



LCD
liquid crystal display



Plasma

Plasma and LCD Flat Panel Display Information

(for the)

Thousand Oaks Personal Computer Club

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OTHER PLACE TO LEARN ABOUT VIDEO

Plasma TV, Flat Screen Displays, and Plasma Screens

What is a Plasma TV

Plasma television is a flat, lightweight surface covered with millions of tiny glass bubbles. Each bubble contains a gas-like substance, the plasma, and has a phosphor coating. Think of the bubbles as the pixels.

Now, think of each pixel-bubble as having three sub-pixels - one red, one green, one blue. When it is time to display an image signal (RGB or video), a digitally controlled electric current flows through the flat screen, causing the plasma inside designated bubbles to give off ultraviolet rays. This light in turn causes the phosphor coatings to glow the appropriate color making your Plasma TV provide the best video image anywhere.

Millions of RGB bubbles glowing and dimming to make a rich, vivid image.

The plasma display is one of the most exciting consumer electronics products to debut in the past decade. It's literally changing the shape of television, from the familiar CRT-type TV's that have been around for 50 years, to a sleek, nearly flat display that can hang on a wall. These new displays deliver high-definition television, and they serve both as TV's and computer monitors.

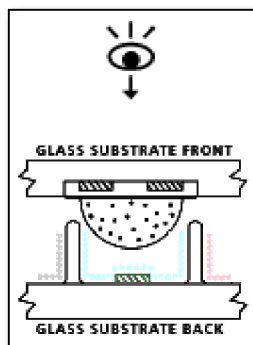
This article provides information on plasma displays in general so when you're ready to make a purchase, you'll have enough information to make an informed decision.

The Basics of Plasma Displays

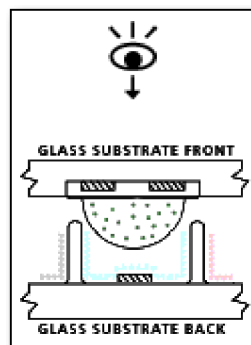
This isn't meant to be a science lesson; we just thought you might want to know how a plasma display works.

Plasma display technology is a new "emmissive" flat panel display technology which gives you the rich, accurate color fidelity of conventional Cathode Ray Tube (CRT) monitors in a large display that is thin enough to hang on the wall. It's the best way to achieve flat panel displays with excellent image quality and large screen sizes viewable in any environment. This technology known as "plasmavision" is an array of cells, known as pixels, which are composed of 3 sub-pixels, corresponding to the colors red, green and blue.

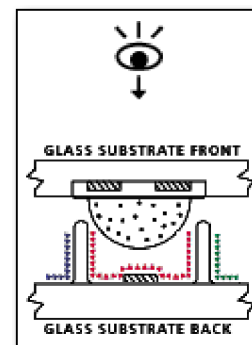
Gas in a plasma state is used to react with phosphors in each sub-pixel to produce colored light (red, green or blue). These phosphors are the same types used in conventional cathode ray tube (CRT) devices such as televisions and standard computer monitors. You get the rich, dynamic colors you expect. Each subpixel is individually controlled by advanced electronics to produce over 16 million different colors. You get perfect images that are easily viewable in a display that is less than 6 inches thick.



Step 1: Address electrode causes gas to change to plasma state.



Step 2: Gas in plasma state reacts with phosphors in discharge region.



Step 3: Reaction causes each subpixel to produce red, green, and blue light.

Conventional Plasma Displays

Basic plasma display technology has been around since the 1960's, and works this way: a mixture of neon and xenon gas fills the space between two parallel sheets of glass, which contain millions of tiny cells filled with the gas mixture. This mixture is stimulated by electrical current and is changed into a plasma. As a result, ultraviolet (UV) light is emitted. Red, blue, and green fluorescent substances in the cells absorb this UV light, then re-radiate this energy as visible light to produce the colors and images you see on the screen.

This process creates a bright, vibrant picture. And since these individual cells are creating light and color, there's no need for the large cathode ray tubes (CRT's) used in conventional and projection TV's, and the display can be very thin and relatively lightweight. Plus, the flat screen eliminates the problem of images bending at the edge of the picture, as seen in conventional TV's.

