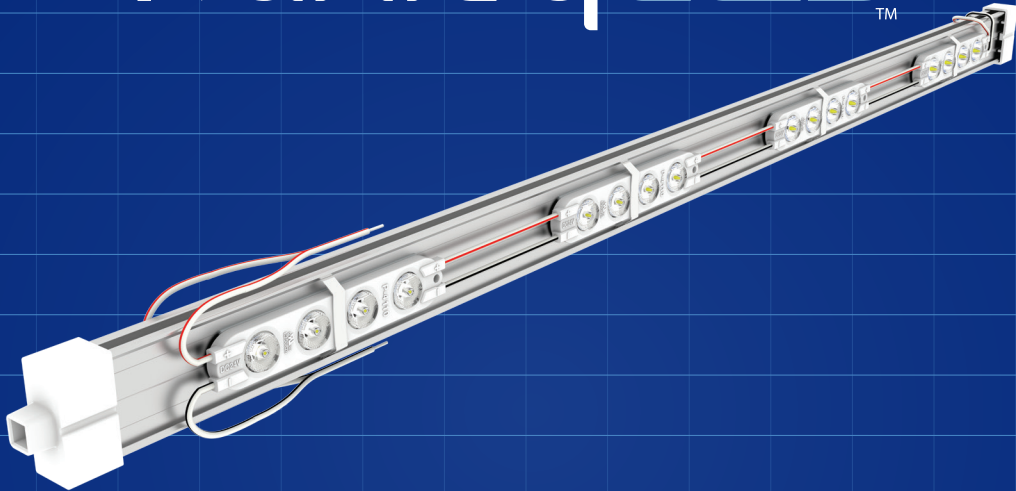


# HanleyLED™



## PHOENIX HARG BARS

### Want to make your shop Highly Efficient, too?

Reduce install mistakes and improve efficiency by transforming your shop with our 24volt System. With our 24volt PhxNRG MODULES, our 24volt PhxNRG BARS & 24volt Wing Span products, you only need 24volt Hanley Premium Power Supplies stocked in your shop.

- Game Saving Solution, made with High Efficiency Everything!
- Exceptionally Bright: 69% Brighter Output
- Most Versatile & Cost Effective Cabinet LED Bar!
- Phoenix Lens for more space between bars
- Can be cut to size
- Ideal for New Construction or HO Lamp Replacement
- 24volt system
- Ships in compact boxes for easy drop-shipping anywhere!
- Guaranteed Life over 50,000 hours
- DIY Layout Tool at [hanleyledsolutions.com](http://hanleyledsolutions.com)  
(Available in English, Spanish and French)

LM79

LM80

L70:5+ YEARS



	GENERAL PURPOSE RETROFIT SIGN CONVERSION
	FOR USE ONLY IN ACCORDANCE WITH KIT INSTRUCTIONS
CERTIFIED <sup>®</sup> SAFETY US-CA e487794	KIT IS COMPLETE ONLY WHEN ALL PARTS REQUIRED BY THE INSTRUCTIONS ARE PRESENT

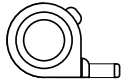


## BEFORE YOU BEGIN

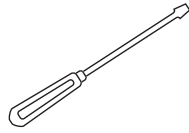
Determine your light bar mounting method. Are you using pre-existing sockets to mount? If so, Retrofit Connectors are already attached to the PhoenixNRG Bars. For a new construction simply remove screw & cap.

## READ THESE INSTRUCTIONS COMPLETELY AND CAREFULLY

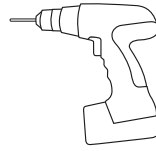
### Tools required:



Tape Measure



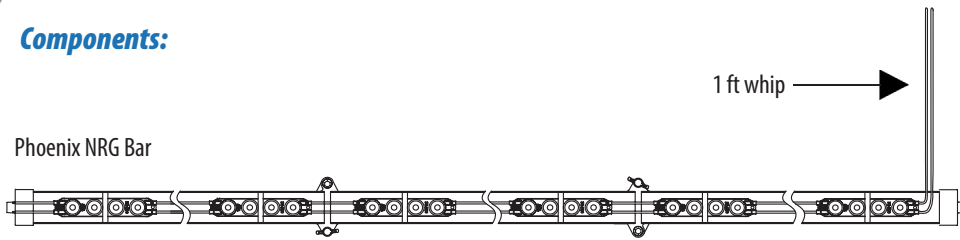
Screwdriver



Electric Drill

### Components:

Phoenix NRG Bar



1 ft whip



24v Power Supply

- Retrofit (RF) Connector is already screwed onto ends
- Simply remove screw & cap for new construction signs
- PhoenixNRG Bars come with a 1 ft whip



