



# MAGNILUMEN PLUS<sup>TM</sup>

LED Lighting Retrofit Solutions



by **ZLED LIGHTING**  
ZLEDLIGHTING.COM



Flourescent Fixture Retrofits



**HIGH OUTPUT**



**EMERGENCY BACKUP KIT**



**COLORS**



**MAGNI BLEND**



**MAGNI BLEND REFRIGERATION**



**COASTAL FRIENDLY**



**COVE**



**NO UV SERIES**



## The Most Versatile Line of LED Retrofit Solutions on the Planet

Discover our extensive selection of LED lighting retrofit solutions designed to meet a wide variety of lighting needs. Product lines available in 16", 2', 3', 4', 5', and Custom Sizes. From commercial to industrial applications, Magnilumen™ Plus products deliver exceptional performance and efficiency.

### PRODUCT OFFERINGS:

#### • Troffers:

Sizes: 2x4, 2x2 1x4 and 1x5

- Prismatic
- Parabolic
- Center Basket

#### • Fixtures:

- Utility Strip
- Stairwell Lighting
- Industrial Strips
- Linear Strip
- Cleanroom Linear
- Surface Mount Linear
- Vandal Resistant Linear
- Mirror backlight

#### • Recessed and Suspended Architectural Lighting:

- Direct Indirect
- Recessed Linear (Slot Lighting)
- Suspended Linear

#### • High Bays:

- Industrial/Commercial High Bays (HO)

#### • Healthcare Lighting:

- Patient & Bed Lighting

#### • Specialty Lighting:

- Coastal Wildlife Friendly
- Cove Lighting (Indirect)
- Industrial Linear Vapor Tights
- Industrial/Commercial Low Bay
- Retail Display Cases
- Refrigerated Cases



- ✓ Hospitals
- ✓ Museums

- ✓ Mercantile
- ✓ Hospitality

- ✓ Offices
- ✓ Education Institutions

*Location applications are endless...*

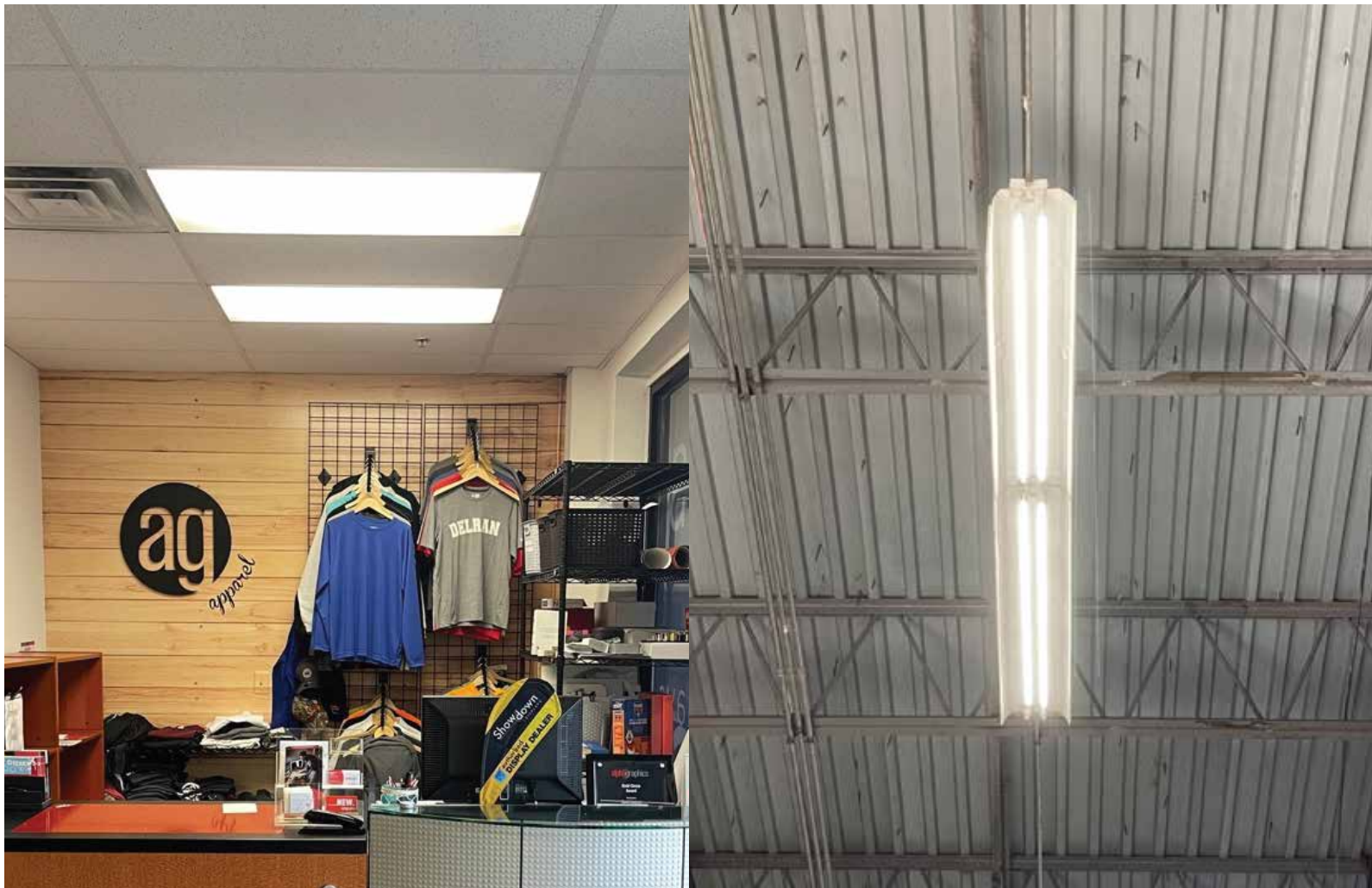


*The #1 Magnetic Retrofit Kit in the U.S.A.*

## TOP REASONS TO CHOOSE MAGNILUMEN PLUS:

- High lumen output (150 lm/W with Frosted Lens, 170 lm/W with Clear Lens, 180 lm/W with No Lens.)
- Ease and speed of installation in as little as 5-15 minutes.
- Wattage and color temperature selectability options.
- For use in most fluorescent lighting fixtures.
- L70 Lifetime calculation > 100,000 hours per LM80 testing.
- Ideal for Both Office height and High Installations 12ft-35ft for Commercial and Industrial applications.
- Long-Lasting in comparison to fluorescent and LED tubes.
- Warranty: 7 years Magnilumen™ Plus Standard, 5 years Color, 3 years Black Light.

