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Product Overview

The LuxStrip II 9008 is a powerful, compact light engine built on a Printed Circuit Board (PCB) and thermally engineered to accommodate high brightness LEDs. Utilizing “driver on board” technology allows the entire unit to easily be integrated into fixtures where space is at a premium. The LuxStrip II is a perfect solution for applications such as general lighting, fluorescent replacement, sign or channel letters, or architectural lighting. As a standard offering at 12" the LuxStrip II comes with up to six LUXEON® Rebel* devices. Strips can be cut to specific lengths, as short as 4". The strips are designed to interconnect to allow for varying lengths, and can be deployed to lengths of up to 12 feet. Optics are available for directional lighting. Standard options are 5°, 8°, and 20°. Other options may be added to suit custom applications.

Unlike traditional PCBs, the driver for the LuxStrip II is contained conveniently on board, allowing power supplies which deliver a fixed voltage to be used. An industry standard 24VDC power supply is ideal for use with LuxStrip II. This is due to the use of a LUXdrive series power module, which allows for a fixed voltage input while maintaining a true, constant-current regulated output for the LEDs. Power and dimming control voltage is connected via a low profile board-to-board connector at the end of the strip, and utilizes a unique polarized connection for goof proof assembly. Several strips can be stacked/attached together upto 12 feet typical. “Stub” sections can be shortened at 2" increments to fit any length requirement.

* - Units can be customized for other LEDs or redesigned for OEM applications - Contact LUXdrive for more information

Features

- Designed to operate on 24VDC
- On board driver provides constant current
- 12" x .95", cuttable every 2", min length 4"
- Fits the Dialight 22mm optics (OPC1-1-xxxx)
- Easily joined for up to 12 feet length
- 0 to 100% dimming w/signal pass-through
- Works with 0-10V Dimmers, Lutron Nova T®
- Polarized connections - No Goofs
- Compatible with LUXEON® Rebel
- Series configuration eliminates current hogging

Typical Applications

- Line lighting and wall wash
- Automotive, RV & Marine Lighting
- Tight space and cove lighting
- Point of Purchase Lighting
- Desk & Reading Lamps
- Fluorescent replacement fixtures
- Cabinet & Display Case Lighting
- Sign & Channel Letters

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Figure 1
(6) LUXEON Rebel LEDs in series
(VIN= 24VDC) and end-feeding another strip



RoHS
Compliant
2002/95/EC

Luminous Flux

Table 1
Typical Luminous Flux at LED Thermal Pad Temperature of 25°C

Part Number	Color	Drive Current in (mA)	Luminous Flux	CRI	Continuous length (feet)	Power Consumption (per foot)
9008-PW750-35	5000K White	350	630 typ	70 typ	12 max	7W
9008-PW750-70	5000K White	700	1080 typ	70 typ	8 max	15W
9008-PW740-35	4000K White	350	630 typ	70 typ	12 max	7W
9008-PW740-70	4000K White	700	1080 typ	70 typ	8 max	15W
9008-PW830-35	3000K White	350	462 typ	85 typ	12 max	7W
9008-PW830-70	3000K White	700	800 typ	85 typ	8 max	15W

Notes for Table 1:

1. Custom units available upon request, restrictions apply. Contact LUXdrive for additional details.
2. See LUXEON® Rebel data sheet for more details.

Part Number Identification

The part number is explained below:

9008 - P A B CC - DD

Where:

9008 designates the LUXdrive Product ID

P designates Radiation Pattern (P for Lambertian 120° typ)

A designates LED color (W= White, D= Red, M=Green, B=Blue)

B designates CRI value (7= 70 typ, 8=85 typ, 0 for direct color variants)

CC designates Color Variant (30=3000K White, 40=4000K White, 50=5000K White, 00 for direct color variants)

DD designates Drive Current (35=350mA, 70=700mA)

Thermal Resistance (LED junctions to bottom of PCB)

