

PR[®]-P7 System for ISO 9241-7 Reflection Measurements

Photometer/Colorimeter - The system consists of a PR-880 photometer/colorimeter with optional tristimulus filters and 2° aperture. The built-in RS-232 is used to control the PR-880 from a remote host. The photometer is offered with an integrated camera in the viewing optics to monitor alignment onto the display being measured. Illumination is provided by two diffuse light-sources and a 46cm-integrating sphere that complies with the uniformity requirements of ISO 9241-7. The photometer, diffuse light sources and a 46cm integrating sphere source are all mounted on a railing system that assures accurate and repeatable positioning.

CRT Carrier - The displays (CRTs) are mounted on an adjustable mount to accommodate 14" to 21" displays. The CRT mount has height adjustment as well as a distance adjustment to the photometer to allow the insertion of a reflectance standard between the photometer and the CRT to establish absolute illumination levels.

Alignment - The set up is accomplished by using a simple procedure that uses a HeNe laser pre-aligned to the railing system. This method assures an expedient alignment setup. The integrated camera system in the photometer's viewing optics allow the user to remotely view the photometer and display alignment using the actual sphere light source image as visual target. Nuances such as double image reflections can be easily aligned with the photometer's adjustable mounting platform.

Programmable DC Power Supply - The regulated constant current sources operate the two tungsten-filament lamp sources with the highest regulation possible. Stability of the light sources can be reached with in 5 minutes to perform accurate measurements. The power supply operates with a $\pm 0.01\%$ uncertainty with a ramp function to avoid electrical shocking to the filament. The power supply also has a built in elapsed time meter that allows the user to keep track of the operation time on the light sources. These supplies come with an RS-232 interface (IEEE-488 optional) to access the internal microprocessor's control functions via a user's command program for automation of lamp operation.

The complete system can be mounted on a 150cm X 180cm optical table to assure flexibility for other types of reflectance measurements.



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System Components

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| Photometer/Colorimeter | PR-880 w/ integrated CCD camera. |
| Illumination | Two (2) Diffuse Light-sources and one (1) 46cm integrating Sphere Source with a 150mm and 9.0mm exit ports. A programmable power supply is included. |
| Railing System | Optical Rails to mount photometer/colorimeter, light sources, CRTs, diffuse reflectance and alignment laser. |
| Optical Bench | Honeycomb center, Stainless-Steel Top |
| Reflectance Standard | PTFE PRS-3 |