**Magnilumen™ Plus LED kits are a true retrofit solution!  
Making it easier than ever to embrace energy-efficient LED lighting.**

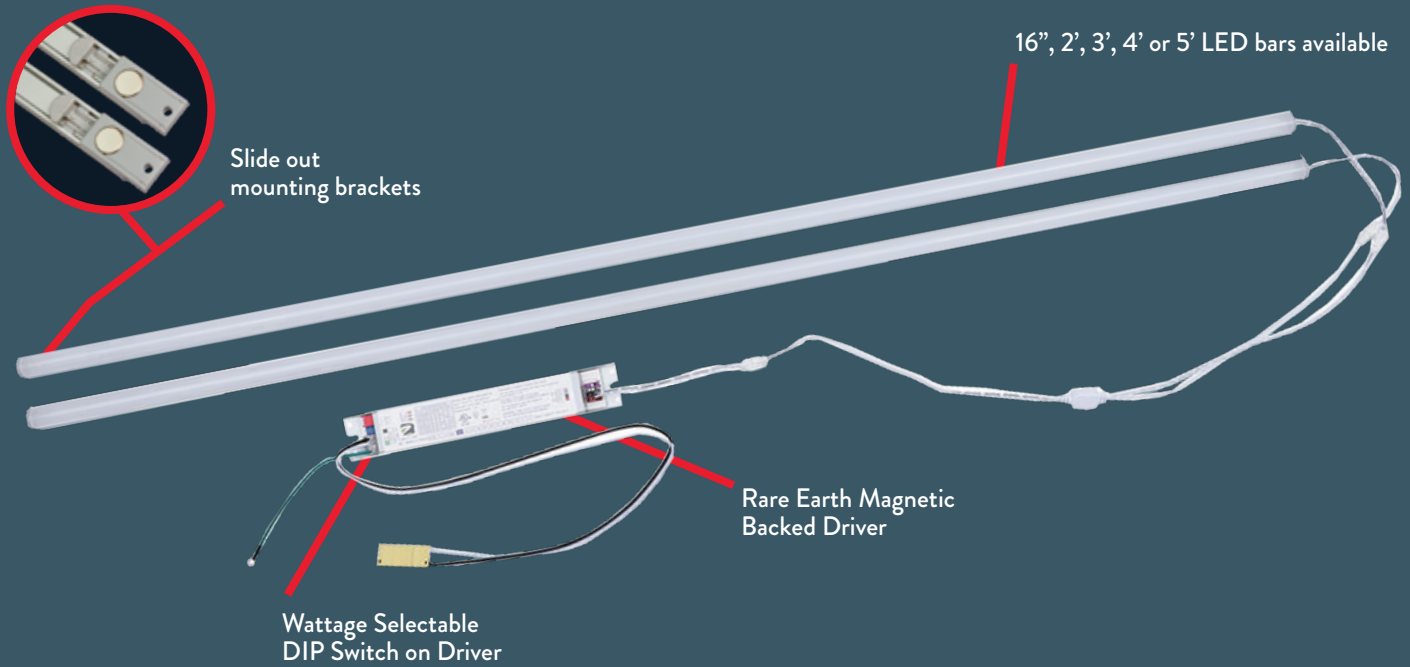


For more information on all the Magnilumen™ Plus products, applications, and accessories, visit [www.magnilumennplus.com](http://www.magnilumennplus.com)

# MAGNILUMEN PLUS<sup>TM</sup>

## 16", 2', 3', 4' and 5' LED Magnetic Retrofit Kits

Magnilumen<sup>TM</sup> Plus is designed to retrofit fluorescent fixtures with standard 0-10 volt dimming. Kits are easy to install and fit into almost any existing linear fluorescent fixture with onboard magnets.



- **Enhanced Product Flexibility:** Wattage Selectable and Color Selectable (CSK - Color Selectable Kelvin in Retail Packs Only) options allow the end user to adjust lumen output and color temperature to application needs.
- **Ease of Use:** Pre-installed onboard magnets on both bars and driver. Slide out mounting brackets on bars, pre drilled holes on driver for easy screw mount installation. (Self drilling screws included).
- **DLC Listed:** 150 lm/W with frosted lens installed. Maximized energy savings: 170 lm/W with clear lens or 180 lm/W with no lens.

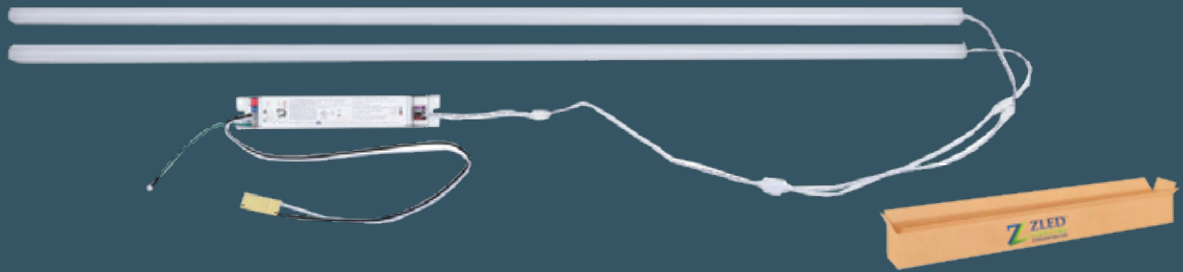
**APPLICATIONS**

- CHANNEL LIGHTS
- VAPOR TIGHTS
- TROFFER
- COVE LIGHTING
- SURFACE MOUNT
- HIGH BAYS
- SHELF DISPLAY
- RETAIL DISPLAY
- DIRECT & INDIRECT
- LINEAR HIGH BAY
- EMERGENCY
- INDOOR SIGNAGE