Luxstrip with Rebel LEDs in white 2.5° C/W

Storage Temperature..... <135°C

Recommended Operating Temperature (T_{opr})..... <135°C³

See LUXEON Rebel data sheet for more details

³Junction temperature

Heat Sinking and Mounting

The LuxStrip II has five mounting points for #4, or #6 screws used with fiber or nylon washers. These screw holes are provided to allow secure connection to the heat sink. Thermal epoxy, or double-sided thermal tape may be used for speedy and easy assembly. The LuxStrip II should be attached to additional heat sink for proper thermal management. At minimum, a heat sink of a metal plate (copper or aluminum), attached using a thermal interface material, should be used to increase the area exposed to free air.

The LuxStrip II FR4 Printed Circuit Board has a backing plate that is electrically isolated from the emitter. It is not necessary to use an electrically insulating thermal interface material.

Configuration

To be able to fit lengths of less than 12", the LuxStrip II can be trimmed as necessary. This method is called "stub", where the unpowered end of the strip is cut to fit the fixture or extrusion. A common hacksaw and soldering iron is all that is required to allow for field modification of the strips to accommodate custom installations. Jumper pads are available at each cut point to shorten the electrical length of each string. Simply jump the pad that is located before the cut. The remaining LEDs will get the proper current and voltage since they have their own driver. As the length of the LuxStrip II is reduced, the minimum voltage to power the unit is also reduced. Using this approach, here are the possible lengths:

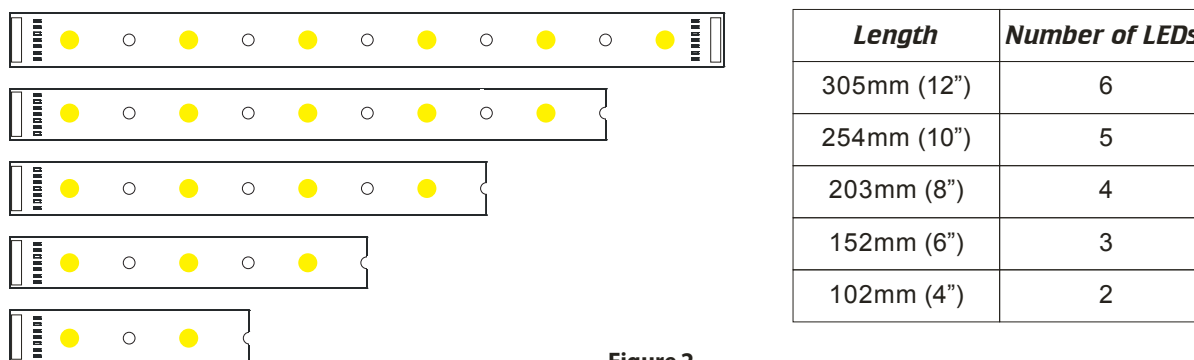


Figure 2
Typical "stub" strip cut lengths and results

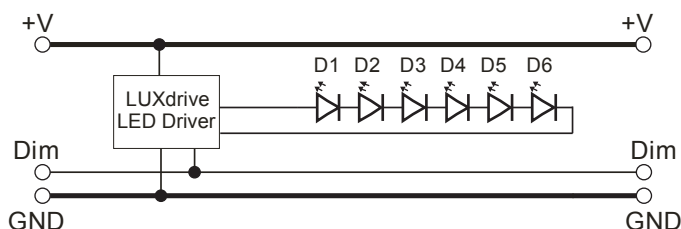


Figure 3
Electrical equivalent of LuxStrip II

Connection Diagram

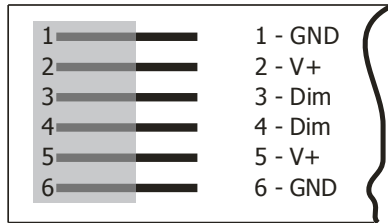


Figure 4
LuxStrip II wiring diagram

There are two different types of wiring connectors available for the LuxStrip II. Both connectors are 24.1mm (0.95") wide and 19.1mm (0.75") long. The 9008-HE which has four wires, two wires for Power in and two wires for dimming. Also available are the Barrel Plug connectors 9008-PE and 9008-PN. Both Barrel Plug connectors feature a 2.5mm center positive plug. The 9008-PE has dimming wires while the 9008-PN does not. Both Barrel Plug solutions offer solderless setup of the system.