Flat Screens Are Not All Alike

Plasma displays are not the same as an LCD screen, like those on laptop PC's or the ones that you see on commercial jetliners. Among other differences, an LCD screen uses backlighting for its illumination; plasma displays are self-lit, which produces a far brighter picture. Nor should the "flat panel TV's" you may see in stores be confused with a plasma display. These flat panel TV's, like plasma displays, do have a flat screen, so they don't have the edge distortions of a conventional curved screen. But their use of CRT's gives them the same bulky "behinds" of regular TV's, and they cannot offer the same practical advantages of plasma displays.

Is This A TV Monitor, Or A Computer Monitor? Yes.

A Plasma Display is a television monitor, capable of displaying high definition TV, regular TV, and home video. AND it's a computer monitor, capable of doing everything a regular computer monitor can do. Just bigger and better.

Here are examples of how you can use a plasma display and a description of each, where applicable.

Watch Digital TV And Regular TV

Most of the television we see now is analog TV, based on standards set decades ago (called NTSC, or National Television System Committee). But you've probably noticed that more and more shows, particularly sports and prime time shows, are also being broadcast- actually, simulcast- in high definition. What's the difference between regular and high definition TV? And, what is digital TV? Since Plasma Displays reproduce virtually every kind of broadcasting, here's a brief explanation that will help sort things out.

What Is Digital TV?

Digital TV represents the future of broadcasting, and will ultimately replace analog television, though not for while. It encompasses standard definition television (SDTV) and high definition television (HDTV), plus potential data broadcasting capabilities. SDTV delivers approximately the same resolution as regular analog TV, but without the annoying snow and ghosting, so the actual picture quality is higher. HDTV delivers five times the resolution of regular analog TV, with photograph-quality images that you have to see to believe. Digital TV (both SDTV and HDTV) also provides broadcasters with the capability of multiple channels of digital surround sound, so you'll have great audio, to go with great video.

Another advantage of digital TV is that it allows for a widescreen presentation of "16:9". This 16:9 (read: 16 by 9) figure is the aspect ratio of the width of your TV to its height. Most current TV's are 4:3 (think of it as 12:9 reduced to its lowest common denominator). Comparatively, a 16:9 ratio gives you more width, more picture, more fun.

And of course, you can view all of the regular TV shows you're receiving now. A Plasma Display is ready for all current television and video formats, plus those in the foreseeable future.

How To Receive Digital TV

So, how do you get digital TV? You can receive it off the air, with a UHF antenna and a digital tuner (both are widely available). Or, you can get it via satellite broadcasting companies like DIRECTV, DISH Network, and others, and through cable operators like Time Warner Cable and others. Contact your local cable or satellite operator for more details.

Watch Movies On DVD, Videotape, Laser Disc, And Camcorder

Movies- in whatever format you choose- will look better on Plasma Displays. You'll find connections for all major home video formats on the unit's back panel. And you can set the screen size and shape to match the type of movie you're watching (more about that later).

Play Video Games

With the screen's large size and high resolution, video games will reach a new level. Your plasma display can reproduce games on a multitude of formats, including PC, Mac, and console-based games like PlayStation and the new X-BOX.

Use It As A PC/Mac Monitor

As stated earlier, the Plasma Display is also a monitor for a PC or Mac. You can use it as the primary monitor for your desktop computer or connect it to your laptop computer. Either way, it's able to process signals up to and including 1280 x 768 ("Wide XGA"), so charts, graphs, the Internet, and full-motion DVD's (movies or data) will all look clean and crisp. Like any computer monitor, plasma units allow you to display several personal computer applications simultaneously. For example, you can run a full-motion DVD from your DVD drive in one window, the Internet in another, and your personal calendar in a third.

The plasma-to-laptop connection

If you want to connect your laptop computer to the display, all you need is a standard computer monitor cable, with the 15-pin connector. Connect this cable from your laptop to Input1 or Input2 of the display, and select the corresponding input with the display's remote controller. Last, you'll probably need to push the "Laptop Screen/External Monitor/Both" button on your laptop till an image appears on the display.