<b>WATTAGE</b>	Wattage selectable drivers
<b>COLOR TEMPS</b>	27K, 30K, 35K, 40K, 50K, 65K, Green, Blue, Orange, Yellow, Red, Amber, Black Light (color selectable in retail pack only)
<b>EFFICACY</b>	150 lm/W with Frosted Lens 170 lm/W with Clear Lens 180 lm/W with No Lens
<b>VOLTAGE INPUT</b>	100-277VAC 100-347VAC (special order)
<b>DRIVER OUT VOLTAGE</b>	27-42VDC
<b>CRI</b>	80+ (standard); 90+ (special order)
<b>DIMMING</b>	0-10VDC, (optional: TRIAC, DALI, LUTRON ECOSYSTEM)
<b>AMBIENT TEMP</b>	-20 to 50C; -40 to 122F
<b>SURGE PROTECTION</b>	2KV
<b>RATED</b>	IP20 for damp location
<b>WARRANTY</b>	7 years Magnilumen Standard, 5 years Color, 3 years Black Light
<b>LED LIFESPAN (L70)</b>	100,000 hours Magnilumen Standars 50,000 hours Colors
<b>FLICKER</b>	Meets Title 24 Flicker Requirements

# KIT OPTIONS

## JOB PACK



Magnetic LED bars, selectable magnetic driver, 24" harness, and screws  
(27K, 30K, 35K, 40K, 50K, 65K, Green, Blue, Yellow, Orange, Red, Amber, Black Light)

## RETAIL PACK



Magnetic LED bars, selectable magnetic driver, 24" harness  
with CSK switch (35K, 40K, 50K), and screws

### LUMEN OUTPUT

- 150 lm/W with Frosted Lens
- 170 lm/W with Clear Lens
- 180 lm/W with No Lens

### WATTAGE SELECTABLE

- Toolless wattage selectable option on driver via DIP switch.

#### MAXIMUM WATTAGE

- 2 foot: 15W per bar
- 3 foot: 20W per bar
- 4 foot: 30W per bar
- 5 foot: 38W per bar

### COLOR TEMPERATURE SELECTABLE STANDARD IN RETAIL PACKS, OPTIONAL IN JOB PACKS

- Toolless color temperature selectable option on harness via switch.
- 35K, 40K, 50K options available.

### INSTALLATION MADE EASIER

- Onboard magnets on LED bars, driver and CCT switch designed for quick and easy installation.
- Mounting brackets for screw mounting (where applicable).

# JOB PACK PART BUILDER

MRK	# of Bars	Length of Bar	Kit Wattage	Color Temp	PLUS	Options
	1 2 3 4	16 = 16 inches 2 = 2 feet (21.06 inches) 3 = 3 feet (30.91 inches) 4 = 4 feet (42.91 inches) 5 = 5 feet (58 inches)	20 = 20W Driver 30 = 30W Driver 40 = 40W Driver 50 = 50W Driver 60 = 60W Driver 100 = 100W Driver  Max wattage per bar by length 16" - 10W Max 2 ft. - 15W Max 3 ft. - 22W Max 4 ft. - 30W Max 5 ft. - 38W Max	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K 65 = 6500K AMBER-585NM = TURTLE SAFE AMBER NO UV BLACK = BLACK LIGHT ① BLUE = BLUE LED GREEN = GREEN LED ORANGE = ORANGE LED RED = RED LED YELLOW = YELLOW LED AMBER = AMBER LED		90CRI = HIGH CRI AO = AUX 12V OUTPUT AO Drivers - available in 20, 40, 60 W BL = MAGNIBLEND CL = CLEAR LENS EM = EMERGENCY BATTERY BACKUP MS = FACTORY SUPPLIED INFRARED (PIR) MOTION SENSOR MV = FACTORY SUPPLIED MICROWAVE MOTION SENSOR NL = NO LENS or DIFFUSER TR = DRIVER WITH TRIAC DIMMING DALI = Includes DALI 2 Driver LUTRON = Includes Lutron® Hi-Lume® 1% ECOSYSTEM® 3 Wire Driver



All Color Bars 2ft and 4ft only.

Consult factory for additional drivers.

① = Black Light Max Wattages  
20W - 4 ft.

Lutron, Hi-Lume and EcoSystem are all registered trademarks.

## 2 FOOT RETAIL KIT

150 lm/W with Frosted Lens, 170 lm/W, with Clear Lens, 180 lm/W with No Lens



PRODUCT NUMBER	COLOR TEMP CSK	QTY/ LENGTH	DRIVER	WATTAGE	LUMENS WITH LENS	LUMENS WITHOUT LENS	RATED	DLC CODE	UPC BARCODE
MRK2220-CSK-PLUS-RP	35K, 40K, 50K	2 pcs 2 ft = 21.06"	20W	Max. 20W	3000	3600	ETL, DLC	PH6IV9OX	080101407472
MRK2230-CSK-PLUS-RP	35K, 40K, 50K	2 pcs 2 ft = 21.06"	30W	Max. 30W	4500	5400	ETL, DLC	P6Q72IGJ	080101408448

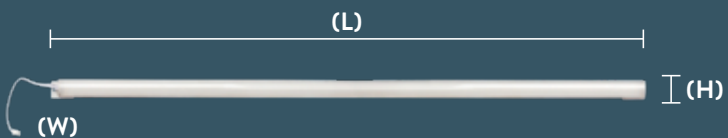
## 4 FOOT RETAIL KIT

150 lm/W with Frosted Lens, 170 lm/W, with Clear Lens, 180 lm/W with No Lens



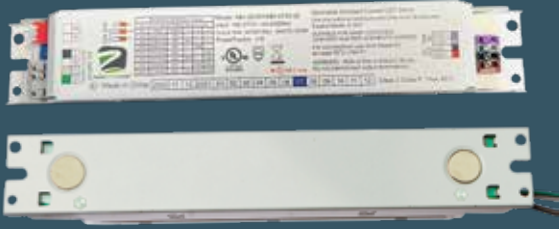
PRODUCT NUMBER	COLOR TEMP CSK	QTY/ LENGTH	DRIVER	WATTAGE	LUMENS WITH LENS	LUMENS WITHOUT LENS	RATED	DLC CODE	UPC BARCODE
MRK2420-CSK-PLUS-RP	35K, 40K, 50K	2 pcs 4 ft = 42.91"	20W	Max. 20W	3000	3600	ETL, DLC	PTML224Q	080101408271
MRK2430-CSK-PLUS-RP	35K, 40K, 50K	2 pcs 4 ft = 42.91"	30W	Max. 30W	4500	5400	ETL, DLC	PDL8J2HO	080101407922
MRK2440-CSK-PLUS-RP	35K, 40K, 50K	2 pcs 4 ft = 42.91"	40W	Max. 40W	6000	7200	ETL, DLC	P4S826L6	080101407977
MRK2450-CSK-PLUS-RP	35K, 40K, 50K	2 pcs 4 ft = 42.91"	50W	Max. 50W	7500	9000	ETL, DLC	S-KYTS7G	080101408028

