

# ILC-100™ Intelligent Lighting Controller

## CS-Bus™ LED Controller for Full Color Control and Network Operation

*Controls RGB (full color) as well as Mono Color LED Lighting Elements*

*Licensed Technology from Philips Electronics*

*Networkable System Enables up to 65,025 CS-Bus Controllers to be Networked (thousand of miles of LEDs)*



*Small Form Factor Device can be Integrated Easily*

*Gamma-corrected Color Output*

*Sophisticated Programmable Software*

### Product Description

#### Background

The Intelligent Lighting Controller (ILC-100™) is an ingenious state-of-the art networkable controller for either monochrome (single color) or RGB (full color) component LED lamps. Unlike traditional LED lighting controllers which simply activate and in some cases dim LED elements, the ILC-100™ allows any hue from a palette of over 16 million colors to be user selected, saved in memory and dimmed to any level reliably without expensive accessories or complex user interfaces. For ease of color selection, an embedded color computer (previously used to generate color printer output within laser printers), permits any hue to be easily selected with the simple press of a button and no special training or knowledge of color science.

#### 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-100™ LED lighting controllers to be connected to nearly any type system!

#### Operation

One or more ILC-100™ controllers (max 65,025) can be networked to control nearly an unlimited number of LED lighting arrays. A family of Decora<sup>®</sup>-style keypads are available to select colors as well as function as simple "exit" control devices. Automation systems and 3rd party lighting panels can operate ILC-100 networks up to 4000 feet away.

#### Applications

The system is designed to operate either as a standalone device or within an integrated system controlling rigid or flexible strips of LEDs (mono color or full color). Typical applications include backlighting projection screens, soffit lighting, 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-100™ allows you to be the designer for LED lighting.

### Features

- CS-Bus™ Control Accessory
- Built-in gamma-corrected color computer selects any color hue quickly
- Compatible with nearly any type of interface (dry contact, STI, 0-10v dimmable ballast controllers, serial and Internet Protocol)
- Up to 16.3 million Controllers can be individually addresses/controlled
- Enhance functionality of popular automation systems
- Low-Voltage system does not require a professional electrician for installation
- Can be triggered by compatible motor controllers (useful on projection screens and window covering products)
- Can interconnect to controllers and control panels up to 4000 feet away
- Wide range of network control options available

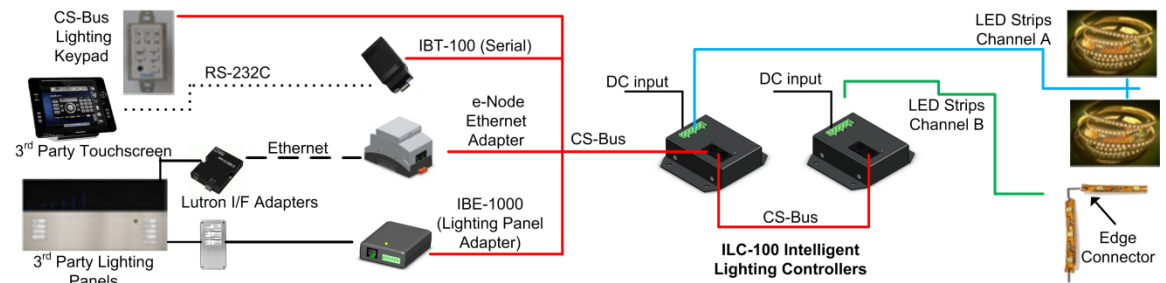
# Specifications

Feature	Detail
LED Control	Supports rigid or flexible LED strips requiring 12V DC to 48V DC current
Communication	CS-Bus (4 –wire bus). On-board powered RJ-25 connector (for powering keypads) and one RJ-25 connector for additional CS-Bus™ connections
Current Sensing	Built-in current sensing circuitry automatically shuts off system in case of faults or shorts
Addressability	-Individual addressability for up to 16.3 million Controllers -Zone Limits—255 Controllers per zone -System Limits—16.3m Controllers using bridge (e-Node) interconnects
Failsafe I/O	Unique circuitry permits failsafe operation for all units on the CS-Bus even if one unit fails or shuts down
Hardware Compatibility	A built-in connector allows keypads to be easily integrated using Category II wiring
Software Compatibility	-VPAD (virtual keypad) PC application -Any third-party serial communication utility -Lighting panels from Lutron & Vantage -Automation systems from AMX, Crestron, Control 4, Elan Home Systems and others
IR Control	On-board CS-Bus™ connector enables low-cost IR receiver to be connected for IR operation
RS-232-C Control	IBT-100™ serial adapter plugs anywhere onto CS-Bus™ network up to 4000 feet from ILC-100™ Controller

Feature	Detail
0-10v Dimmable ballast Control	Optional IBE-1000™ adapter plugs anywhere onto CS-Bus™ network and connects to wallbox, residential and commercial lighting panels (and enables LED presets to be selected)
Power Requirements	Power supply should be selected depending upon voltage of LED elements selected. Controller requires minimum 5V DC@40 ma. Maximum voltage 48V DC. Maximum current input 6.67 amps
Load Rating	Maximum current output 6.67 amps. For 12V DC LED devices, typically 42' for standard density RGBs can be supported.
Size	PCB Version: 1.78" (45.21mm) x 2.75" (69.85mm) x 1.1" (27.94mm) Standalone: 2.25"(76.2mm) x 3.0"(76.2mm) x 0.9" (22.86mm) (not including mounting ears)
Enclosure	Optional Metal Mounting Enclosure with indexed power and LED connections (included with Standalone version)
Weight	PCB Version: 4.0 oz. (.11kg) Standalone: 6.0 oz. (0.17kg)
LED Compatibility	RGB LEDs:12V DC to 48V DC + Anode (4 wire) Single Color LEDs: 12V DC to 48V DC (2 wire)
Compliance	RoHS, PCB UL-94VO certified, Rated to work with UL rated Category 2 power supplies,
Manufacturing	Made in the USA

## Overview

### Wiring



### Application

The ILC-100 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. Your application may be easily adapted from our core technology. Contact us for more information.

- Backlighting Projection Screens
- Soffit and Alcove Lighting
- Navigational/Exit Lighting
- Object of Interest Illumination
- Motor Automation
- Cabinet Lighting
- Marine/Boat applications
- Energy savings applications
- Heat sensitive application
- Enhanced functionality for Lighting Panels
- Space saving requirement
- Stair and Stumble-proof Applications