

Affordable Display Measurement Services

From the leaders in Display Quality AssuranceSM

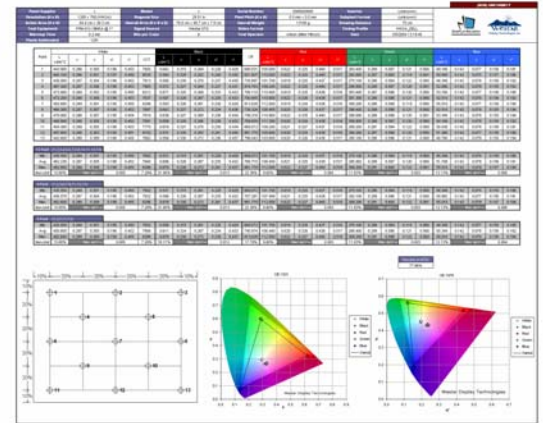


The price tag for setting up, equipping, and staffing a display test and measurement lab can be staggering. If you have display measurement requirements but lack the test facility or expertise, consider outsourcing your test program to Westar Display Technologies.

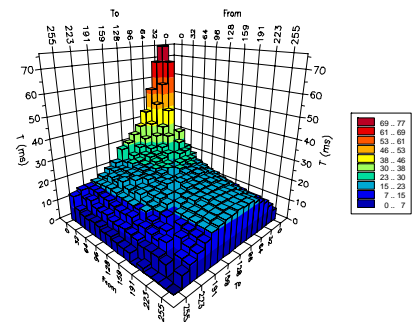
Our state-of-the-art display laboratories are fully equipped with industry-standard Westar FPD Performance Measurement (FPM) Systems, high-end photometers and spectroradiometers, and a stable of display drive equipment including our own T-Drive™ Universal TFT Tester.

Staffed by our experienced display engineers and measurement team, Westar's display measurement laboratory stands ready to help your display products and programs succeed with professional, comprehensive, and quality-certified electro-optical characterization services.

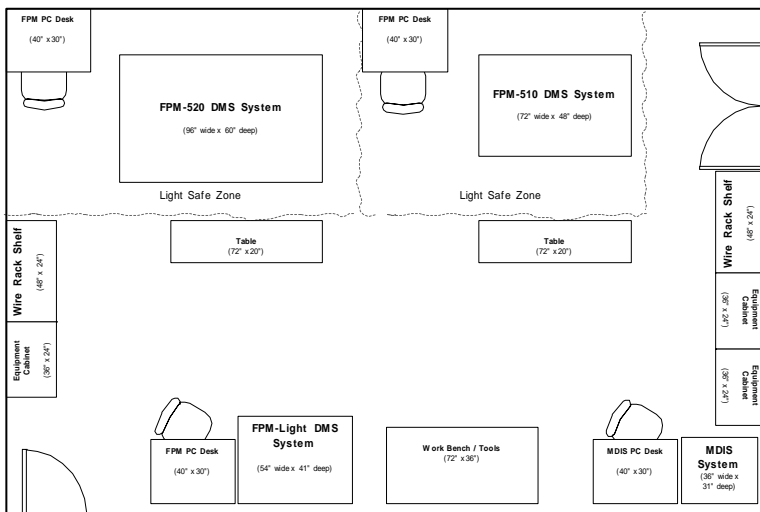
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Industry Standard Report Formats



Gray Level Response Time Testing



Westar's Display Measurement Laboratory Layout



Westar FPM-520 FPD Performance Measurement System – just one of several test assets available

When does outsourcing display measurements make sense?

- **Panel supplier quality** – When you're a panel procurement manager and quality is all over the map. You need to qualify new suppliers and ensure your current suppliers meet your stringent standards.
- **Design verification** – When your R&D team just produced the first prototype of a new display...is it ready for production? Or, when a late engineering change is needed...will it meet spec? Your customers want to know.
- **Pre- and post-environmental testing** – When tough applications require tough displays – you need to know if your display can take the abuse of harsh environmental testing.
- **Competitive Analysis** – When industry journals just slammed your new display because of poor viewing angle and video response. If you only knew how you stacked up with the competition before the displays were shipped.

Some of the services we offer:

- **Pre-test Consultation** – Before you spend a dime, call us to discuss your requirements – we'll advise you how best to proceed, what's important, and how we can help.
- **Display Test Integration** – TFT panel, notebook, monitor, or TV – we can drive it right and get it ready for test with fixturing and cabling.
- **VESA FPDM Standard Testing** – Suite of basic measurements, reflection testing, response time & flicker – we've done it all.
- **TCO'99/'03 Testing** – Viewing angle dependence, front frame gloss, and more!
- **Custom Testing** – Special tests and modifications to standard procedures are not a problem.
- **Data Analysis Service** – Too much data? We'll help you sort through the raw data and distill it into meaningful figures of merit and quality factors.

Industry Standard Test Suites:

| VESA FPDM 2.0 Tests | |
|---------------------|------------------------------------|
| SBM | Suite of Basic Measurements |
| 301 | Setup of Display and Equipment |
| 302 | Center Measurements of Full Screen |
| 303-4 | Shadowing |
| 304 | Box Pattern Measurements |
| 305 | Temporal Performance |
| 306 | Uniformity |
| 307 | Viewing Angle Performance |
| 308 | Reflection |
| 401 | Power Consumption & Supply |
| 402 | Efficiencies |

| ISO 13406-2 Tests | |
|-------------------|-----------------------------------|
| | Contrast Uniformity Difference |
| | Display Luminance |
| | Contrast |
| | Luminance Balance |
| | Reflections |
| | Luminance Uniformity |
| | Image Formation Time |
| | Absolute Luminance Encoding |
| | Temporal Instability (flicker) |
| | Default Color Set |
| | Color Differences / Spectral Ext. |

| TCO'99/'03 Tests | |
|------------------|------------------------------|
| | Luminance Level |
| | Luminance Uniformity |
| | Luminance Angular Dependence |
| | Contrast Angular Dependence |
| | Front Frame Gloss |
| | Periodic Luminance Variation |

| MIL-L-85762A Tests | |
|--------------------|----------------------------------|
| | Diffuse Reflection 4.8.16.2.3.1 |
| | Specular Reflection 4.8.16.2.3.2 |
| | Design Eye Point Measurements |

Need more information?

Call our engineering hotline at **636-300-5115** to discuss your display test program and needs.