## DIMENSIONS



	L	W	H
16 inch	16"	.72"	.75"
2 feet	21.06"	.72"	.75"
3 feet	30.91"	.72"	.75"
4 feet	42.91"	.72"	.75"
5 feet	58"	.72"	.75"

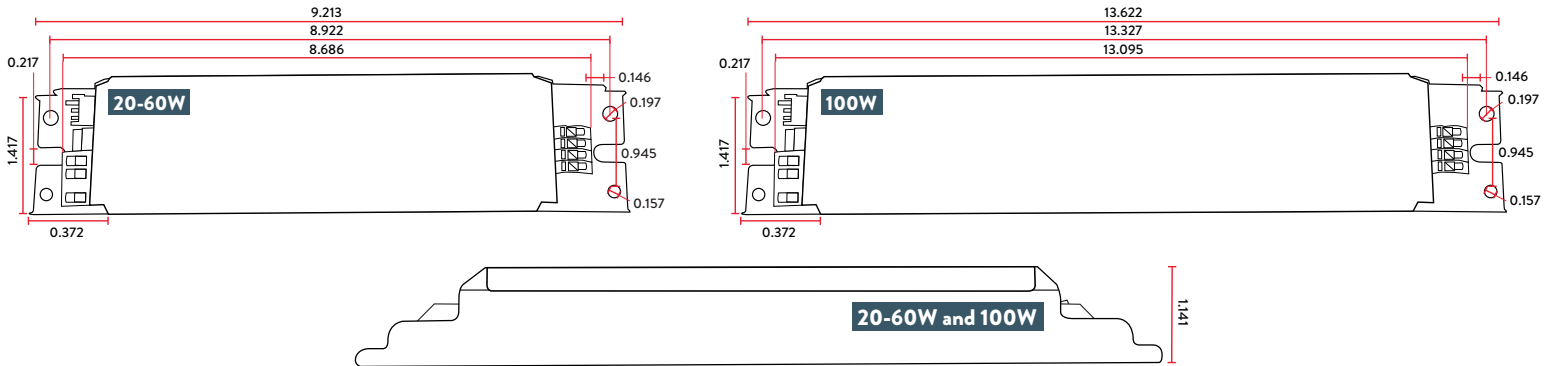
# MAGNILUMEN PLUS DRIVER SPECIFICATIONS



MODEL NUMBER	DEFAULT WATTAGE	INPUT VOLTAGE	POWER FACTOR	EFFICIENCY	THD	OUTPUT VOLTAGE
MRK-DRIVER-20W-2H-PLUS	20W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-30W-2H-PLUS	30W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-40W-2H-PLUS	40W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-50W-2H-PLUS	50W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-60W-2H-PLUS	60W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-100W-4WH-PLUS	100W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC

## MAGNILUMEN PLUS DRIVER DIMENSIONS

(Unit: inches)

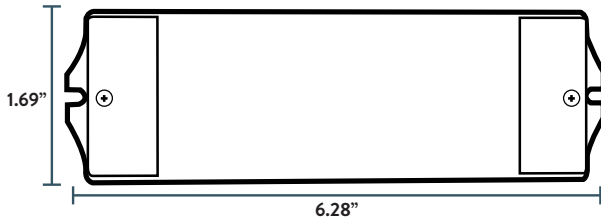


## DIMMABLE LED TRIAC DRIVER WITH 5 IN 1 DIMMING (WATTAGE SELECTABLE)

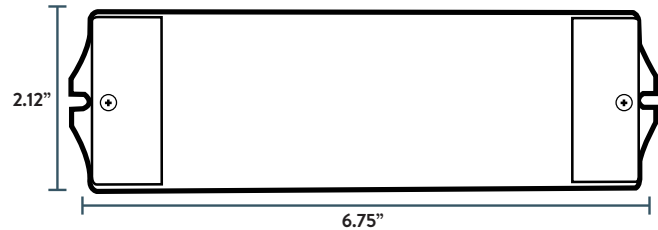
20W, 40W, 60W with DIP Switch (Triac, Forward Phase, MLV, ELV, 0-10V)

Input Voltage: 100-277VAC

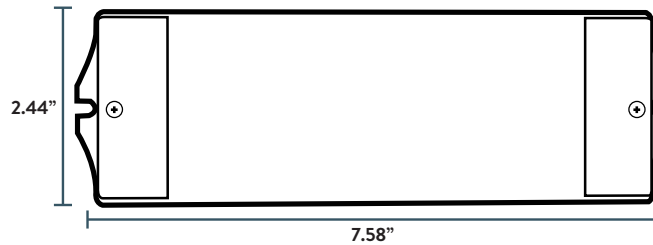
20W CONSTANT CURRENT DRIVER WITH DIP SWITCH



40W CONSTANT CURRENT DRIVER WITH DIP SWITCH



60W CONSTANT CURRENT DRIVER WITH DIP SWITCH



MODEL NUMBER	DEFAULT WATTAGE	INPUT VOLTAGE	POWER FACTOR
ZL-DRIVER-20W-TRIAC	20W	100-277VAC	>0.95
ZL-DRIVER-40W-TRIAC	40W	100-277VAC	>0.95
ZL-DRIVER-60W-TRIAC	60W	100-277VAC	>0.95

# WATTAGE DRIVER LUMENS

## DRIVER WATTAGE POWER SELECTABLE OPTIONS

Wattage selectable options allow the end user to adjust lumen output to their specific needs.

