

Flexible Linear Lighting Arrays™

Low-Voltage Color Changing (RGB) LED Elements

*Low-Voltage, Full-Color Flexible
(LED) lighting elements*

*Flexible Construction Enables
Mounting on Flat or Uneven surfaces*

*Standard and Water-Resistant
Models available*



*Licensed Patents
from Philips Electronics*

*Small Form Factor Device can be
Integrated Easily*

*Shorter/Customized lengths can be
created in the field*

Product Description

Background

The Flexible Linear Lighting Arrays (FLA™) is an ingenious, easy-to-install family of color changing LED elements that are designed to work seamlessly with the ILC-100™ Intelligent Lighting Controller to generate virtually any color of illumination (including white). The FLE devices are available in a choice of two brightness configurations (standard and enhanced) as well as three packaging formats (dry, water resistant, and super-water resistant). The lowest-cost version (dry) is designed for installations where protection of the surface-mounted LED elements can be provided typically by a soffit or other shield. The water-resistant (IP54) version and the super-water resistant (IP67) version are specified where exposure to physical contact (under steps, hand rails), excessive vibration or moisture is anticipated. The IP20 and IP54 versions come equipped with a built-in 4-pin male connector. On FLE units shorter than 5.0 meters (16.4') in length, a corresponding 4-pin built-in female connector is provided on the non-powered end such that additional lengths can be daisy-chained without soldering or crimping (max run is 5.0 meters per strip) connected arrays.

Operation

Combined with an ILC-100™ LED controller, nearly 14 million colors from a displayable range of 68 billion colors can be selected. Compatible-accessory family products include keypads, hand-held IR remotes, standard 0-10v lighting interfaces, motion sensors, as well as serial and Ethernet adapters.

Features

- LED energy saving lighting elements
- 14 million hues from a range of 68 billion (colors) available
- Compatible with ILC-100™ LED controller
- SB-Standard Brightness (708 lumens) as well as EB-Enhanced Brightness (1416 lumens) models
- Apple iPad[®], Android[®] compatible²
- Dry, water-resistant, and super water-resistant models available.
- Low-voltage system **does not** require a commercial electrical license for installation
- 3M™ adhesive backing (silicon fastening straps available for moist locations)
- Can interconnect to controllers and control panels up to 1209m (4000') away
- Std. lengths can be customized (min 0.1m)

Easy Setup and Configuration

The FLA's thin form factor enables the lighting devices to be mounted almost anywhere. Typically up to 12m (40') of standard density (FLE-12SD-xxx) 12-volt DC LEDs or up to 6m (20') of enhanced brightness (FLE-12EB-xxx) 12-volt LEDs can be connected to a single ILC-100™ controller¹. Alternatively, a 24-volt enhanced brightness configuration is available (FLE-24EB-xxx) which permits longer runs. If additional runs beyond those specified above are required, additional ILC-100™ controllers can be networked together. ILC-100™ controllers can be located up to an amazing 1219m (4000') away with other controllers, automation systems or switches!

Applications

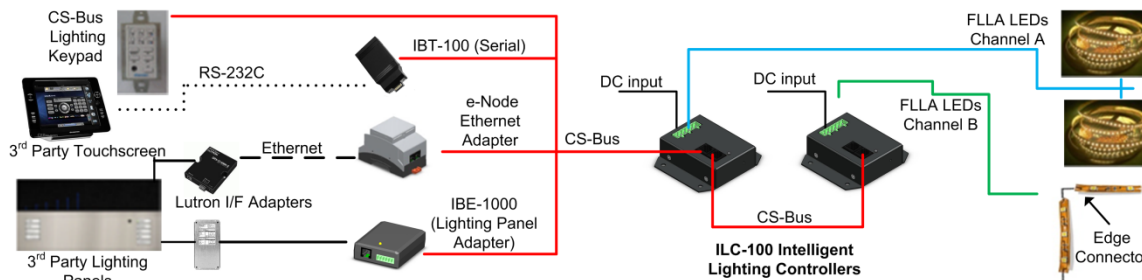
Typical applications include backlighting projection screens, soffit lighting, navigational/accessibility lighting, decorative ambient, focal point, and object of interest illumination. Bi-directional feedback with the ILC-100 controllers enables automation systems to indicate specific lighting states selected (on touchscreens and iPads). The ILC-100™ and the FLA luminaries allow you to be the designer for LED lighting! 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 is available which enable ILC-100™ LED lighting controllers to be connected to nearly any type of home, commercial or industrial automation system!

Specifications

Feature	Detail
Construction/Suitability For specific installations	Depending upon installation environment, a choice of three configurations are available: <i>-Std. Packaging</i> -Dry locations <i>-Std. Water Resistant</i> -Rated IP54 for moist locations <i>-Super Water-Resistant</i> -Rated IP67 with sealed power connector.
Embedded lighting elements	Standard Brightness Model —30 tri-color (integrated RGB) LED elements per meter mounted on flexible printed circuit board medium. Enhanced Brightness Model —60 tri-color (integrated RGB) LED elements per meter mounted on a flexible printed circuit board medium.
Standard Lengths	Dry Version --0.5m, 1.0m, 3.0m and 5.0m lengths available. Std. Water Resistant (IP54) --0.1m, 0.2m, 0.5m, 1.0m, 3.0m and 5.0m lengths available. Sealed-ends Water Resistant (IP67) —1.0m, 3.0m and 5.0m lengths available.
Light Output	Standard Brightness - 708 lumens/ft Enhanced Brightness -1416 lumens/ft
Beam Angle	120 degrees (120° x 120°)
LED Controller Compatibility	DC common positive (+) with separate Red, Green, and Blue cathodes (-)

Feature	Detail
Power Requirements	Standard Brightness Models -FLLA-12SD-xxx systems requires 12v DC positive common. 6.0-7.22watts/m (1.83-2.2w/ft) @12vDC Enhanced Brightness Models FLLA-12EB-xxx systems requires 12v DC positive common. 12.0-14.44watts/m (3.66-4.4 watts/ft@12vDC) -FLLA-24EB-xxx systems requires 24v DC positive common. 12.0-14.44watts/m (3.66-4.4w/ft) @24vDC
Built-in Power Connections	Dry and IP54: 4-pin male connector* IP67 —Built-in 4-wire flying lead sealed power connection *Note: Requires DC Power Leader harness which connects to ILC-100 controller. Non-powered end has 4-pin female connector for continuation runs up to 5 meters (16.4 ft)
LED Controller Compatibility	Intelligent Lighting Controller ILC-100* *Note: System comprised of ILC-100™ and FLLA luminaries includes a license to use LED color mixing and LED dimming technology without risk of patent infringement from Philips Electronics
Size (w. & h.)	Dry Ver. -- 10.1mm (w) x 2.25mm (h) IP54 Ver. -- 10.2mm (w) x 3.41mm (h) IP67 Ver. -- 12.3mm (w) x 4.75mm (h) <small>See model designation for length (i.e. FLLA-12SD-010 is 0.1m, -500 is 5m)</small>
Weight	Dry Ver. -- 12.19 g/m (0.13 oz/ft) IP54 Ver. -- 39.69 g/m (0.43 oz/ft) IP67 Version -- 73.71 g/m (0.79 oz/ft)
Compliance	RoHS, Rated to work with UL rated Category 2 power supplies

Wiring Overview



Application

The Flexible LED elements (luminaires) and the ILC-100™ family of LED controllers 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

Notes: ¹: Category 2 power supplies restrict current to 60 watts @12 volts DC or 100 watts @24 volts DC
²: Using e-Node™ Ethernet adapter and ILC-100™ Controller.