Zoom In And Out

Here's a useful feature for when you're running a personal computer or laptop as the main source: let's say you're playing a computer-based video game and want to inspect a character's darkened room more closely. With the Point Zoom feature, you can zoom in on nine select areas of the screen for extra focus. Just hit the Point Zoom button on the display's remote and follow the easy on-screen instructions. When you're done, hit the same button to zoom back out. This feature is also useful when playing movies on your personal computer's DVD-ROM/Video drive.

Experience The Web

Whether you're using a personal computer or a TV-based web browser system, plasma displays are perfect for reproducing the web in your home. And as web sites increase their use of full-motion graphics, displaying them on a high-quality monitor will become even more ideal.

Home Theater And Speakers

A basic home theater system includes a television with at least a 25-inch screen, a surround sound A/V receiver and at least four speakers, and a video source like a DVD player. So, where does a Plasma Display fit in? It makes an

outstanding centerpiece for a home theater system, and when wired to a digital television tuner, DVD player, THX-capable A/V receiver, and other home theater components, the result is a level of entertainment that even the best movie theaters cannot match.

What To Consider Before You Shop

Now that you know more about plasma displays, here are a few factors to consider before you go shopping.

The Position Of The Display

Have a good idea of where your new plasma display might best be located: in which room, and if you will wall-mount it, on which wall. (Read more about installation and mounting options in these two sections: Shopping for a plasma display and Delivery and installation.

Since the plasma display takes up little- or zero- floor space, you don't need a lot of room for it. Also, because your new plasma display is a highly valuable piece of merchandise, you'll want it in a position where it can't be disturbed by dogs, kids, or excited sports fans.

The Amount Of Ambient Light

As mentioned earlier, a Plasma Display performs better than TV's or monitors in bright rooms, so feel free to position it in a well-lit room. However, for best viewing, you should avoid placing it so that it faces a large window, or where sunlight will shine directly onto the screen.

Your Other Home Theater Components

Your plasma display doesn't have to be in the same room as the rest of your home theater components; there are ways to control these components via remote from another room. But you should consider the relative position of your display and these components, because they'll need to be connected to one another. If you'd like assistance in wiring up your system, ask your dealer if this service is offered.

Shopping For A Plasma Display:

Ok, we are biased but we think you should buy online. However follow several rules you have to follow and scams to watch for.

1: DO NOT BUY FROM A ONLINE AUCTION: !!!! The vast majority of ALL fraud occurs at Ebay and other auctions. Most dealers on there have never seen a plasma and for the "the really good deals" you will end up sending your money to support a Nigerian or Romanians family and never see a plasma. Also there are several dealers selling overseas models..it may say it comes with one year warranty..it does ..but you have to send it to Japan at your cost. Even if it is USA warranty , it can be B stock or worse..no serial. This is too big a investment to try to save 50 or a hundred dollars on by buying from a unknown dealer whose total investment is 5 dollars Also watch out for Yahoo Stores. They can be set up for 50 dollars and come and go like the wind.

2 : Do not fall for the best price scam or bait and switch and get nailed with inflated shipping costs. Several dealers online quote shipping at 150 for ground and 350 for 3 day. Don't fool yourself.. you will get stuck with the three day charge. You are always outside the discount shipping area (even if you live across the street) If you buy from any online dealer and they try to hit you with surprise charges cancel the order. Some even hit you days later claiming that it was shipped 3 day by mistake. Also watch for inflated accessories. Biggest scam on and offline is overcharging for accessories. **ALWAYS LOOK AT THE FINAL COST OF EVERYTHING TO YOUR HOUSE, NOT THE INITIAL ADVERTISED PRICE.**

3: Every website out there claims to be the number one source and claims to have 200 years experience. Anyone can make these claims. Many online dealers have never seen a plasma and there online experience consists of surfing the net. If you want to check how long a business has been online, you can search the info at www.internic.com

4: False buying guides: Do not be fooled by "impartial buying guides" These are directly or indirectly related to sites. A common practice is do set up what appear to be impartial sites and then recommend dealers who strangely enough all have very similar sites located on the east coast. and then throw in a few sites that have super high prices to try to look impartial Don't be fooled, if this was done in in a magazine they would have to state "paid advertisement" across the top of each page. Although many legitimate websites have multiple stores, If they try to mask the connection...keep away.

