

## **BUYING TIPS: PLASMA V. LCD SCREENS**

When deciding whether to use plasma or liquid crystal diode (LCD) displays for your applications, you need to consider many factors. Both provide brilliant color, sharp text contrast, and crystal-clear images. But the way in which plasma and LCD screens process and display incoming video/computer signals is markedly different.

### **Compare and contrast.**

Both plasma and LCD technology provide stark enough contrasts to make displays sharp and pleasing. But when it comes to contrast output, plasma technology outperforms LCD screens. Some plasma displays have a 3000:1 contrast ratio, which is the measure of the blackest black compared to the whitest white. LCDs use electric charges to untwist liquid crystals, thereby blocking light and emitting darker pixels. Despite this process, LCD displays don't produce more than a 1000:1 contrast ratio.

### **Clarity that's light waves ahead.**

Pixels contain enough information to produce every color in the spectrum. Because plasmas use each and every pixel on their screens, color information is reproduced more accurately. Plasma screens display moving images with remarkable clarity, though burn-in can be an issue. For displays with lots of light and dark imagery, plasma panels provide excellent performance with their high-contrast levels, color saturation, and overall brightness.

LCD displays, on the other hand, manipulate light waves and reproduce colors by subtracting colors from white light. Though this makes it more difficult to maintain color accuracy and vibrancy compared to plasma screens, LCDs have an advantage with their higher-than-average number of pixels per square inch. These additional pixels make LCD technology better at displaying static images from computers or VGA sources in full-color detail. Plus, there's no flicker and very little screen burn-in.

Applications with large amounts of data—such as those found on spreadsheets—display particularly well on LCD monitors.

### **Brilliant displays that go on and on.**

With LCD screens, there are essentially no parts to wear out. LCD screens last as long as their backlights do, with displays lasting, on average, 50,000–75,000 hours. That's why LCD screens are especially good for long-term applications, such as digital signage or displays that require around-the-clock use.

Plasma screens, however, use a combination of electric currents and noble gases (argon, neon, and xenon) to produce a glow, which in turn yields brilliant color. The half-life of these gases, however, is only around 25,000 hours. The glow they produce grows dimmer over time.

### **The right angle can make all the difference.**

Plasmas light every pixel on the screen, making the brightness on the screen consistent and giving plasmas the edge when it comes to viewing angles. In fact, plasma screens have as much as a 160° viewing angle compared to LCDs. This makes viewing the images on the screen easier to see from a variety of angles. In doing so, however, plasmas consume much more power.

LCDs display at 130–140° angles, but their use of fluorescent backlighting requires much less power to operate than plasmas. This also makes LCDs less prone to burn-in or ghosting of images.

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