Agilent
U2972A CCFL Panel Test Solution

Data Sheet

Agilent Technologies

Introduction to U2972A CCFL Panel Test Solution

The U2972A CCFL panel test solution is an irradiance measuring system comprising a platform, an application software, and up to 10 measuring sensors. The U2972A is designed for inspection of a display panel's luminance and white chromaticity, for quality-control purposes. The U2972A-101 backlight luminance and white chromaticity measurement sensor is designed to be optically less sensitive to vibration and minute distance changes, which are potentially unavoidable in a manufacturing environment, making the U2972A solution suitable for use in this area.

Allows **multipoint testing with a high channel count** of up to 10 sensors per platform with any number of sensors at the same time.

Comes with **easy-to-program API for your solution customization** in various programming languages including Agilent VEE, C++, and VB.

Quick luminance and white chromaticity measurement of panel under test, with the measurement time of 250 ms.

A solution that offers **easy-to-use application software** with a simple graphical user interface (GUI) that provides just the features your application needs.

Quick and easy to start, with a USB 2.0 interface that enables automatic detection of connected U2972A and USBTMC 488.2 standard compliance that makes it compatible with Windows systems that comes with USB ports.

Product Characteristics and Specifications

GENERAL CHARACTERISTICS	
Remote interface	• Hi-Speed USB 2.0 • USBTMC 488.2 Class Device
Power supply	100 Vac to 240 Vac, 50 / 60 Hz, 50 VA
Operating environment	• Temperature: 0 °C to 55 °C • Humidity: 50% to 95% at 40 °C (non-condensing) • Altitude up to 2000 meters • Pollution degree 2 • For indoor use only
Storage compliance	• Temperature: –40 °C to 70 °C • Humidity: 90% at 65 °C RH (non-condensing)
Safety compliance	• IEC 61010-1:2001/ EN61010-1:2001 (2nd Edition) • Canada : CAN/CSA-C22.2 No. 61010-1-04 • USA: ANSI/UL 61010-1:2004
EMC compliance	• IEC 61326-1:2002 / EN 61326-1:1997+A1:1 998+A2:2001+A3:2003 • Canada : ICES-001:2004 • Australia/New Zealand: AS/NZS CISPR11:2004
Shock and vibration	Tested on IEC/EN 60068-2
Warranty	One year

ELECTRICAL CHARACTERISTICS	
DC power consumption	12 Vdc (±10%), average 40 mA/sensor
Sensor signal voltage range	0 V to 4 V maximum
Measurement Time (Typical)	250 ms

MECHANICAL CHARACTERISTICS	
Sensor housing	Extrude aluminium with black powder coating
Sensor cable	2-m multi-wire cable with 8×2 connector
Dimensions (mm)	• Platform (W×D×H): 212.3 × 345.4 × 88.1 • Sensor* (D, L): 40.0, 115.5
Weights (kg)	• Platform: 2.55 • Sensor: 0.28

* The dimensional tolerance of sensor is ±0.5 mm.

OPTICAL CHARACTERISTICS	
Sensing wavelength	380 nm to 680 nm
Sensing area	60 mm diameter (at 100 mm distance with <1% variation)
Sensing distance	90 mm to 110 mm
Luminance sensing range	500 nits to 6000 nits (cd/m^2)
Luminance accuracy	±6%
Sensor repeatability	±1%
Sensor to sensor deviation	±4%
Color response range†	0.25 to 0.45
Color accuracy	• 500 to 2000 nits, ±0.007 • 2000 to 6000 nits, ±0.005
Dark current-voltage	• 5 mV maximum • 3 mV typical

† Base on CIE 1937 Chromaticity Diagram

System Requirements

Processor	1.6 GHz Pentium® IV or higher recommended
Operating system	• Windows® XP Professional or Home Edition (Service Pack 1 or later), or • Windows 2000 Professional (Service Pack 4 or later)
Browser	Microsoft® Internet Explorer 5.01 or higher
Available RAM	512 MB or higher recommended
Hard disk space	1 GB
Video	Super VGA 1024 × 768 resolution monitor
Prerequisites	• Agilent IO Libraries 15.0 or higher • Agilent VEE Pro 8.51 Runtime version • Microsoft .NET Framework version 1.1 and 2.0 • Agilent U2300A/U2500A/U2600A/U2700A Series Driver

Ordering Information

MAIN

U2972A Contains the following standard items
- U2972A CCFL Panel Test Solution Platform
- U2972A-101 Backlight Luminance and White Chromaticity Measurement Sensor
- U2972A CCFL Panel Test Solution Operating Guide
- U2972A CCFL Panel Test Solution Product Reference CD-ROM
- Agilent Automation-Ready CD (Contains IO Libraries Suite)
- USB Cable (Standard A to Mini-B)
- Power cord
- 10-pin terminal blocks