DEFAULT WATTAGE	WATTAGE POWER SELECTABLE OPTIONS
20W	8W, 10W, 14W, 16W, 18W, 20W, 22W
30W	10W, 16W, 20W, 24W, 28W, 30W, 32W
40W	24W, 28W, 30W, 32W, 38W, 40W, 42W
50W	25W, 30W, 38W, 40W, 45W, 50W, 52W
60W	40W, 45W, 50W, 55W, 57W, 60W, 62W
100W	65W, 70W, 75W, 85W, 90W, 95W, 100W



Toolless Wattage Selectable Switch (red switch)

- Setting info on driver and website.

## SUGGESTED FIXTURE LUMENS CHART FOR MAGNILUMEN PLUS RETROFITS

WATTAGES	150 lm/W with Frosted Lens		WATTAGES	170 lm/W with Clear Lens		WATTAGES	180 lm/W with No Lens	
	MAGNILUMEN PLUS	SUGGESTED FIXTURE		MAGNILUMEN PLUS	SUGGESTED FIXTURE		MAGNILUMEN PLUS	SUGGESTED FIXTURE
8W	1,200		8W	1,360		8W	1,440	
10W	1,500		10W	1,700		10W	1,800	
14W	2,100		14W	2,380		14W	2,520	
16W	2,400		16W	2,720		16W	2,880	
18W	2,700		18W	3,060		18W	3,240	
20W	3,000	2'x2'	20W	3,400	2'x2'	20W	3,600	2'x2'
22W	3,300		22W	3,740		22W	3,960	
24W	3,600		24W	4,080		24W	4,320	
25W	3,750		25W	4,250		25W	4,500	
28W	4,200		28W	4,760		28W	5,040	
30W	4,500		30W	5,100		30W	5,400	
32W	4,800	2'x4' (8-10')	32W	5,440	2'x4' (8-10')	32W	5,760	2'x4' (8-10')
34W	5,100		34W	5,780		34W	6,120	
35W	5,250		35W	5,950		35W	6,300	
38W	5,700		38W	6,460		38W	6,840	
40W	6,000	2'x4' (10' and above)	40W	6,800	2'x4' (10' and above)	40W	7,200	2'x4' (10' and above)
42W	6,300		42W	7,140		42W	7,560	
45W	6,750		45W	7,650		45W	8,100	
47W	7,050		47W	7,990		47W	8,460	
50W	7,500	Low Bay	50W	8,500	Low Bay	50W	9,000	Low Bay
52W	7,800		52W	8,840		52W	9,360	
55W	8,250		55W	9,350		55W	9,900	
57W	8,550		57W	9,690		57W	10,260	
60W	9,000		60W	10,200		60W	10,800	
62W	9,300		62W	10,540		62W	11,160	
65W	9,750		65W	11,050		65W	11,700	
70W	10,500		70W	11,900		70W	12,600	
75W	11,250		75W	12,750		75W	13,500	
85W	12,750		85W	14,450		85W	15,300	
90W	13,500		90W	15,300		90W	16,200	
95W	14,250		95W	16,150		95W	17,100	
100W	15,000	High Bay	100W	17,000	High Bay	100W	18,000	High Bay

These are suggested lumen fixture packages based upon photometrics and manufacturers experience. Vital decisions may vary based on actual criteria. For High Bays above 20ft Use High Output Magnilumen™ Kits.



# ENCLOSURES FOR MAGNILUMEN PLUS DRIVERS

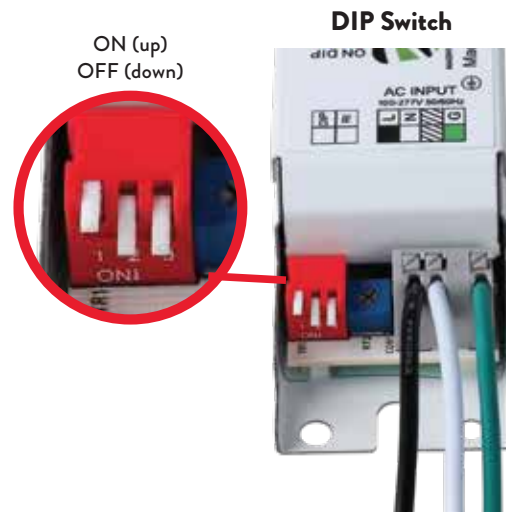


## 100W DRIVER ENCLOSURE (with two knockouts)

PN: MRK-100W-DRIVER-ENCLOSURE  
 DIMENSIONS: 16" (L) x 1.75" (W) x 1.3125" (D)

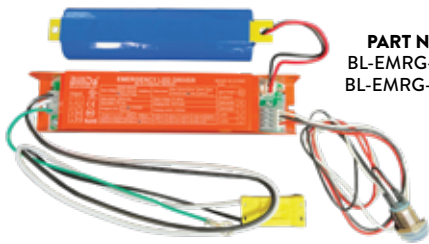
## 20-60W DRIVER ENCLOSURE (with two knockouts)

PN: MRK-20/60W-DRIVER-ENCLOSURE  
 DIMENSIONS: 12" (L) x 1.75" (W) x 1.3125" (D)



# OPTIONS

## EMERGENCY BACK-UP LED DRIVER



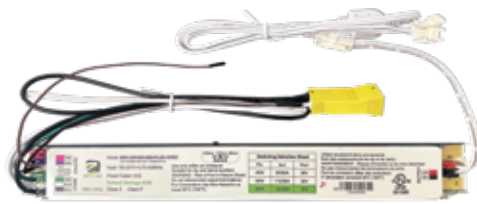
**PART NUMBER:**  
 BL-EMRG-LED-15-1H  
 BL-EMRG-LED-20-1H

Plug and Play To Magnilumen™ Retrofit Kit  
 90 Minutes Minimum Run time in Emergency Mode  
 2200L in Emergency Mode

## SENSORS



## AO DRIVERS WITH 12V AUXILIARY OUTPUT FOR CONTROLS



**Wattage Selector Switch**

## FEATURES

### 20/30/40W Selectable

- Built-in 0-10V adjustable power LED Driver
- 12V 0.1A Auxiliary source
- Output current 470mA; 660mA; 880mA
- Selectable Wattage: 20W, 30W, 40W
- For luminaires of protection Class P