5: Do not buy from any online dealer that does not have phone support and make sure the person who claims to be a specialist knows what they are talking about. Plasma TV's and projectors can be a confusing subject.. If you want a sales person with no knowledge you can get that at any big retailer.

6: Ensure the website has a clearly posted return policy and that the product is shipped insured. Many online sites have a return policy that requires you to pay shipping back if the unit is faulty or damaged in shipping. This is unacceptable and gives you a idea of the service you can expect. Also watch the privacy policy. Many privacy policies state they WILL USE YOUR INFO FOR MARKETING. The longer the policy.the more fine print.

7: High pressure sales.Do not rush into any purchase and do not allow the salesperson to give you the "there is only one left" line. If there is only one left, that means a new model may be coming out. You have lived for years without a plasma, a week or two more won't kill you. Commission salespeople are a very bad sign.

8: Don't fall for store ratings on Bizrate, Nextag etc. Many stores have huge number of great ratings mixed with absolutely poor ratings. It is a common, although highly unethical, practice for many stores to pad their reviews.

9) No Name plasma screens: There are several legitimate companies who rebadge plasma screens (Sony Toshiba, JVC etc) and provide top notch service and support however there more and more "no name" products hitting the market (most from China) Many are based on obsolete technology and provide little, If any, support or warranty. If you can afford a plasma, you can afford a good plasma.

'In addition to blenders we now make plasma screens'

Advantages Of Plasma Displays Over Regular TV's

While at a retail store, you'll probably see dozens, even hundreds, of other displays and TV's, and it may become a little overwhelming. Here is a quick list of advantages of a Plasma Display over conventional CRT-type TV's:

- 4" thick, and can be hung on a wall
- Much larger picture
- Higher color accuracy
- Brighter images (3 to 4 times brighter)
- Better resolution
- High-definition capability
- 16:9 aspect ratio vs. standard 4:3
- Can be used as a monitor for a PC or Mac
- Images don't bend at the edge of the screen
- Reflections from windows or lights are minimized
- Wider viewing angles
- Takes up less space (zero, if wall-mounted)
- not effected by magnetic fields

Advantages Of Plasma Displays Over Projection Monitors

Like plasma displays, the best rear-projection monitors are great for viewing TV and video. However, a Plasma Display has certain key advantages over rear-projection monitors:

- Ideal for any room, even rooms where space may be limited
- 4" thick, and can be hung on a wall
- Can be used as a monitor for a PC or Mac
- Higher color accuracy than most PTV's
- Brighter images than most PTV's
- Better resolution than most PTV's
- Wider viewing angles , not stuck sitting in a sweet spot
- DLP and LCD rear projectors need bulb replacement every 4 to 5000 hours. They may seem cheaper initially but are vastly more expensive over time.

System Setup and Connections

We know that many people don't like to read operating instruction manuals, but we strongly recommend that you read the one included with your Plasma Display. It will help you with system setup and connections, and tell you how to adjust settings to your exact preferences.

Protection Function

IMPORTANT: Static, non-moving images left on-screen for extended periods of time can leave a "shadow" on plasma displays (this is true of models from all manufacturers). For this reason, you can also manually adjust the brightness level of your display. In addition, you should avoid extended display of static images. Your operating manual has more information on this.

Plasma vs. LCD

What's the difference between a plasma display and an LCD flat screen, and how do these differences enter into your decision-making process? Often "plasma" is used as a general term for thin, flat displays or monitors, but there are some general differences in the technologies, as listed below. Overall, LCD is great for displays 30 inches and smaller, and plasma is ideal where 32-inches or larger display is needed. They are complementary technologies. LCD has a inherent delay and will "artifact" moving images on larger LCD's

	Plasma	LCD
Viewing angle	160 degrees+, typically about 90 degrees vertically	Up to 160 degrees horizontally, typically less
Size	32-61 inches	2-28 inches
Lightsource	Emissive (internal)	Transmissive (External backlight)
Switching speeds	<20ms (video rates)	>20ms (may have image lag at video rates)
Color technology	Phosphor (Natural TV colors)	Color Filters (Not the same color system as TV)
Ideal application	TV, signage, public display	PC data, PC graphics, desktop use

Plasma TV vs LCD TV vs DLP TV

Which big screen TV is better ???