OPTION

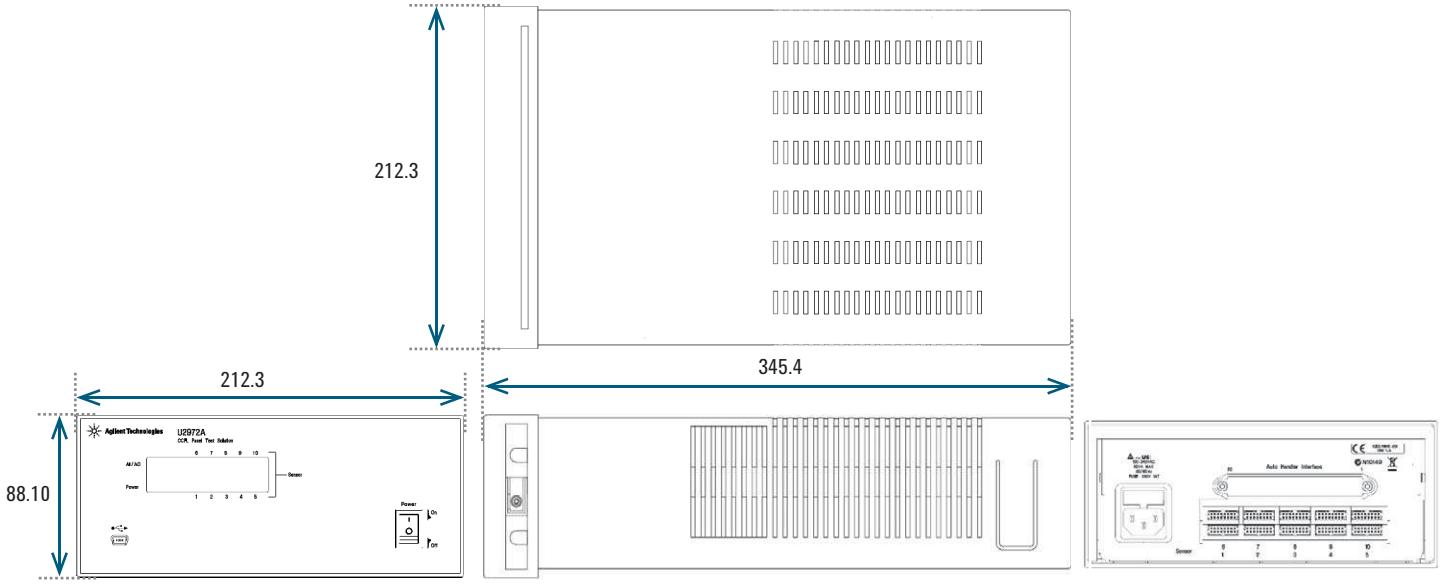
1CM Rackmount Kit

MODULE

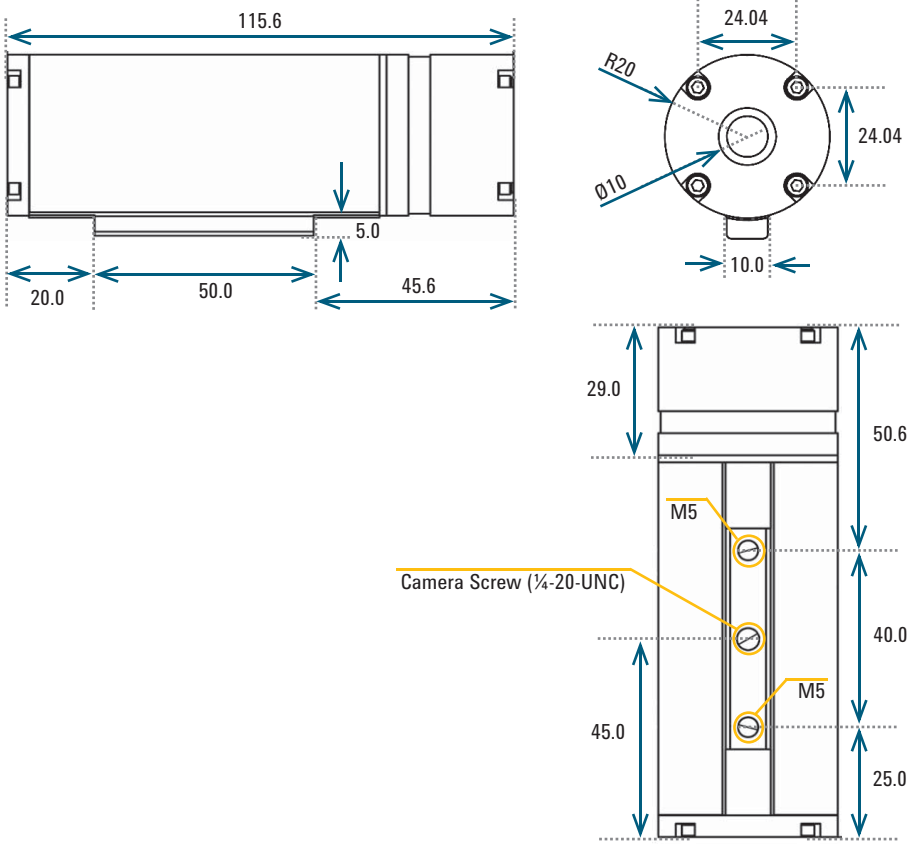
U2907A For replacement of U2972A-101 CCFL Backlight Luminance and White Chromaticity Measurement Sensor

Dimensions of U2972A

Platform Dimensions



Sensor Dimensions



- The unit of measurement for all dimensions are in millimeter (mm).
- The dimensional tolerance of sensor is ±0.5 mm.

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