

Plasma TV Buying Guide

Plasma TVs are flat, super high-contrast TV sets that are offered in very large sizes, which at the extreme end exceeds 60-inches to provide the one of the most immersive theater-like viewing experiences you can get in the comfort of your own home. In addition, plasma TVs are also extremely thin to offer flexible placement options that include the wall of your living room.

Plasma TV Features

Immersive theater-like screen sizes

At the larger end of the scale, plasma TVs come in sizes exceeding 60-inch. This helps the plasma TV to provide an immersive, “theater-like” experience right in your own living room!

Space-saving design

Though plasma TVs are offered in impressive sizes, their thicknesses are dramatically thin by comparison – only a few inches. This allows plasma TVs to be hung from the wall – a fashionable installation method that opens up the space beneath it for a variety of other gadgets or toys.

Absolute flat screen

With the Plasma TV’s perfectly flat screen, picture distortions owing to screen curvature are a thing of the past.

Astonishing picture quality

Plasma TVs provide very rich, saturated colors, extremely high contrast ratios and wide viewing angles to maximize your viewing enjoyment. Plasma TVs are often found in high-quality video systems such as high-end home theaters or shop or exhibition screens.

Ready for DTV

DTV (Digital TV) is poised to gradually replace standard analog TV. The plasma TV can support DTV signals with a built-in or external digital tuner. Most plasma TVs can support at least EDTV (Enhanced Definition TV, 480p), which provides superior picture quality to regular analog TV.

HDTV Capability

Plasma TVs are great for displaying HDTV pictures as they are designed to be HDTV compatible or HDTV ready by featuring a 16:9 widescreen aspect ratio and very high native resolutions. Please refer to the Screen Resolution section below for more details.

The Parameters that Matter

Screen size

The smallest sized Plasma TV offered is 32-inch. This means that plasma TVs are always large. Currently, the most popular plasma TV screen size is 42", but larger sizes such as 50, 55, 60 and 65-inch sets are also available. In general, larger screen size will cost more.

The relationship between Screen Size and Viewing Distance

Although many of us hope to purchase the largest TV we can afford, this actually isn't recommended. The proper size TV to purchase should be a function of the distance you sit in relation to the TV screen. For example, a 1 foot distance between you and a 42-inch Plasma TV will most likely feel very uncomfortable. A distance of 5 ~ 10.5 feet from the same 42-inch Plasma TV will provide a much more comfortable viewing experience and still maintain the immersive qualities of the large screen.

The following table provides a quick reference for the relationship between screen size and the viewing distance, measured from the screen of the Plasma TV.

Screen Size (in inches)	Viewing Distance (in feet)
37	4.5 ~ 9
42	5 ~ 10.5
43	5 ~ 11
50	6.5 ~ 12.5
55	7 ~ 14
61	7.5 ~ 15
65	8 ~ 16

These are only recommendations - please find a viewing distance that best suits your own preferences.

Screen Resolution

Every displayed pixel on the plasma TV screen corresponds directly to a physical pixel on the plasma panel. Each pixel on a horizontal line multiplied by the number of vertical lines gives you the native resolution of the plasma TV. At current, 852 x 480 is the frequently applied resolution on relatively small plasma TV sets, such as 37" and 42"; while higher native resolutions (e.g. 1024 x 768, 1366 x 768) are available in larger plasma TV sets.

Aspect ratio

The aspect ratio of a TV is its width to height proportion. 4:3 is the aspect ratio for standard televisions. This corresponds to 3 inches of height for every 4 inches of screen width.

The majority of plasma TVs utilizes the 16:9 widescreen aspect ratio. A plasma TV's native resolution can sometimes indicate its aspect ratio. For example, the native resolution of 1366 x 768 corresponds directly to the aspect ratio of 16:9. In other cases, a plasma TV's featuring the resolution of 1024 x 1024 (not a typo!) can also correspond to the 16:9 widescreen aspect ratio because the horizontal pixel pitch (distance between pixels) is wider.

Contrast ratio

In scientific terms, contrast is the ratio between the light intensity of the brightest and the darkest points in an image. What it does in practice is to allow a screen to show both light and dark details as well as possible. A higher contrast performance often allows darker details to show better and therefore improves picture quality.

Plasma TVs can produce very high quality blacks (this means the depth of the color black is excellent), because the light emitted by every pixel can be controlled directly. As a result, plasma TVs often offer extremely high contrast ratios, such as 3000:1, 5000:1 or even 10000:1.