There is a lot of confusion and misleading information available on plasma TV's, LCD TV's and DLP TV's Everyone and anybody you talk to claims to have the answer and they are always bias depending on what the store wants to move or what their factory makes. The truth is that each has advantages and disadvantage depending on your use. Please note: in this we discuss name brand and no name . Please don't be fooled by the fact it may come from a well known computer maker, It will still be considered "no name". We consider name brand plasma screens as NEC, Pioneer, Hitachi , LG/Zenith, Panasonic, Samsung and secondary name brands (based on name brand chassis) such as JVC., Sony, Philips, Mitsubishi, Toshiba, Sharp, Studio Experience.

"No names" include but are not limited to Norcent, Sampo, Gateway, Monovision, SVA and a pile more that you have never heard of and are usually Chinese based.

NOTE: LCD TV refers to a LCD flat panel, DLP TV also includes DILA and LCD video projector based rear projection TVs.

This chart shows a very simplified summary, Please refer to more detailed explanations below

USAGE	Under 30 Inch	30 to 35	40 to 50	55 to 63
Computer use only	LCD TV	LCD TV	Lcd up to 40 inch plasma above 40, use screen saver or screen wipe, expect burning and expect shorter life	DLP TV or Video projector, Plasma screens show well but expect image retention shorter life *See note 2
Video Only (TV and DVD)	LCD TV	Plasma Tv 37 inches plus, LCD Below	Plasma screen	Plasma screen *See note 1
Mostly Video and some Computer	LCD TV	Plasma Tv 37 inches plus, LCD Below	Plasma screen	Plasma screen *See note 1
Mostly Computer and Some Video	LCD TV	LCD	Lcd up to 40 inch plasma above 40, use screen saver or screen wipe	Plasma screen, Use saver or screen wipe *See note 1

Note 1: Although in long run Plasma screens are economically best choice, Lower initial outlay on DLP TV in 60 inch plus area may be attractive, please consider operating costs, see more below

Note 2: If you are using the plasma for digital signage such as Airport Terminals arrivals signs, the image retention will not be a factor until you plan on using the screen for a different application.

LCD TV disadvantages :

One problem with LCD TV screens is that they have a inherent delay problem. This is something that cannot be overcome. " It is the nature of the beast" When a fast moving object moves across a LCD screen the delay of LCD technology causes "artifacting" Basically there are trails or blockiness of the image since the screen cannot keep up. There are newer LCD panels that have lower m/s (millisecond) times but there still is a delay. The good news is that with a good name brand LCD TV the artifacting is minimal and really wont be noticeable until you get a screen over 30 or 35 inches. At that point the delays will be noticeable and in some cases extremely annoying. Expect severe artifacting on "no name" units to the point of making the TV basically unwatchable .

Black levels: A LCD display has a backlight which shines through the LCD panels. The panels allow or block light depending on what is required to produce an image or a color. Most , if not all, LCD TV's tend to have difficulty going fully "black". Blacks tend to have a very very dark grey. This is especially true on no name units.

Field Of Vision: Even the best LCD TV has field of vision problems. When you look straight on the picture looks great, as you move to either side the picture quality diminishes and eventually disappears. Some LCD TV makers

claim up to 170° field of view. This is a complete lie. To quote one major manufacturer "well it doesn't mean you have a great picture for 170 degrees, but you do have a picture" . Realistically a good LCD TV such as a Sharp Aquos will have a 90 degree (45 each side) usable picture.