Custom connectors available upon request, restrictions apply. Contact LUXdrive for additional details.

Optics

The LuxStrip II can be fitted with many different optics from the major optics manufacturers. Dialight optics, also offered by LUXdrive, offer four different illumination patterns: spot (5°), medium(8°), wide(20°) and oval (8° x 25°) (Note that LED type and color will have a slight effect on illumination pattern, e.g., non-white LEDs give a narrower distribution). See the Dialight "LUMILEDSTM LUXEON[®] REBEL ADHESIVE-BACKED LENS" data sheet for more information, including typical light distribution patterns.

Figure 5
LuxStrip II with optics.

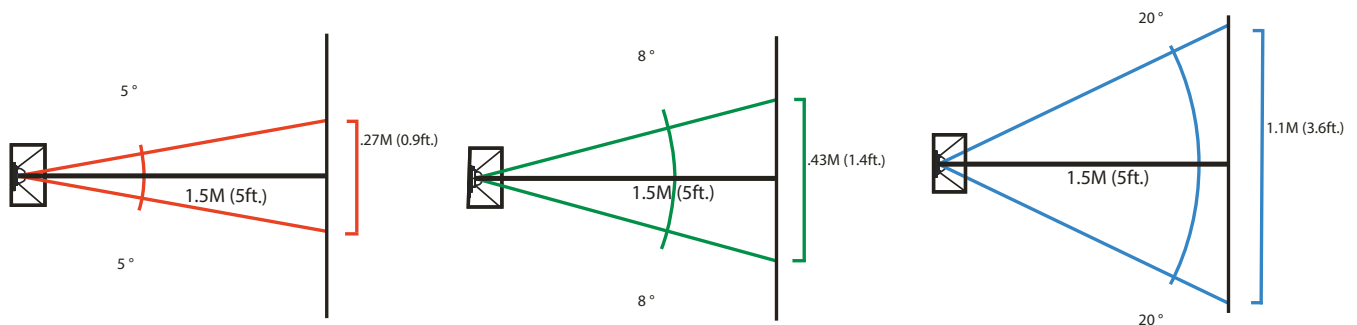


Figure 6
standard illumination patterns available,
and approximate diffusion at 1.5M (5ft.)

