Making the Right Choice

What's the difference between LCD and Plasma TV

If you're looking to buy a large flat-screen TV, you no longer just need to decide which brand to choose. You also need to pick between two very different technologies: Plasma and LCD. So in this document we hope to make your decision easier by putting the case for why we think Plasma is the way to go for large screen sizes over 42".

Since Plasma & LCD use different methods to display images on the screen, they produce different results. With powerful large screen images, Panasonic VIErA Plasma TVs in big screen sizes of 42", 46", 50", 54", 58" or 65" are ideal for the ambient lighting conditions of your living room. For viewing big impact,fast moving action from movies to sport, we recommend you choose a big screen Plasma TV so the whole family can enjoy the experience.

Panasonic VIErA LCD TVs with screen sizes of 32" are ideal for personal viewing in smaller, brightly lit environment set-ups such as in the kitchen or bedroom.

But why should you listen to us? Well, for starters we actually make LCD TVs and Plasma TVs. LCD TVs are ideal for small screen sizes under 42" and Plasma for larger screen sizes over 42", and this is based simply on our experience of which technology works best.

Different Technologies

Facts you should know before buying a large screen TV

TECHNOLOGY

Plasma technology is relatively new (1964), having been originally developed as a full colour screen at the time of the Winter Olympics in Nagano (1998) as a means of showing sporting events on larger screens than is possible with CRT technology. It was thus developed from the ground up for showing video as opposed to static pictures.

LCD Technology is actually an older technology dating back to 1904 and was primarily developed to display static images on digital calculators and watches, before being adopted by the IT industry for computer monitors and eventual development into TV sets.

COLOUR REPRODUCTION

With Plasma technology, every individual pixel (3x cells or sub-pixels) contains all the elements necessary to make colours which helps Plasma produce a wider colour palette with more natural tones.

With LCD technology, colours are made by manipulating the light coming from either a Cold Cathode Fluorescent Lamp (CCFL) or Light Emitting Diodes (LED) then passed through colour filters.

In the case of CCFL & LCD TVs with edge lit LED Backlight this reliance on a fixed backlight source and colour filters may make it difficult to produce consistently natural and believable colour uniformality and tone.

Because Plasma TVs can produce more viewable colours than LCD, Plasmas are able to bring the colour of your world to TV. If you want to see more vibrant colour on your TV we recommend that you choose a big screen Plasma TV.

INTENSE BLACKS

With Plasma screens, a pixel can be made to look almost completely black by stopping any electrical current from entering it. Panasonic are now so good at this that some of our Plasma's boast a dynamic contrast ratio of 40,000:1 (native contrast), helping to create a truly cinematic, deep image.

With LCD, some unwanted light from the backlight may seep-through pixels that are supposed to be black, meaning that dark areas may look grey and flat.

If you are a movie buff and love the cinema experience, we recommend that you choose a big Plasma TV to deliver a more cinema-like experience in your home with deeper and truer blacks which enhance depth and richness of colour.

RESPONSE TIME

Plasma technology works on the rapid electrical discharges in the individual cells to produce an image, which can react almost instantly to changes in picture content. This makes a Plasma screen's response time practically zero. Moving objects are rendered vibrantly and crisply.

With LCD TVs, response time describes the time it takes for a liquid crystal cell to go from active (white) to inactive (black) and then back to active (white) again (the LCD molecules have to physically move). Because this whole process can take considerably longer than a Plasma cell to refresh itself, LCD TVs may blur moving objects as the LCD cells fail to go through their active/inactive/active cycle fast enough to keep up with the rapid changes in the source image. Some large LCD TVs now utilise frame interpolation technology in an effort to reduce the effects of monitor blur. The larger the screen, the more noticeable this motion blur may become – and this is why we recommend Plasma for larger screens.

If you're looking for a big screen TV to view sport and action movies, Plasma should be your choice.

VIEWING ANGLE

Because Plasma screens emit light directly from each cell, their pictures retain high contrast and picture quality even when watched from extreme angles.

Because pixels in conventional LCD TVs in effect merely "pass on" a light originating from a single point behind them, some may lose contrast and colour if watched from different angles.

If you often entertain groups of people for TV viewing, movie nights or sports events, we recommend that you should choose a big Plasma TV so everyone has the best seat in the house.

