

# ILC-500™ Intelligent Lighting Controller

## CS-Bus™ LED Controller for Constant Voltage RGB +WW Linears

Remote Power/Control for multiple full color (RG+WW) constant voltage LED linear devices

Networkable system enables up to 254 CS-Bus Controllers to be connected (per gateway) over a 4000 ft. digital bus

Gamma-corrected Color Output for the smoothest dimming to .001% totally without Flicker



Licensed Technology from Philips Lighting

Din-Rail form factor can be remotely mounted for group fixture control

Sophisticated Programmable Software

### Product Description

#### Background

The Intelligent Lighting Controller (ILC-500™) is an ingenious state-of-the art networkable controller for **constant voltage** 5-channel luminaires. Unlike traditional LED ballasts, LED drivers or DMX controllers, the ILC-500 leverages Converging Systems' rich history of leading edge color technology to control all five luminaires in order to obtain the most accurate CCT levels while maintaining the most saturated color output for color operations. This technology along with flicker-free .001% dimming and calibrated Circadian support makes the ILC-500 the go-to solution for 5-channel devices. Best of all, virtually all popular automation and lighting systems support the product through custom drivers/internet connections. Many enhanced features including static and dynamic (moving) scene selection, bi-directional feedback, as well as low-end gamma correction (for the smoothest dimming to black) are all built-in.

#### Operation

One or more ILC-500™ controllers (max 65,025) can be networked to control nearly an unlimited number of LED supported fixtures. A family of Decora®-style keypads are available to select colors or color temperature or Circadian output as well as to function as simple "exit" control devices. Automation systems and 3<sup>rd</sup> party lighting panels can operate ILC-500 networks up to 4000 feet away.

#### Easy Setup and Configuration

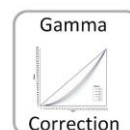
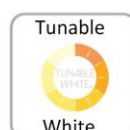
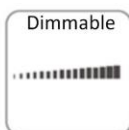
The controller's incredibly small size enables the unit to be positioned seamlessly within a soffit, equipment rack, J-Box or control panel. A built-in microprocessor allows easy system programming while the unique CS-Bus™ discovery technology allows one or more keypads to be quickly interfaced to control lighting functions and scenes. Popular building and home automation systems have developed customized device drivers which enable simple to sophisticated control of scenes and functions. In addition, a family of CS-Bus™ interface adapters are available which enable ILC-300™ LED lighting controllers to be connected to nearly any type system!

#### Applications

The system is designed to operate either as a standalone device or within an integrated system controlling constant voltage full color (RGB+WW) linears. Typical applications include architectural lighting, general purpose illumination, navigational/accessibility lighting, decorative ambient, focal point, and object of interest illumination. Bi-directional feedback enables automation systems to indicate any actual lighting states selected (on touchscreens and iPads). The ILC-500™ allows you to be the designer for LED lighting.

### Features

- Full support of Constant Current Fixtures<sup>1</sup>
- Full tunable white (1600K to 7000K) and Circadian Color control (measurement of Big Island, HI natural sun)
- Wide range of network control options
- Support from all popular lighting and automation systems
- IP connectivity-254 controllers
- 64K dimming steps (compared to 100 or 200 with typical systems)

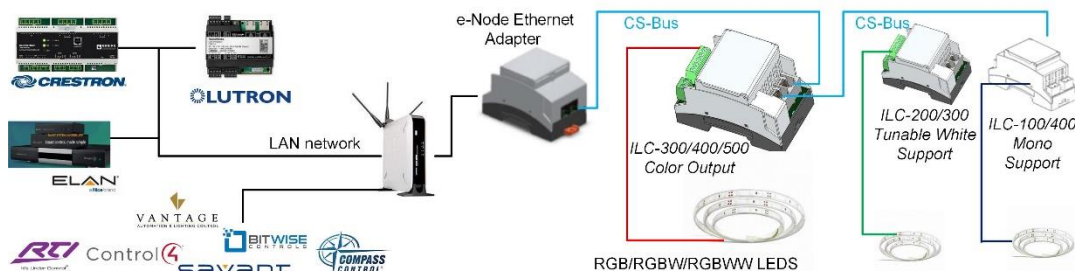


## Specifications

Feature	Detail	Feature	Detail
LED Control	Supports rigid or flexible CSI FLA LED strips requiring 12V DC to 28V DC current	Ethernet Control	Optional e-Node™ adapter plugs anywhere onto CS-Bus™ network and permits web-page control through smart phones and control by virtually all 3 <sup>rd</sup> party automation and lighting systems
Communication (between ILC-500 and Communication Gateway)	CS-Bus™ (3-pair 6 CAT-type bus—Brown pr. not used). On-board powered RJ-11/25 connector (for powering keypads) and one RJ-25 connector for additional downstream CS-Bus™ connections	Power Requirements	Power supply should be selected depending upon voltage of LED elements selected. Controller requires minimum 5V DC@40 ma. Maximum voltage 28V DC. Maximum current input 6.67 amps
Current Sensing	Built-in current sensing circuitry automatically shuts off system in case of faults or shorts	CS-Bus Monitoring	Built-in CS-Bus monitoring signals in case of faults or shorts
Failsafe I/O	Unique circuitry permits failsafe operation for all units on the CS-Bus even if one unit fails or shuts down	Load Rating	Maximum current output 4.17 amps. For 24v DC LED devices, typically 20' for standard density LEDs can be supported.
Software Compatibility	-VPAD (virtual keypad) PC application -Any third-party serial communication utility -Lighting panels from Lutron & Vantage -Automation systems from Crestron, Control 4, Elan Home Systems, Leviton/Bitwise, RTI, Savant and others	Failsafe I/O	Unique circuitry permits failsafe operation for all units on the CS-Bus even if one unit fails or shuts down
Addressability	-Individual addressability for up to 65,025 Controllers -Zone Limits—254 Controllers per zone -System Limits—16.3m Controllers using bridge (e-Node) interconnects	Size	• 3.53" (89.66mm) x 1.40" (35.56mm) x 2.39" (60.71mm) (not including extendable Din lugs)
Addressability	- Individual addressability for up to 16.3 million Controllers (254 per gateway) -System Limits—Unlimited gateways (subject to integration platform limits)	Weight	• 3.3 oz. (93 gm)
		Manufacturing	• Designed and Manufactured in CA
		Compliance	UL Listed (UL File 2108). CSA (C22.2#9.0), RoHS, PCB UL-94VO certified, Rated to work with UL rated Category 2 power supplies,

## Overview

### Wiring



### Application

The ILC- x00 family of LED controllers and associated LED luminaires of single color, full color and adjustable color temperature are ideal for a variety of applications. They are widely used in a variety of application areas where **precise color settings, 3rd-party lighting and automation control, networkable functionality, expandability** and **bi-directional feedback** are demanded. You application may be easily adapted from our core technology. Contact us for more information.

- Architectural Lighting
- Soffit and Alcove Lighting
- Object of Interest Illumination
- Cabinet Lighting
- Marine/Boat applications
- Energy savings applications
- Enhanced functionality for Lighting Panels
- Space saving requirement

**Note:** <sup>1</sup> Contact factory for specific fixtures supported, maximum number of fixtures per controller, required power supplies and wiring directions.

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