

System Analyzer User Guide

Revision 1.0.0



INNOVATIVE ILLUMINATION

Get more information at

www.IllumiSci.com

Safety, Handling, & Support Important Safety Information Do Not Skip This!

WARNING

Failure to follow these safety instructions could result in fire, electric shock, other injuries or damage to the IllumiSci System Analyzer, system components or other property. Read all the safety information before using. Read this entire User Guide and the User Guides/Manuals for the components and devices in the system prior to using this or any other IllumiSci product.

Basic Handling Considerations

Handle the IllumiSci[®] Analyzer and other IllumiSci[®] products with care. They work using electricity and are sensitive to metal, glass, and plastic and have sensitive electronic components in or on them. They can be damaged if dropped, burned, punctured, or crushed, or if they come in contact with liquid. IllumiSci Analyzer is not intended for permanent installation.

Repairing

Do NOT attempt to repair any IllumiSci products yourself. Doing so could cause the item to become unsafe. Any service or repair should be done by IllumiSci only.

Overloading

Be sure NOT to overload the circuits of IllumiSci Analyzer and other IllumiSci products. Do NOT short any other part of the circuit. Determine the proper load as specified for each product prior to operation. Do not use IllumiSci products if you do not have more than a basic understanding of electricity and what understand what overloading (excessive current) means. A maximum of 5 Amps at 12VDC (60W, Class 2) can be passed through a circuit with IllumiSci products in it. Note that there is no protection circuitry built into this device. It is your responsibility to use it safely, and understand its limitations.

Heat, Cold & Moisture

Do NOT expose to excessive heat (>30°C (86° F)), cold (<5°C (41° F)), or any moisture/liquids. IllumiSci products are not for outdoor use, and must be enclosed.

Ventilation

Be sure that IllumiSci components have proper ventilation so that they do not overheat. IllumiSci products should have ample ventilation to room temperature air (approximately 77°F (25°C)). Consider and accommodate this thermal requirement when using or installing them.

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Metal & Conductive Material

Keep metal and conductive materials not intended to be in the circuit away from IllumiSci products since they can cause a short-circuit and damage the product, cause bodily harm or property damage.

Use Around Some Equipment or Environments

Do NOT use IllumiSci products around medical equipment, explosive atmospheres, such as at a fueling area, or in areas where the air contains chemicals or particles such as grain, dust, or metal powders. Do NOT use around equipment sensitive to radio frequency, electromagnetic or electrical equipment. Do NOT use for high-consequence activities where failure could lead to death, personal injury or environmental damage. Do NOT use where children can access IllumiSci products or any other system components.

Check IllumiSci's website for any updated information at the following address: www.illumisci.com

Please contact IllumiSci with any questions about any of these or other issues of concern prior to using any IllumiSci products.

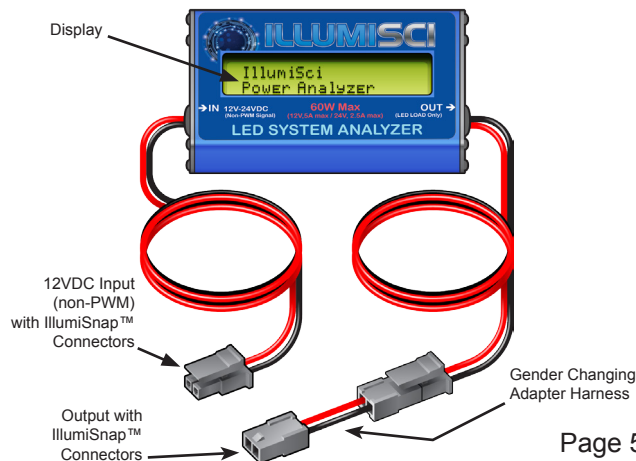
e-mail: info@IllumiSci.com Phone: (310) 953-8807

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IllumiSci™ System Analyzer at a Glance

Congratulations on your purchase of the IllumiSci System Analyzer!

IllumiSci provides you with innovative products that make lighting your project, simple.



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Features

- ✦ Designed to Measure UL Class 2 (60W max) LED system loads (for non-PWM input)
- ✦ Measures: Energy (Wh), power (W), Current (A) and Voltage (V)
- ✦ Handles up to 5A continuous
- ✦ Small and lightweight
- ✦ Acts like a wire in the system so it does not significantly affect the performance of the system (draws only 7mA).
- ✦ Uses DSP for greater resolution and increased noise immunity.
- ✦ Powerful 8MIPS microcontroller

(Continued on reverse.)

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How to Use IllumiSci® System Analyzer (ISA)

Connection of the ISA to the LED Illumination System

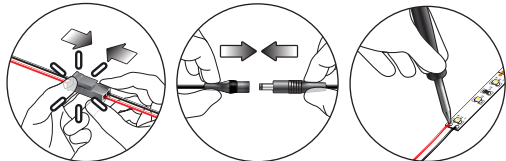
Prior to connecting the IllumiSci System Analyzer (ISA), verify that the LED system to be evaluated by the ISA will be using only a single, linear output, 12VDC Class 2 power supply, 5A maximum (60W or less). Note that the ISA is for temporary system assessment, not for permanent installation.