Item	Bars Per Box	Bars Per Case
HPEB-2S24	3	12
HPEB-2S30	3	12
HPEB-2S36	3	12
HPEB-2S42	3	12
HPEB-2S48	3	12
HPEB-2S60	2	8
HPEB-2S64	2	8

Item	Bars Per Box	Bars Per Case
HPEB-2S72	2	8
HPEB-2S84	2	8
HPEB-2S96	2	8
HPEB-2S108	2	8
HPEB-2S117	2	8
HPEB-2S120	2	8

### NOTE:

All materials removed must be disposed of in accordance with applicable local, state, and federal laws.

**WARNING check polarity:** All connections must be WHITE-TO-RED (+) and BLACK-TO-BLACK (-). Reverse polarity connections may damage the LEDs and will void product warranty.

**Caution:** Turn off power to sign before inspecting or removing existing light source. Power must remain off while installing the Concorde Cabinet System.

# RETROFIT INSTALLATION GUIDE

## Phoenix NRG Bar

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This guide is designed to aid in the installation of HanleyLED's Phoenix NRG Bar. Skilled trades people that are familiar with general construction, electrical, and sign installation techniques should do the installation. Licensed electricians should provide all installation and hook-up of both the primary and secondary input/outputs of the HanleyLED power supply. All installation and hook-up should be done in accordance with all National and Local codes and permits. In no way is this document intended to construe warranty or fitness of use of the products described, nor is it intended to provide safety instruction for those installing the product.

THE FIELD INSTALLATION OF THIS RETROFIT SYSTEM INTO A SIGN IS SUBJECT TO THE ACCEPTANCE OF LOCAL INSPECTION AUTHORITY.

**CAUTION:** TURN OFF POWER TO THE SIGN BEFORE INSPECTING OR REMOVING EXISTING LIGHT SOURCE. THE POWER MUST REMAIN OFF WHILE INSTALLING THE LED RETROFIT KIT.

## Tools Required:

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- Wire cutter & strippers
- Measuring tape
- Marking pens
- Drill
- Standard hardware and supplies in addition to the HanleyLED modules installation guides (UL listing may be required on certain items)

## Prepping the Channel Letter or Cabinet

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### Step 1

Remove existing neon or fluorescent bulbs by having a licensed electrician disconnect and remove the neon transformers or fluorescent ballasts. Remove existing neon and standoffs or fluorescent lamps. Leave fluorescent sockets in cabinets with leads disconnected. This should leave an empty channel letter or cabinet.

**NOTE:** ALL MATERIALS REMOVED MUST BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL LAWS.

### Step 2

Using a non- oil based cleaner, clean the back surfaces of the channel letter or cabinet where the LED modules will be mounted. This is an important step for good adhesion of HanleyLED modules mounting tape.

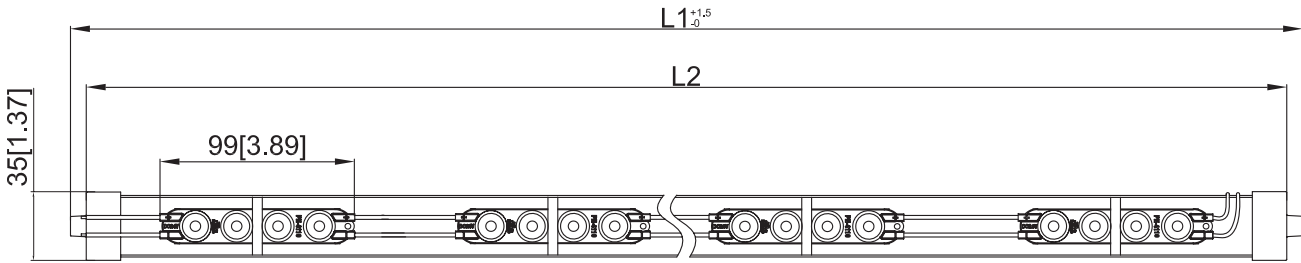
### Step 3

Installer should examine all parts that are not intended to be replaced by the retrofit kit for damage and replace any damaged parts prior to installation of the retrofit kit. Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation. Any existing holes in the letters or cabinet that will not be used in the installation of HanleyLED modules should be patched to avoid water damage. Openings smaller than ½" diameter may be sealed with the appropriate amount of rated caulk or sealant. Openings larger than ½" should be patched using an aluminum or zinc coated steel patch with rivets and sealant.

