



Choosing an LCD Panel Manufacturer

The first step to implementing effective digital displays is choosing the right LCD panel manufacturer. But how do you know which LCD panel manufacturer to choose?

We outline some of the most important things to consider when deciding which LCD panel manufacturer to use.

Panel quality

An essential part of choosing an LCD panel manufacturer is the quality of their LCD panels. You should always review the panel quality check process. While many companies may have a similar manufacturing process steps, how quality measures are implemented and process quality maintained makes all the difference.

Whether you are using TVs, monitors or professional-grade digital signage, you need to think about how they are being deployed and whether the panels are effective for this. For instance, if your panel will be displayed outdoors, you need panels that can cope with high-temperature variance and bright sunlight.

Durability is also an extremely important consideration. Inferior panels will need replacing more often so investing in a more long-term solution is more cost-efficient.

Samsung Display undertakes a thorough QA process to ensure that everyone always receives the very best panel. Numerous tests have been designed to test the reliability and durability of displays in challenging conditions.



High Temperature Operating Life

Integrated circuits are exposed to 50-60°C for 500 hours



Wet High Temperature Storage

All samples are tested at 60°C and 75% relative humidity for 500 hours



Thermal Cycle Testing

Panels are alternated through hot and cold temperature extremes



Image Sticking

Tested at 50°C with 168 hours on and 1-hour release



Dust

Dust infiltration over 10 hours with 10 min on and 10 min off



Test Step Stress

220 temperature cycles with acceleration of -25°C to 80°C



Altitude

Tested at 0°C at 50,000 feet for 48 hours



Reputation for innovation

When choosing an LCD panel manufacturer, take into account the manufacturer’s focus on innovation and technology. Display technology requires high capital investment and deep development focus to ensure continuous improvement.

Samsung Display has been the undisputed digital panel technology market leader since 2008 and is trusted by leading signage manufacturers worldwide. With a constant desire to innovate and improve, Samsung Display always delivers best-in-class LCD panels.



LCD panel manufacturers who invest in research and development, like Samsung Display, ensure that their products are at the cutting edge of technology. Choosing a pioneering manufacturer means that you will get the very best in image quality and durability.

Warranties

Warranty is an insurance for the buyer. It also reflects the confidence that the LCD manufacturer places in their products and process. It's important to look out for protection as well as quality assurance so that you are covered should the worst happen.

Samsung Display offers an industry leading warranty - most PID products come with a warranty that covers panels that have been used 24/7 for 24 months. There is even the option of an additional 12 months. Samsung panels are guaranteed to be black mura free for 45,000 hours, while an error-free back-light unit performance is also included in the warranty for 50,000 hours.

Customer support



Excellent customer service can greatly improve your use of LCD panels, making installation easier and resolving any problems (if there are any) efficiently. Today, displays have many diverse applications and it is uncommon for one size to fit all. Very few LCD manufacturers have the engineering resources and ability to help companies fine-tune the product and suggest technical solutions to your unique application.

The right manufacturer will support your implementation process, ensuring that every party can do the best job possible. A good LCD panel manufacturer will work with your engineering and procurement teams, assisting the set design process. These support functions allow you to reduce your cost of production and expedite the time to market for any new product. A win-win for you and your customers.

The support should continue once your LCD panels are in use. Look out for a robust after-sales service and find out about ongoing support - both locally and globally.

Samsung Display has an impressive global network of six offices and over 35 dedicated distributors and representatives across every major market - all of whom are there to support you. Dedicated teams at Samsung's HQ are available to answer any engineering questions 24/7.

Environmental friendliness and compliance



If environmental ethics matter to you or your business, ensure you research LCD panel manufacturers' environmental policies and accreditations.

Samsung's approach is "PlanetFirst". Since the Samsung Environmental Declaration was made in 1992, Samsung has championed eco-friendly solutions and a sustainable future.

Today, Samsung recycle 95% of manufacturing waste and is working hard to reduce greenhouse gases and water use intensity. All information on environmental performance and policies is published by Samsung Electronics to ensure full transparency.

It's critical for environmentally-concerned businesses to look into LCD panel manufacturers' standpoints and supporting statistics. An environmentally unfriendly manufacturer can negatively affect your own business's impact so think carefully before choosing.

As well as looking out for eco-friendly credentials, it's important to investigate safety certifications. All Samsung Display products are compliant with industry-recognized certifications such as the Restriction of Hazardous Substances (RoHS) and the UL's CB Scheme (which is an international system for acceptance of product safety test results). Do not assume that all other LCD panel manufacturers are also RoHS compliant and UL/CB Scheme certified - research their certifications before deciding.

Key Takeaway

The most important aspects to review before choosing your LCD manufacturer are:

1. Panel quality
2. Reputation for innovation
3. Warranties
4. Customer support
5. Environmental compliance



All of these elements need to be considered when deciding which LCD panel manufacturer to choose, but individual priorities will vary.

Samsung Display strives to support different needs - we understand that some companies need engineering samples and the ability to customize, while others are looking for standardized products and the reassurance of rigorous quality tests. We cater for both generalized and specialized purposes, understanding your own application needs.

We also offer a diverse range of products and solutions to allow flexibility for your individual use cases. Our video walls can be used in locations ranging from control rooms to museums. We cater for both indoor and outdoor, across various industries ranging from retail to transport. All of these panels are all available in different sizes, resolutions, bezels, brightness levels (500 nit, 700 nit) and can be deployed as portrait or landscape.

Samsung Display is committed to manufacturing stable, reliable and consistent LCD panels but we can also tailor our products to suit your precise requirements.

When choosing an LCD panel manufacturer, you need to analyze how well your own individual set of needs is being met. Whichever LCD panel manufacturer you choose, make sure that it's the right one for you.
