmissive, positive
- Operating temperature: -10° to 60°

Product Dimensions: 97.0mm x 38.0mm x 2.0mm / 3.8" x 1.5" x 0.1"

Product Weight: 14.4g / 0.5oz