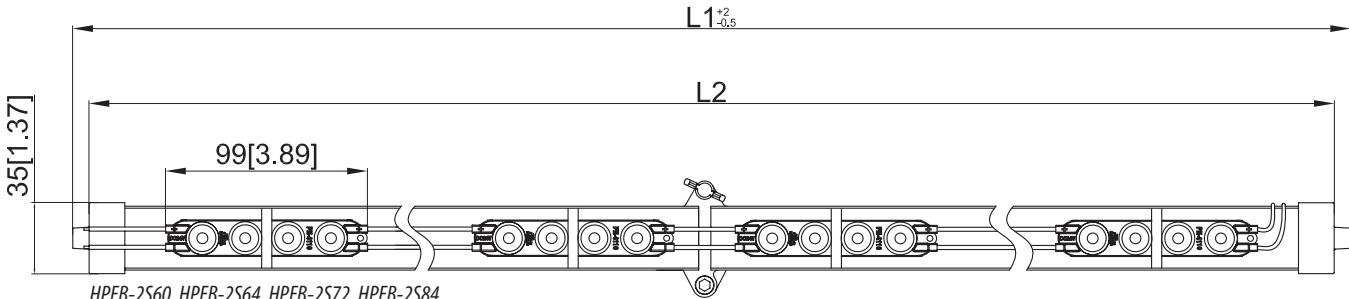
### Step 4

Proceed with the appropriate HanleyLED module installation guide for your specific product.

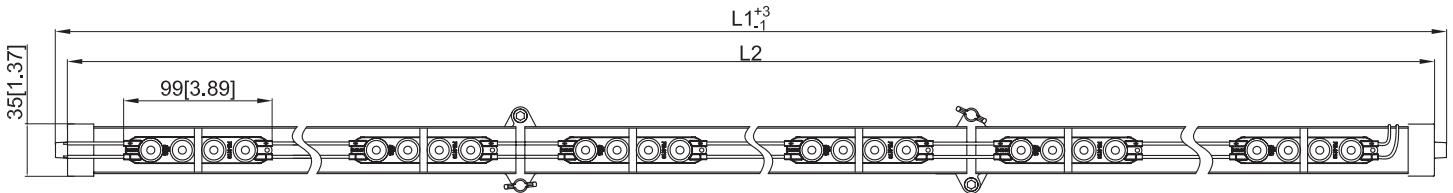
## Light Bar Dimensions



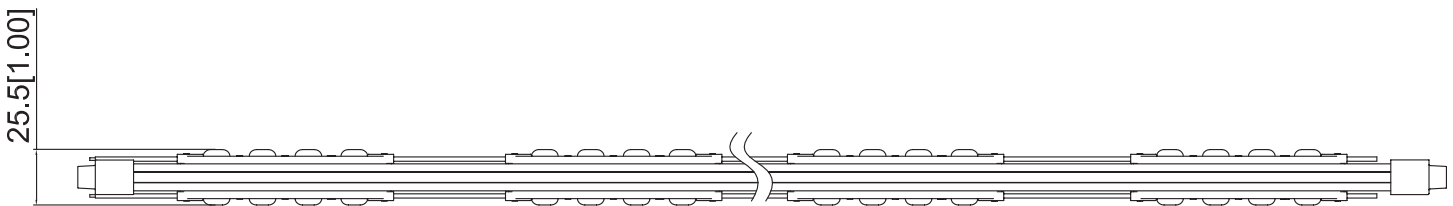
HPEB-2S24, HPEB-2S30, HPEB-2S36, HPEB-2S42, HPEB-2S48