Single Usage: There are many LCD screens on the market but very few have good video processing. If a LCD screen is made as a computer monitor, it is usually very poor as a video display. If you are planning to use the unit as a TV, do not buy a computer monitor with a tuner upgrade. Stick to a unit designed for video such as a Sharp Aquos. For dual purpose, buy a LCD TV with a computer input, not a computer screen with a tuner

Extremely expensive over 35 inch,

Unbelievable amounts of no name junk units on market. Stick to name brands with proper warranties

16/9 widescreen units expensive

Cheaper no names LCD TV's have very poor picture quality and generally poor video performance

Pixel failure: This can be a problem with no name LCD screens. All the major brands have pixel policies which may allow one or two dead pixels. These are not noticeable unless you are right in front of the screen. A 20 inch LCD screen has over 300,000 pixels, so one or two dead could not be seen. No name LCD screens have extremely poor policies which can allow higher than 10%. This would make the unit unwatchable.

Digital looking picture: Many LCD screens tend to have a "digital look " to the image and therefore don't seem to reproduce colors naturally.

LCD TV Advantages:

Good for still images such as computer display, Fairly reasonable pricing below 30 inches.

Quality units have good brightness levels

No real estate: A LCD TV screen hangs on a wall and takes as little space as a picture.

Low operating cost per hour (over 35 inch extremely expensive acquisition cost)

Long Life. Expect 30 to 50,000 hours bulb life according to Sharp (Please note that the picture can fade over time on a LCD TV. I would expect prime performance to last closer to 20 to 30,000 hours maximum (13 years at 6 hours per day). Expect substantially less on a no name.

Plasma TV Screen Disadvantages:

Image retention: Plasma screens can suffer image retention (burn in) if a still image is left on the display for a extended period of time. For example, you would not want to use a plasma screen for a computer display constantly. If you were to use a Plasma TV for Video Display and occasional use it for computer, burn in would not be a factor. Also if you were to leave the plasma TV screen on a station such as CNBC, which has constant ticker tape across the bottom, for 24 hours a day, there would be noticeable burn in when you switched to a different channel. If by error you were to burn your screen, proper name brand plasma screens do have a "white flash" utility which eliminates the burn, however it will shorten the life of the plasma. If your primary use of the plasma screen is for TV viewing and dvd, image retention will not be a factor.

Size: Plasma screens are not available below 37 inches. There were some 32 inch units available but have been discontinued. Also 60 inch and above can be very pricey but prices are coming down. For example a Zenith 60 is below 7500 now.

No tuners: Most plasma screens do not have tuners and if they do they are expensive upgrades. Some cheaper plasma TV's have optional tuners however they usually are not the best. This is not a disadvantage in most cases. Almost everyone who can afford a plasma will be using satellite, digital cable or external HD boxes. So the built in tuner would be redundant and a waste of money.

Many no name junk units on market. Stick to name brands.

Pixel failure: This can be a problem with no name plasma screens. All the major brands have pixel policies which may allow one or two dead pixels. These are not noticeable unless you are right in front of the screen. A 50 inch screen has over 983,000 pixels. so one or two dead could not be seen. No name plasma screens have extremely poor policies which can allow higher then 10%. This would make the unit unwatchable. If the plasma screen has a orbiter function, this will greatly reduce the chance of pixel failure. We have sold tens of thousands of Plasma TV screens and can count the number of units which we have had pixel problems with on one hand. It should be noted we do not sell no name units.

Early models had poor contrast. the first generation plasma TV screens had poor contrast and brightness. Do not buy a used plasma screen from a online auction such as Ebay. The units that have been out for the last two years outperform the older units by miles.

Plasma TV Screen Advantages:

Long life: the average name brand plasma TV will last 30 to 50,000 hours to half like (brightness is 50% of original, it will still be 2 to 3 times brighter then a regular TV) This is around 20 years at 6 hours per day. Expect substantially less on a no name

Field of vision: A plasma screen TV has a field of vision of almost 180 degrees without loss of picture quality. From any angle you will have a great picture

Brightness: Plasma screens are very bright; 4 to 5 times brighter then an average TV.

Great contrast: The last two generations (two years or so) of name brand Plasma screens have great contrast ratios. Look for a rating of 1000 to 1 or more Please note: certain manufacturers claim levels of 3 or 4000 to 1, That is a false rating and is achieved by using non standard measurement methods.