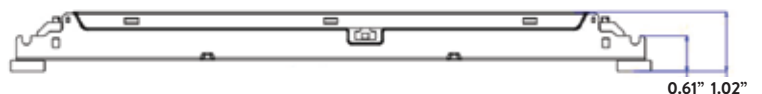
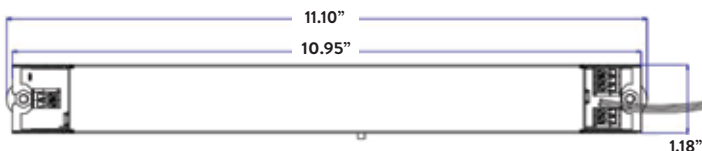


### 40/50/60W Selectable

- Built-in 0-10V adjustable power LED Driver
- 12V 0.1A Auxiliary source
- Output current 900mA; 1100mA; 1250mA
- Selectable Wattage: 40W, 50W, 60W
- For luminaires of protection Class P



Part Number	Default Wattage	Input Voltage	Power Factor	Efficiency	THD	Output Voltage	Output Current
MRK-DRIVER-40W-2WH-AO-PLUS	40W	120-277VAC	≥0.9	>85%	<20%	27-42VDC	470mA @ 20W; 660mA @ 30W; 880mA @ 40W
MRK-DRIVER-60W-2WH-AO-PLUS	60W	120-277VAC	≥0.9	>85%	<20%	27-42VDC	900mA @ 40W; 1100mA @ 50W; 1250mA @ 60W



# OPTIONS – HARNESSES

A 2-Way harness is standard with kits but unique situations might require a special harness. 1, 3, and 4-Way harness options are available.

COVE LIGHTING HARNESS	
PART NUMBER	DESCRIPTION
HARNESS-CSK-COVE-1-WAY-16"	3 WIRE CSK 1 WAY HARNESS
HARNESS-CSK-COVE-1-WAY-8"	8 INCH CSK COVE HARNESS
HARNESS-CSK-COVE-1-WAY-8FT	8 FEET CSK COVE HARNESS

Harnesses are jumpers or extensions for Cove lighting bars

## PLUG & PLAY HARNESSES & EXTENSIONS

### 1-WAY HARNESS – Connects 1 LED bar to 1 driver

**PART NUMBER:** HARNESS-1-WAY-12IN

Connects 1 LED bar to 1 driver.

**PART NUMBER:** HARNESS-1-WAY-16IN

Connects 1 LED bar to 1 driver.

**PART NUMBER:** HARNESS-1-WAY-24IN

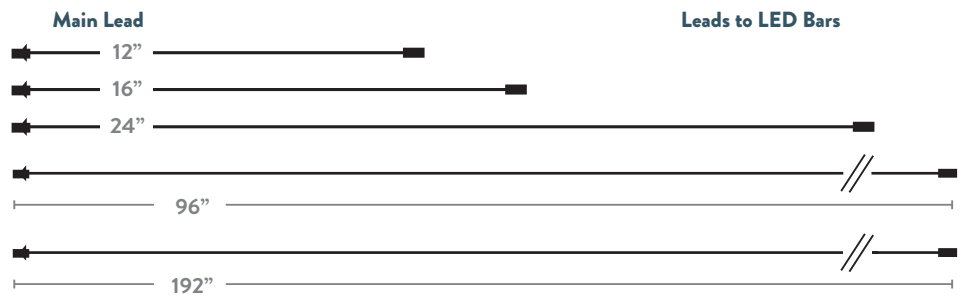
Connects 1 LED bar to 1 driver.

**PART NUMBER:** HARNESS-1-WAY-8FT

Connects 1 LED bar to 1 driver, with an 8 ft extension on driver end

**PART NUMBER:** HARNESS-1-WAY-16FT

Connects 1 LED bar to 1 driver, with a 16 ft extension on driver end



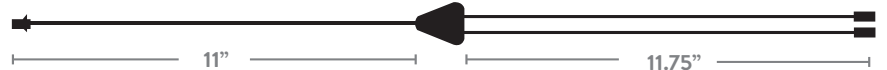
### 2-WAY HARNESS (STANDARD) – Connects 2 LED bars to 1 driver

**PART NUMBER:** HARNESS-2-WAY

Lead from driver connection to splitter: 11.00"; 2 leads to bars: each 11.75"

**PART NUMBER:** HARNESS-2-WAY-OPT

Lead from driver connection to splitter: 11.00"; 2 leads to bars: each 11.75"



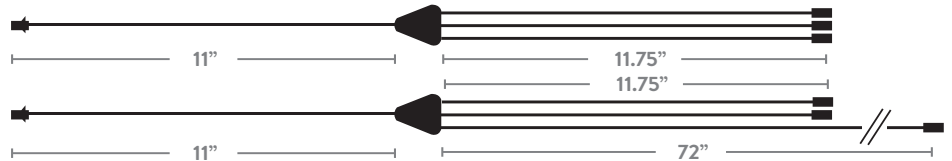
### 3-WAY HARNESS – Connects 3 LED bars to 1 driver

**PART NUMBER:** HARNESS-3-WAY

Lead from driver connection to splitter: 11.00"; 3 leads to bars: each 11.75"

**PART NUMBER:** HARNESS-3-WAY-EXT (2 long, 1 short)

Has 6 ft extension on driver end. Lead from driver connection to splitter: 11.00"; 2 leads to bars: each 11.75", 1 lead to bars: 72.00"



### 4-WAY HARNESS – Connects 4 LED bars to 1 driver

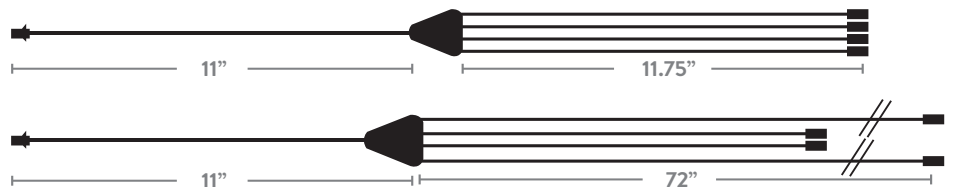
**PART NUMBER:** HARNESS-4-WAY

Lead from driver connection to splitter: 11.00"; 4 leads to bars: each 11.75"

**PART NUMBER:** HARNESS-4-WAY-2-WAY-EXT

(2 long, 2 short)

2 leads have 6 ft extension. Lead from driver connection to splitter: 11.00"; 2 leads to bars: each 11.75", 2 leads to bars: 72.00"