The ISA must have a linear power input. PWM power supplies, dimmers or other devices with a modulated output should not be placed in the circuit on the input to the ISA as doing so will cause it to not function properly. However, PWM or modulated signal devices can be used on the output (load) side of the ISA.

Usually the ISA is temporarily inserted between the 12VDC power supply output and the LED load. Of course, it can be used part way through a system to assess the load for a "leg" of the system too.

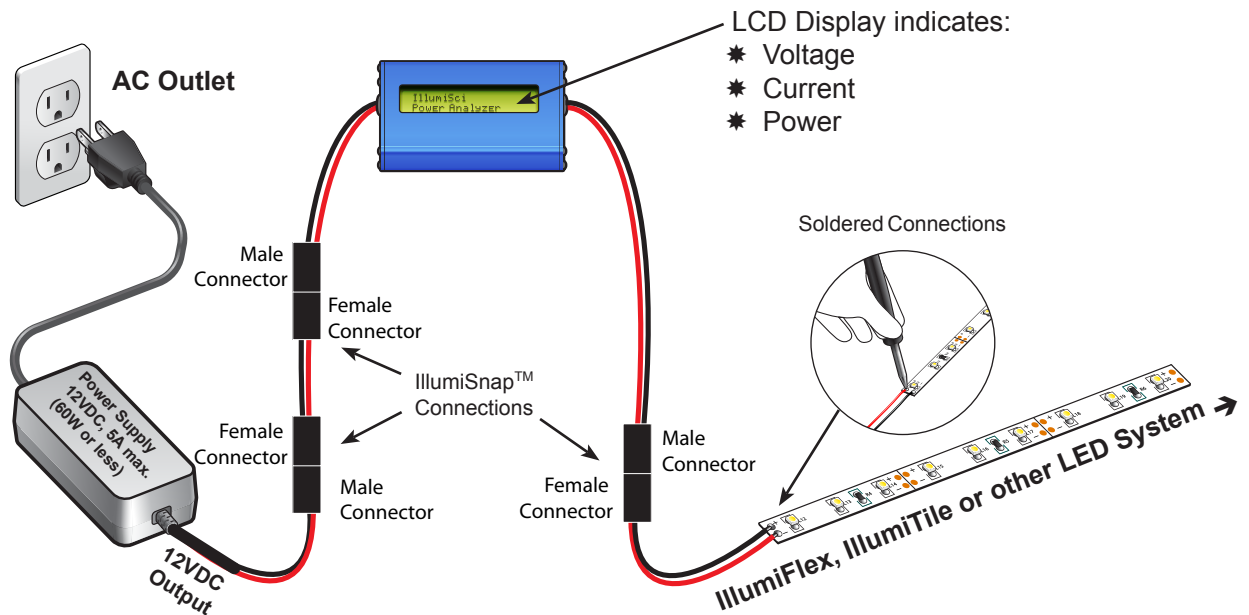
Connect the output of the ISA to the load such as IllumiTile™, IllumiFlex™ or other LED devices. The ISA should be placed before the load in the circuit to be measured. Use the connection type that you prefer. IllumiSnap adapter harnesses are provided with the ISA for a variety of connection options, including a harness with bare leads for soldering. (See diagram on pg 8-9.)

Connections with IllumiSnap or Soldering



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IllumiSci System Analyzer (ISA) Connection



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Specifications

Parameter	Range	Notes
Operating Voltage	10.0VDC to 13.0VDC (Nominally 12VDC)	* See note below table
Current	Current Limit per Circuit: 6 Amp max per circuit	* See note below table
Power	60 Watt Maximum	* See note below table
Dimensions:	(L 3.5" X W 3.5" X H 0.32") L 89mm X W 89 mm X H 8mm	
Weight	132g (4.7 oz)	
Display	16 Character x 2 Row LCD	
Operating Temperature (nominal)	5°C (41° F) - 30°C (86° F) Ambient temp, non-condensing humidity	

* IllumiSci System Analyzer should NOT be used with Power Supplies/Drivers rated over 12V, 5A (60W, Class 2) per circuit. Note that there is no protection circuitry built into the ISA. It is your responsibility to use the ISA safely, and understand its limitations.

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IllumiSci™ Accessories

IllumiTile™ Modular Light Engines (3.5" x 3.5")

Color temps: 6000K, 4500K, 2800K

IllumiFlex™ Flexible LED Strips - 5M Reel

Color temps: 6000K, 4500K, 2800K

IllumiPower™ Power Supplies & Kits

IllumiPower™ 5A with IllumiSnap™ Connector
IllumiPower™ 5A with Switch and IllumiSnap™ Connection

IllumiSci Power Analyzer

IllumiPower™ Power Analyzer with IllumiSnap™ Connections

IllumiSnap™ Harness Options

IllumiSnap™ D Harness with Connections (Direct link Length)
IllumiSnap™ 1 Harness with Connections (1 Span Length)
IllumiSnap™ 2 Harness with Connections (2 Span Length)
IllumiSnap™ X Harness with Connections (Custom Length)

IllumiAdjust™ 60W Smart Dimmers

Plus, many other innovative illumination system product options!
See more detail, IllumiSci products and info at www.IllumiSci.com

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