LUXDRIVE™ by LEDdynamics™

6014 Elara Strip™

Connectable LED Strip with On Board Driver

PRELIMINARY

Product Overview

The Elara Strip is a light engine designed for strip lighting. The Elara Strip combines six LEDs with a dimming regulated current driver, all on a 12.0" x 0.45" strip. The low 0.15" profile and wide 120° viewing angle allows the Elara Strip to be mounted in tight locations while still providing flood illumination. The Elara Strip is designed to be connected end-to-end for long runs that only need power applied to one end of the run. The 0-10V dimming input allows the Elara Strip to be dimmed with many off-the-shelf dimming controls. A temperature compensation circuit automatically reduces the drive current when the Elara Strip is subjected to high ambient temperatures, protecting the LEDs from thermal damage and increasing the life span of the device. Built-in surge protection further enhances the reliability of this versatile strip.

Electrical Specifications

Input Voltage	12-25V DC
Absolute Maximum	30V DC
Power	3W at 20°C
Dim Input	0-10V
Operating Temp	-40°C to +50°C

Applications

- Cove Lighting
- Display Lighting
- Landscape Lighting
- Automotive Lighting
- General Illumination
- Architectural Lighting
- Accent Lighting
- Wall Wash & Bias Lighting

Features

- Up to 200 Lumens / ft. light output
- Efficient and flexible on-board drive circuit accepts 12-25V input
- Built-in temperature compensation protects LEDs from thermal damage, extends life span of device
- 0-10V dimming input, compatible with many off-the-shelf dimming controllers
- End-to-end connectable up to 10 feet
- Strips can be cut down to 6" lengths

Pb

RoHS Compliant 2002/95/EC

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Please note that this is a preliminary version of this datasheet. Please check www.LuxDrive.com for updates.

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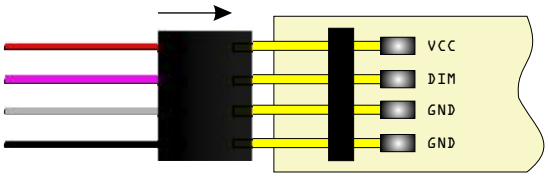
Electrical Connections

With the pins on the left, the connections on each end of the Elara Strip (from top to bottom) are +V (VCC), DIM, DIM GROUND and POWER GROUND. The round pads are +V on top, DIM in the middle, and GND (for DIM and POWER) on the bottom. Because the connections at one end are identical to the other end (from top to bottom), multiple Elara Strips can be connected end-to-end to make longer runs (up to 10'). To make this easier, the Elara Strip comes with end-to-end connectors. Power and dimming can be brought out to wires on one end using an Elara Strip Wiring Harness (Part #6014-HE).



RED	Vin+ (Vcc) +12-25v DC
PURPLE	Dim Input
GRAY	Dim Ground
BLACK	Vin- (Power Ground)

Fig. 1 - Electrical Connections

The wiring harness needs to be installed with the RED wire connecting to the VCC pin (labeled right next to the connector on the strip). See Fig. 1.

Part Number Identification

Part Number	Color
6014-R6	Daylight
6014-R5	Bright White
6014-R4	Cool White
6014-R3	Neutral White
6014-R2	Warm White
6014-G	Green*
6014-B	Blue*
6014-R	Red*

*Special Order

Power Budgeting

The Elara Strip should be budgeted at 3W per foot. If a half-foot section is used, it should be budgeted at 1.5W.

Dimming

The Elara Strip can be dimmed using a 0-10V dimmer. The COMMON or GROUND wire of the dimmer should be connected to the GND input on the Elara Strip, and the 0-10V SIGNAL wire should be connected to the DIM input on the Elara Strip. The Elara Strip goes into standby mode when the DIM voltage drops below 1V. In this mode the LEDs will all be off. Leaving the DIM input unconnected will result in full-brightness operation.

The Elara Strip dimming has been tested with Lutron* Nova* and Nova T☆* 0-10V Slide Dimming Modules.

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Heat Sinking and Mounting

The Elara Strip can be mounted and operated without a heat sink, however the thermal compensation circuit will reduce the current to the LEDs slightly.

Mounting the strip to a heat sink will allow the strip to run at higher currents and produce more light. The Elara Strip needs to be electrically isolated from the heat sink, which can be easily accomplished with an electrically insulated thermal adhesive tape (LuxDrive Part # 6014-TAT). To protect against short circuits, it is recommended that the end connectors be used when connecting boards end-to-end for the longer runs before affixing to the heat sink. This eliminates the possibility of through-hole wires piercing the thermal tape.

The Elara Strip may be sheared 0.5” in from each end. The sheared strips can still be connected end-to-end with other sheared or non-sheared strips. Shearing the end, however, removes the connectors so the wires connecting to the board will have to be soldered to the through-holes. Care should be taken to remove any copper slivers from the sheared end of the board to prevent short circuits.

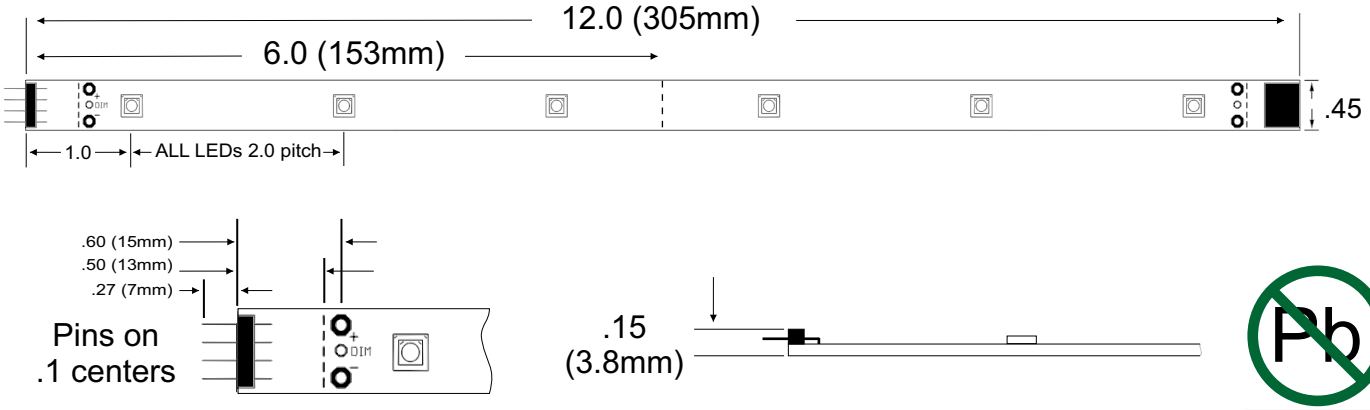
Half Strips

The Elara Strip can be cut in half if only 6” is required. The 6” strip can be used individually or as the last strip in a longer end-to-end run of strips. To create a half strip, locate the solder jumper (designated by SJ1) between the first and second led on the strip. This is a blob of solder or zero-ohm jumper that connects two parts of the circuit. Remove this jumper with a soldering iron and some solder wick or a solder sucker. Once the electrical connection has been broken, simply shear the strip in half. The left side can then be plugged into another strip or into a wiring harness.

Physical Dimensions

All dimensions are in inches (+/- 0.1”).

When Elara Strips are placed placed end to end, the 2” LED pitch is maintained along the length of the run.



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