HPEB-2S60, HPEB-2S64, HPEB-2S72, HPEB-2S84



HPEB-2S96, HPEB-2S108, HPEB-2S117, HPEB-2S120



ALL PHOENIX NRG BAR SIZES

**Your Phoenix NRG bar is ready to go out of the package. Simply open the hinge and snap your bar into existing lamp sockets for retrofits, or screw directly into existing structure for new installs. NO PEELING AND STICKING OF MODULES REQUIRED!**

Item	LED Lamp Cross Reference	Module QTY Per Bar	Watts (w)	Lumens (lm)	Actual size (in)
<b>HPEB-2S24</b>	F24HO	6	6.6	1122	21"
<b>HPEB-2S30</b>	F30HO	8	8.8	1496	27"
<b>HPEB-2S36</b>	F36HO	10	11	1870	33.1"
<b>HPEB-2S42</b>	F42HO	12	13	2210	39.1"
<b>HPEB-2S48</b>	F48HO	14	15	2550	45"
<b>HPEB-2S60</b>	F60HO	18	20	3400	57"
<b>HPEB-2S64</b>	F64HO	20	22	3740	61.1"
<b>HPEB-2S72</b>	F72HO	22	24	4080	69"
<b>HPEB-2S84</b>	F84HO	26	29	4930	81"
<b>HPEB-2S96</b>	F96HO	30	33	5610	93"
<b>HPEB-2S108</b>	F108HO	34	37	6290	105"
<b>HPEB-2S117</b>	F117HO	36	40	6800	114"
<b>HPEB-2S120</b>	F120HO	38	42	7140	117"

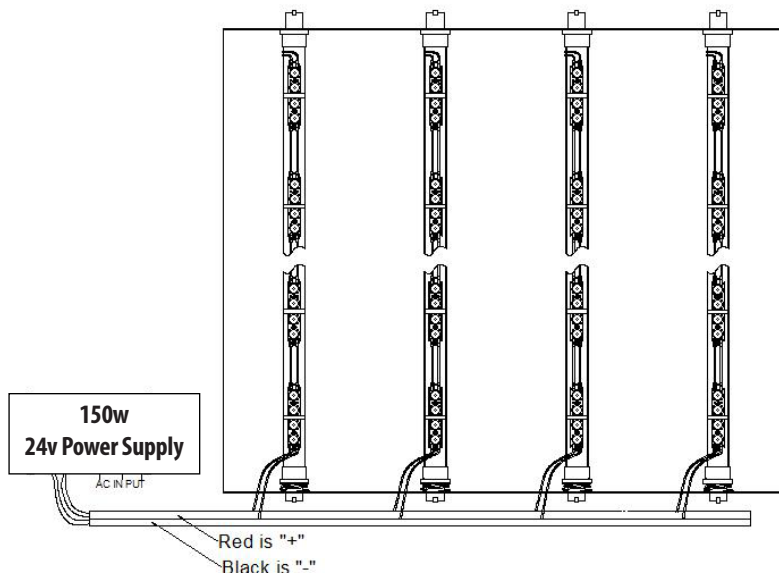
## Layout Guidelines

Double-sided light box depth (inch)	Item	Maximum space between bars (inch)	Comments
9	Phoenix NRG Bars by HanleyLED	12	Lightbox size: 47" x 67" Tested with 3/16" 7328 white acrylic
12		15	
18		20	
24		22	

## Power Supply Load Chart & Cascading (Phoenix NRG bars in a series) Information Guidelines

Item	Watts/Bar	Power Supplies (24v)				Cascading/Run Information
		60w H60W-PPS524V H60W-PPSEM24V	100w H100W-PPS524V H100W-PPSEM24V	150w H150W-PPS524V H150W-PPSEM24V	240w H240W-PPS524V	
		<b>Max Number of Phoenix NRG bars Per Power Supply</b>				<b>Max Series Wired</b>
<b>HPEB-2S24 (F24H0)</b>	6.6w	9	15	22	36	N/A
<b>HPEB-2S30 (F30H0)</b>	8.8w	6	11	16	24	N/A
<b>HPEB-2S36 (F36H0)</b>	11w	5	9	12	20	N/A
<b>HPEB-2S42 (F42H0)</b>	13w	4	7	10	16	N/A
<b>HPEB-2S48 (F48H0)</b>	15w	4	6	10	16	N/A
<b>HPEB-2S60 (F60H0)</b>	20w	3	5	6	12	N/A
<b>HPEB-2S64 (F64H0)</b>	22w	2	4	6	8	N/A
<b>HPEB-2S72 (F72H0)</b>	24w	2	4	6	8	N/A
<b>HPEB-2S84 (F84H0)</b>	29w	2	3	5	8	N/A
<b>HPEB-2S96 (F96H0)</b>	33w	1	3	4	4	N/A
<b>HPEB-2S108 (F108H0)</b>	37w	1	2	4	4	N/A
<b>HPEB-2S117 (F117H0)</b>	40w	1	2	2	4	N/A
<b>HPEB-2S120 (F120H0)</b>	42w	1	2	2	4	N/A