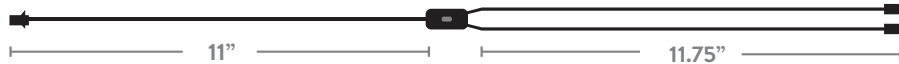
## CSK SWITCH – PLUG & PLAY HARNESSSES

Color Selectable Switch with Magnetic Back



**PART NUMBER: HARNESS-2-WAY-CSK-SWITCH**

Lead from driver connection to CSK switch: 11.00";  
2 leads to bars: each 11.75"



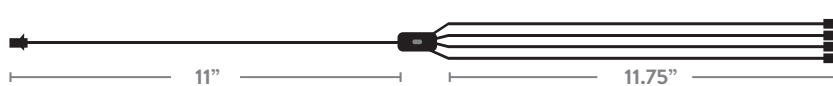
**PART NUMBER: HARNESS-2-WAY-4-WAY-CSK-SWITCH**

Lead from driver connection to CSK switch: 11.00";  
2 leads each to 4 bars: each 11.75"



**PART NUMBER: HARNESS-4-WAY-CSK-SWITCH**

Lead from driver connection to CSK switch: 11.00";  
4 leads to bars: each 11.75"



## OPTIONAL MOUNTING HARDWARE

### MAGNETS FOR DIRECTIONAL USE

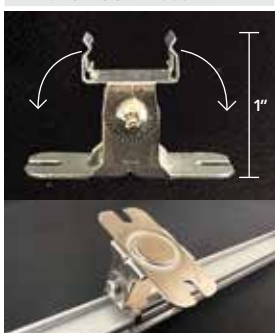
45 Degree Angle Magnet

**PART NUMBER:**  
MAG-NO-HOOK-45DEG



Magnet with Hook (adjustable 0-180 degrees)

**PART NUMBER:**  
MAG-HOOK-ADJUSTABLE



### MOUNTING MAGNETS AND HARDWARE

Magnet with Hook

**PART NUMBER:**  
MAG-HOOK



Clip with No Magnet, No Hook

**PART NUMBER:**  
NO-MAG-NO-HOOK



No Hook Magnet

**PART NUMBER:**  
MAG-NO-HOOK



All Magnilumen™ LED Bars come with onboard magnets and self-drilling screws standard. Additional mounting magnets and hardware available.

## DISTRIBUTOR COUNTER AREA DISPLAY OPPORTUNITIES

### FLOOR POP DISPLAY - LESS THAN 2' x 2' FOOTPRINT

#### GRAB & GO FOR CONTRACTORS

Holds 20 piece 4' kits and 8 piece 2' kits, available with retail packaged kits only.

#### Standard Kits:

MRK2220-CSK  
MRK2440-CSK

#### Mix & Match Wattage Kit:

MRK2220-CSK-PLUS-RP  
MRK2230-CSK-PLUS-RP  
MRK2420-CSK-PLUS-RP  
MRK2430-CSK-PLUS-RP  
MRK2440-CSK-PLUS-RP  
MRK2450-CSK-PLUS-RP

#### Part Number:

MAG-POP-DISPLAY



### WORKING 4' DISPLAY - INCLUDES 4" x 9" RACK & HOLDER

#### TWO WORKING DISPLAYS TO CHOOSE FROM

• Both include two bars, 4" x 9" brochure holder and descriptive header

#### Basic Working Display

• Works with floor POP display

**Part Number:**  
Magnilumen™  
Plus Stand-Up  
Working  
Display-4ft



#### Working Display with Retail Box Wings

• For Showrooms with limited floor space  
• When floor POP display can't fit and stock is on the shelves

**Part Number:**  
Magnilumen™ Plus  
Stand-Up Working  
Display-Wings



Display includes two retail packs attached to side wings

Counter Top 2 Foot Display: Magnilumen™ Plus Stand-Up Working Display-2ft

# EMERGENCY BACK-UP LED DRIVER

Install with Any Magnilumen™ Retrofit Kits



## FEATURES

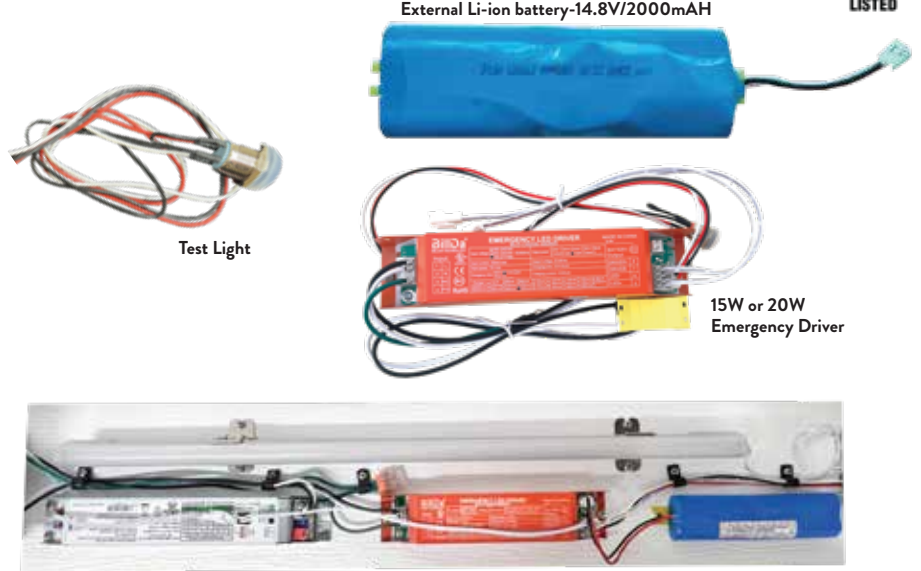
- Wattages: 20W, 15W
- Voltage Input: 100-277V
- Battery: External Li-ion battery-14.8V/2000mAH
- Battery Charging Time: 24 hours
- Operating Temperature: 32 to 104F
- Indicator: Test switch and charging indicator light
- Emergency Time: 1.5 hours
- Plug and Play Installation
- Warranty: 5 years
- Listed: UL

## LUMENS

	15W	20W
150 lm/W with Frosted Lens	2,250	3,000
170 lm/W with Clear Lens	2,550	3,400
180 lm/W with No Lens	2,700	3,600