Viewing angle

The viewing angle refers to the max angle (horizontal or vertical) from which a user can view a plasma TV screen at acceptable image quality. Currently, most plasma TVs are capable of at least 160°/160° (Horizontal / Vertical), and some are able to exceed 170°/170° (H / V), which allows a large number of people to view the screen from many different angles.

Connectivity

Every plasma TV offers several types of input connector allow signal sources such as a TV antenna, cable TV line, and other such devices such as a DVD player or gaming console to connect and provide a picture. If, for example, you want to output your PC's picture to your plasma TV, you will need your plasma TV to come equipped with either a DVI or D-Sub port. For DVD players you can work with composite connectors, but component connectors are recommended for better image quality. For in-depth information, please see our [Plasma TV Connector Guide](#).

HDTV Capability

The future of TV is definitely Hi-Def. At the current time, only a portion of plasma TVs sold is **HDTV-ready** or **HDTV compatible**. This means that they are able to display an HDTV resolutions, but do not feature an HDTV tuner - this requires owners to purchase an external HDTV tuner separately in order to provide the TV with an HDTV picture signal.

HDTVs that are built with internal tuners are able to accept HDTV signals directly over the air (by connecting an antenna) without the help of an external tuner. These TVs are called **Integrated HDTVs**.

Some newer plasma TVs are not only integrated HDTVs but **Digital Cable Ready (DCR)** as well. These plasma TV sets are able to receive over the air HDTV programming, but more importantly, they are used to tune into digital cable programming by inserting a CableCard from the cable provider.

Please note that digital cable programs are broadcast digitally and are not automatically offered in HDTV resolution, but digital cable programming *can* include HDTV channels if the

cable provider carries them.

Audio

Some plasma TVs come with built-in speakers and generally provide acceptable sound quality. Others models do not provide speakers, and are more suited for use by individuals or families that own independent sound systems. Users also have the option of purchasing optional external speakers. Please be sure to look at the each plasma TV's detailed specifications carefully.

Choosing the right plasma TV

On a budget

Extremely high specs aren't what we are looking for here, but one of the advantages of the plasma TV is that picture quality is still satisfying without them. Plasma TVs that fall within the range of specs in the table below may make great choices for users on a budget:

Key Features	Recommendations
Screen size	37 or 42-inch
Resolution	853 x 480
Aspect ratio	16:9

These specs meet the requirements for DTV (Digital Television) and are at 480p EDTV (Enhanced Definition TV) quality level.

Mainstream

Mainstream users want to experience the pleasures of the plasma TV, with its high picture quality and large immersive screen. In addition some flexibility and future-readiness is desired, such as HDTV compatibility. The recommended specs are listed as below:

Key Features	Recommendations
Screen size	42 or 43-inch
Resolution	1024x768
Aspect ratio	16:9
HDTV capability	HDTV ready or integrated HDTV

Movie Buffs

Movie fans are more demanding in terms of picture quality and performance so as to ensure that their TV sets do full justice to the DVDs or High definition content they will display. Also needed is a digital interface to hook up a digital high definition content player. Of course, a larger screen size is always better.

Key Features	Recommendations
Screen size	50-inch or above

Resolution	1280x768, or 1366x768
Aspect ratio	16:9
HDTV capability	HDTV ready or integrated HDTV
Connectivity	HDMI

Gamers

Microsoft's new Xbox 360 and the upcoming Sony PlayStation 3 both support HDTV output. To enjoy the picture quality offered by these next-gen consoles, a gamer's television set needs to provide high native resolutions and the proper input connectors such as HDMI.

Key Features	Recommendations
Screen size	42-inch or above
Resolution	1280x768, or 1366x768
Aspect ratio	16:9
HDTV capability	HDTV ready
Connectivity	D-Sub, HDMI

Computer/HTPC Users

LCD TVs are great choices for HTPC (Home Theater PC) users who use their computer primarily for movies and games. As a result, the recommended features and specs are similar to those for movie buffs and gamers. Of course, the LCD TV should provide standard computer connectors, namely the DVI and D-Sub (VGA) ports.

Key Features	Recommendations
Screen size	50" or above
Resolution	1280x768, or 1366x768
Aspect ratio	16:9
HDTV capability	HDTV ready
Connectivity	D-Sub, DVI

Office Users

Office users typically use TVs for video conferencing, presentations or training videos. Mainstream specs will do fine here, but computer connectors are recommended to allow it to receive a picture from computers as well.

Key Features	Recommendations
Screen size	42" or above, depending on room size
Resolution	1024x768
Aspect ratio	16:9
Connectivity	D-Sub, DVI