## 108" PhoenixNRG Bar Example (HPEB-2S108)



Please connect the '+' and '-' of the PhoenixNRG Bar to those of the power supply output correctly.

## Warranty

Model No.	Warranty Period
HPEB-2S24 · HPEB-2S30 · HPEB-2S36 · HPEB-2S42 · HPEB-2S48 · HPEB-2S60 · HPEB-2S64 · HPEB-2S72 · HPEB-2S84 · HPEB-2S96 · HPEB-2S108 · HPEB-2S117 · HPEB-2S120	7 year (product), 5 year (labor)

*Note: Above warranty period is only for products which are used inside of waterproof light box, and valid only when used as a system with HanleyLED Premium Power Supplies.*

## Cautions

### Cautions for installation and use:

- Make sure the installing surface is clean and suitable for sticking prior to installation
- Inadequately connecting the '+' and '-' of module to those of power supply output might ruin your product
- Full attention should be paid to wire polarity when connecting two or more strings of the product during installation
- The maximum cascade length is 142inch[3600mm]; not recommended to exceed this cascading length
- Standard operating temperature: -40° to 60°C

### Cautions for selection of other parts:

- Please ensure that the output voltage of using power supply is DC (24±5%)V, and the rated power supply is recommended to underload by 20%. (HanleyLED "PPSS" and "PPSEM" Power Supplies can be loaded to 100% if absolutely needed with no effect to warranty)
- During installation, please ask qualified person to count and select the suitable cable according to the diameter and length of wire when the connecting cable needs to be extended, otherwise, low input voltage to product may occur, or fire hazard due to overheated cable
- Prohibited to use any acid or alkaline glue to fix this product

## Troubleshooting

Malfunction & Solutions		
Malfunctions	Possible Causes	Solutions
All LEDs do not work	The power supply did not connect to power grid	Power on
	No electricity due to short-circuit of external power supply.	Remove the malfunction caused by short-circuit, power on again
	The wires of the bar connect to power supply output reversely	Check the connection and ensure the wires are connected correctly
Part of LEDs do not work	Part of power supplies do not have output	Check the power supply system
	Part of the bar wires have malfunction	
Brightness of LEDs is weak or uneven	Overloaded power supply	Replace it with higher power supply
	The power loss of power circuit is huge or the power loss to each existing circuit	Ensure working voltage of bars is within ±5%V of rated voltage. (1.Shorten the length of wires between the first bar and power supply or replace with wires with bigger diameter; 2. Ensure the cascading qty of string is less than or equal to the allowed maximum cascading qty, and each bar cascading qty is well-balanced.)
	Too many bars in series/cascade	Lessen the cascading qty for bar and ensure the qty for each electrical circuit is within the maximum cascading qty
LEDs are blinking	Poor wiring connections	Check all wiring connections immediately
	Failures in power supply	Replace power supply

**WARNING** – Risk of fire or electric shock. LED Retrofit Kit installation requires knowledge of sign electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.

**WARNING** – Risk of fire or electric shock. Install this kit only in host signs that have been identified in the installation instructions and where the input rating of the retrofit kit does not exceed the input rating of the sign

**WARNING** – Risk of fire or electric shock. Installation of this LED retrofit kit may involve drilling or punching of holes into the structure of the sign. Check for enclosed wiring and components to avoid damage to wiring and electrical parts.

**WARNING** – To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.

Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation.

Repair and seal any unused openings in the electrical enclosure. Openings greater than 12.7 mm (1/2 in.) diameter require a metal patch secured by screws or rivets and caulked with non-hardening caulk. Smaller openings may be sealed with non-hardening caulk.