An entirely new kind of Plasma

Why choose NeoPDP technology when buying Plasma?

NeoPDP is an entirely new Plasma design. NeoPDP combines breakthrough revisions in three critical areas – materials and processes; discharge gas and cell design; and circuit and drive technology. Together these advantages bring you twice the luminous efficiency of previous displays.

FULL HIGH DEFINITION MOTION WITH 1080 LINE RESOLUTION

VIErA 600Hz Sub-field Drive technology lets you view superb Full HD motion and still images with 1080 lines of resolution. For even greater clarity with motion images, Panasonic uses unique image-analysis technology. This convert the motion in each scene into data, then optimises the frame to display fast-action scenes in Full HD resolution. Each frame display is faster than previous systems, to reduce after effects.

(2,000,000+:1) DYNAMIC CONTRAST (NATIVE 40,000:1)

New VIErA models incorporate an improved panel production process and the new Real Black Drive system. A pre-discharge control system, the Real Black Drive system combines with NeoPDP technology to achieve next-generation black reproduction. When you're watching movies, VIErA renders images just the way the director intended, even in scenes where it's difficult to achieve a proper balance of light and dark.

RICH GRADUATION: 6,144 EQUIVALENT STEPS OF GRADATION

The equivalent of a full 6,144 steps of gradation assures smooth, rich image expression. This superb gradation performance means that even the delicate shades of colours in a sunrise are accurately reproduced.

Panasonic Difference

Why choose Panasonic VIErA?

So now you understand some general reasons why we believe Plasma is better for large-screen TVs than LCD. Let's now get specific about the extra improvements Panasonic exclusively delivers in the shape of our own specific processing and production technologies.

IMAGE PROCESSING

Any TV, even a full HD one, is only really as good as its picture processing. Imagine a car with the very latest alloy wheels, but an underpowered engine. Quite simply, even with the alloy wheels, the lack of core power means it will still under perform. The same is true of a flat panel TV.

Panasonic uses its own state-of-the-art "VIErA" processors, the result of twelve generations of Plasma production, to balance all the key picture elements and get the best results possible from your video sources.

HIGH DEFINITION

Another example of the "Panasonic difference" in action can be seen in the current "Full HD" debate. Some manufacturers emphasise that only Full HD TVs can deliver the best picture quality - however, more resolution does not always mean better picture quality.

Why? Because resolution by itself is just one small element among others such as black levels, motion handling, clarity, picture noise, and colour reproduction.

Panasonic's focus is on getting the best from ALL the different elements of a picture including, but not only, the resolution.

PRODUCTS

All the technology core components inside Panasonic Plasma screens are designed, developed and manufactured by Panasonic.

The result is a totally integrated end-product and complete quality control, ensuring that our picture quality is never compromised by third-party "weak links".

PANEL LIFE

Panasonic VIErA Plasma panels boast a long service life of approximately 100,000 hours and LCD panels approximately 60,000 hours**.

Long Service Life

The plasma panel offers a long service life up to 30 years, when watched for up to eight hours a day. Panasonic is working to utilise resources, by developing products that maintain high quality for a long time.

By making the panel glass thinner, we are able to increase the light transmission to create a brighter picture with less power.

CONNECTIVITY

VIErA Link* – operation with a single remote control

VIErA link allows you to control your VIErA TV, Panasonic Blu-ray or DVD player/ recorder, Panasonic Home theatre system and Panasonic Full HD camcorder with a single remote, from the comfort of your sofa. Simply connect the devices to each other with an HDMI cable. That's Genius Connecting.

VIErA Image Viewer – easy viewing of Full HD Photos and Videos

It's easy to view Full HD images with the SD card slot. Watch and show your photos and videos to family and friends right after you take them. Simply slip your SD card out of your camera or camcorder, and into your VIErA TV, to display photos and Full HD videos on the large screen. You can also choose from among 3 types of background music and 4 display effects. That's Genius Sharing.

* VIErA Link uses control signals from HDMI cables to interlink DVD Recorder, AV amp and HD Video Camera operations so they can be controlled by the VIErA remote control unit. Depending on the cable used, this function may not be possible. Panasonic HDMI cables are highly recommended.

** Number of hours until the panels brightness is reduced to half its initial level, based on operation in the standard mode with dynamic content.