Low operating cost: A name brand plasma is cheap to operate due to long life with virtually no maintenance (No you cannot recharge a plasma, and they don't leak gas). The cost of a nice EDTV 42 inch is well below 3 k and a 50 inch is around 5 k. 60 inch plus is still highly priced per inch. This is substantially less then a LCD TV. 42 inch plasma TV screens cost almost half of a 40 inch LCD.

Instantaneous picture response: There is virtually no delay in any name brand plasma and therefore no artifacting that is experienced on LCD screens.

Natural looking picture: A plasma screen reproduces a picture in a similar manner to a standard TV .Name brand plasma TV colors tend to be natural looking and more accurate. Mo names can tend to be weak or soft on colors.

No real estate: A plasma screen hangs on a wall and takes as little space as a picture

Wide screen, All but one or two plasma TV screens are 16:9 wide screen. Format

Upgradeability: Many plasma screens have upgradeable video cards that "future proof " your plasma

DLP rear projection TV disadvantages:

High operational costs: The DLP TV is simply a DLP video projector in a box. The projectors use a replaceable bulb which can cost between 200 to 400 US dollars. The life on the bulb varies but generally expect around 6 to 8000 hours. However some will last substantially less. Realistically you can expect to be buying a bulb every 2 years and possible sooner if you watch a lot of TV. Add the acquisition cost of the unit and a DLP TV can actually cost twice as much as a plasma over 5 or 6 years of normal use. In the expected life of a unit it can cost 3 to 4 times as much as a plasma. Consider a DLP TV like a computer bubble jet printer. Cheaper to acquire, way more expensive on ink Example based on 10 hours a day use. DLP costs become even more expensive if your viewing is more then 10 hours a day

Cost of 42 inch NEC plasma 2500. Additional costs over 10 years 0 Plasma costs per year for 10 years \$250 Cost per year for 15 years \$ 166

42 inch DLP TV 2000. Cost of bulbs based on 6000 hour life. 300 per bulb (this presumes bulb makes full life) \$1825 Yearly of cost of DLP TV based on 10 years 382.50 Average cost over 15 years \$315

(not factoring increasing costs of bulbs due to inflation)

Large foot print: Even though a DLP TV is substantially thinner then a old style rear projection TV, they are still a minimum of 12 to 13 inches deep

Not wall mountable: units cannot be hung on wall

Field of vision: Although greatly improving, DLP TVs still do not have as good of a field of vision as a plasma TV
Picture quality. Although improving, the picture quality varies on DLP TVs. Some have very poor to medium quality, none have spectacular. Many people still complain about artifacting and blockiness in some units

Diminishing bulb brightness: When a bulb gets older in a dlp Tv the brightness level reduces. When the bulb is replaced, the TV becomes bright again.

Early bulb failure: The bulb in a DLP can fail instantly well before its scheduled replacement. Availability of replacement bulbs vary with manufacturer. If you do purchase a DLP TV I would suggest getting a spare bulb right away. It's Murphy's Law that the bulb will fail 3 minutes before the Superbowl kick off

DLP rear projection TV advantages:

Initially low acquisition cost. Generally offset by high operating costs. Still cheaper then a plasma or LCD in the very large size, 42 to 50 are not much cheaper then a plasma screen and definitely not cheaper over the long term.

OTHER PLACE TO LEARN ABOUT VIDEO

TFT LCD TV - What is TFT LCD?

http://www.plasma.com/classroom/what_is_tft_lcd.htm

What is DLP Technology for Video Projectors and TV?

http://www.plasma.com/classroom/what_is_dlp.htm

What is a Anamorphic Video Projector lens and what does it do??

<http://www.plasma.com/classroom/hometheaterplasmatvinfo.htm>

DVD Player - FAQ and Help Page

<http://www.plasma.com/DVDFAQ.HTM>

What is Progressive Scanning and 3/2 Pull Down

<http://www.plasma.com/classroom/Proscanexplained.htm3>

Who really makes your Plasma TV?

<http://www.plasma.com/classroom/whomakesplasma.htm>