Physical Dimensions

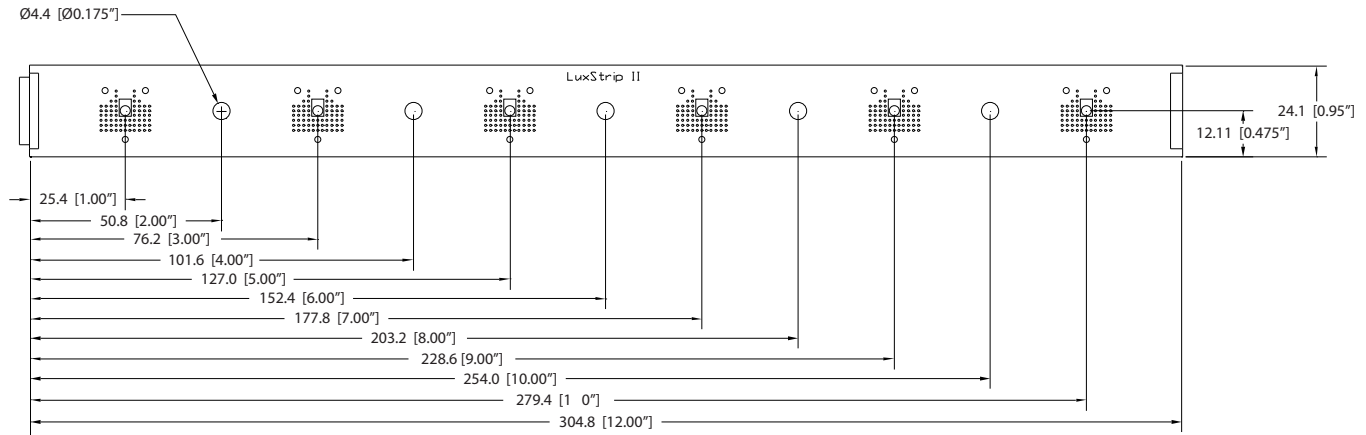


Figure 7a
Top View - Typical Physical Dimensions,
Including Mounting Holes

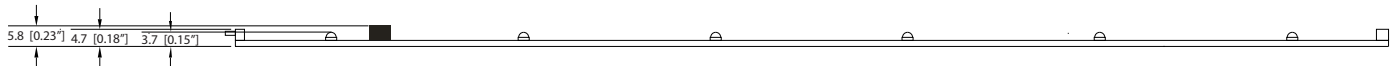


Figure 7b
Side View - Typical Height

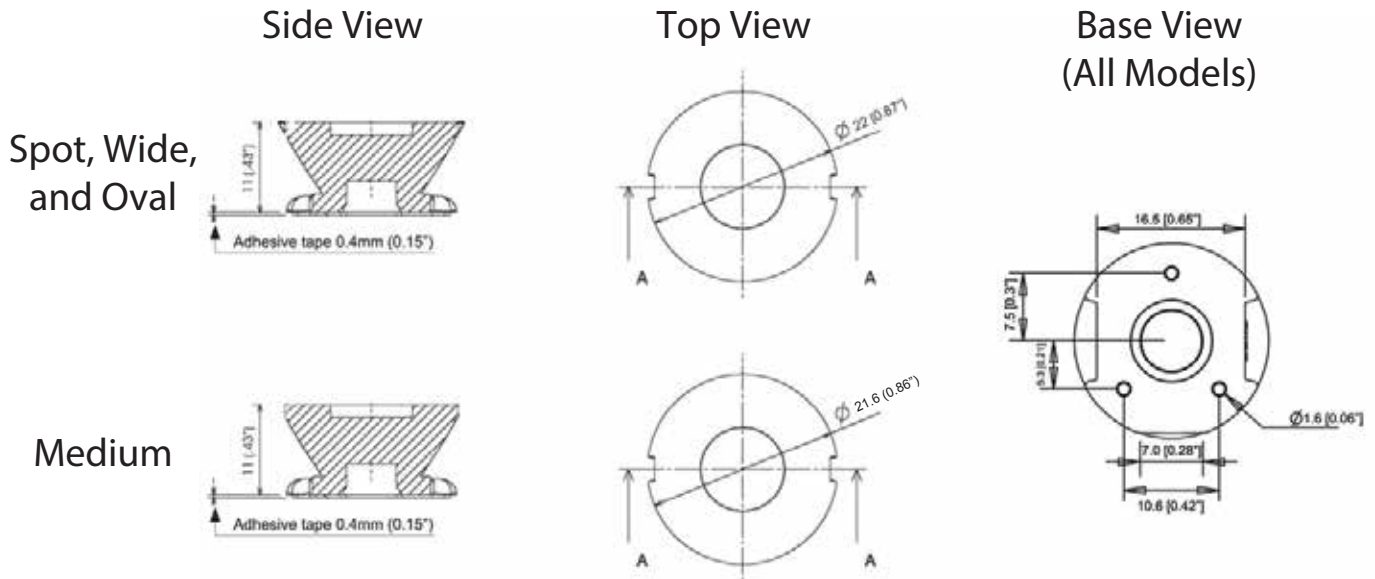


Figure 8
Typical Dimensions for the Dialight Optic.