## SPECIFICATIONS

PRODUCT #	WATTAGES	DRIVER DIMENSIONS (LxHxD)	BATTERY DIMENSIONS (LxHxD)
BL-EMRG-LED-15-1H	15W	7.4" x 1.5" x 1.1"	6" x 1.5" x .75"
BL-EMRG-LED-20-1H	20W	7.4" x 1.5" x 1.2"	6" x 2.25" x .75"

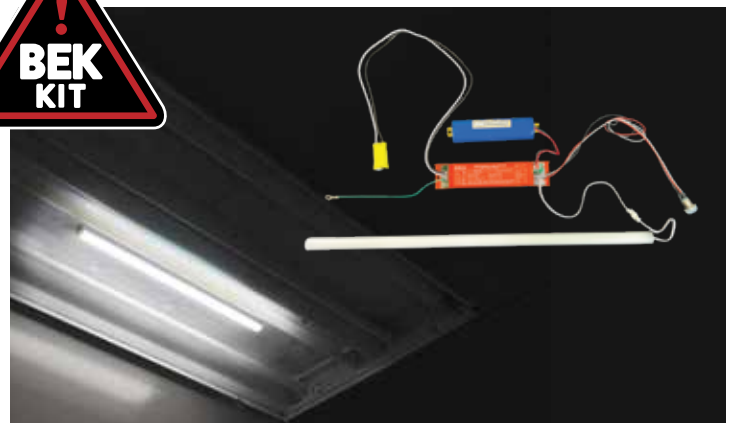


## BEK KIT (BACKUP EMERGENCY KIT) WITH MAGNILUMEN PLUS BAR, EM DRIVER AND BATTERY

Stand alone emergency kit. Can be added to almost any linear fixture!

## FEATURES

- Wattages: 15W
- Kit Lengths: 2 ft. = 21.06"
- Voltage Input: 100-277V
- Color Temperatures: 40K
- Charge Time: 24 hour charge time
- Emergency Time: 90 minute charge
- Plug and Play Installation
- Warranty: 5 years
- Kit Includes: 12ft. Bar, EM driver, battery pack, harnesses, screws, and test button.



### LUMENS AT 15W:

- 2,250 - 150 lm/W with Frosted Lens
- 2,550 - 170 lm/W with Clear Lens
- 2,700 - 180 lm/W with No Lens

## NOTES:

- Product may be installed in non-ZLEDLighting/Magnilumen™ Plus kits or drivers.



• Part Number: BEK12-15W-40K-2250L-PLUS

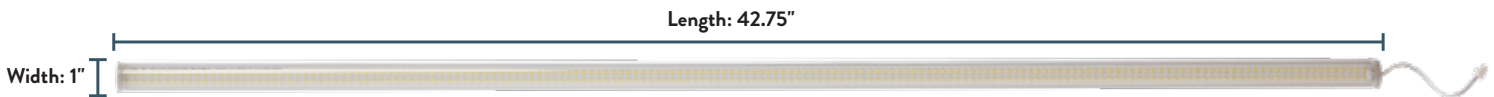
## MAGNILUMEN PLUS HIGH OUTPUT LED BARS FOR HIGH BAY RETROFIT KITS

### EASY-TO-INSTALL MAGNETIC LED BARS AND RETROFIT KITS FOR TRADITIONAL FLUORESCENT LAMP HIGH BAYS

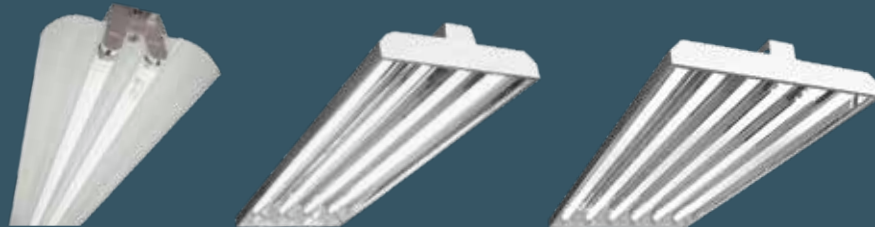


Designed to exceed expectations, Magnilumen™ Plus High Output illuminates spaces with remarkable clarity and consistency, whether in industrial facilities or commercial complexes. Committed to sustainability, Magnilumen™ Plus products merge high luminosity with energy-saving technologies, ensuring environmental responsibility and cost-effectiveness.

**Up to 10,000 Lumens Per LED Bar!**



Upgrade T12, T8, and T5HO 4, 6, and 8 lamp high bays with Magnilumen™ Plus High Output kits.



### MAGNILUMEN PLUS HIGH OUTPUT LED BARS

SPECIFICATIONS	
WATTAGE	60W
COLOR TEMPS	40K, 50K
VOLTAGE INPUT	100-277VAC
DRIVER INPUT	27-42VDC
EFFICACY	No Lens: 173Lm/w Clear Lens: 165Lm/w Frosted Lens: 155Lm/w
LUMENS	Up to 10,000 per bar
CRI	80+
DIMMING	0-10V
AMBIENT TEMP	-20 to 50C; -4 to 122F
SURGE PROTECTION	2KV
RATED	IP20
LED LIFESPAN (L70)	50,000 hours
WARRANTY	5 years
LISTED	ETL

Pre-installed magnetic bars use the latest high-efficiency and high-brightness LEDs to provide a cost-saving alternative to the traditional fluorescent T12, T8, and T5HO lamps.

- **Easy to Install:** Pre-installed onboard magnets slide out for screw mounting.
- **Up to 10,000 lumens per bar.**
- **Up to 50-75% reduction in power used.**
- **It is the easiest and best alternative to fluorescent tubes on the market.**
- **Frosted lens optional.**

### MAGNILUMEN PLUS HIGH OUTPUT LED BARS FOR HIGH BAY RETROFIT KITS



Retrofit kits are ideal for use in linear high bays, troffers, vapor tight, and other linear fixtures where high illumination is needed in applications like warehouses, distribution centers, and other industrial facilities.

- Complete LED retrofit kit includes LED bars, driver, wiring harness, and screws.
- 60W per bar and multiple color temperature choices (40K and 50K).
- Input voltage 100-277V.
- LED bars and drivers include magnets for easy installation and positioning.
- 0-10V dimming
- 5-year warranty
- DLC

### MAGNILUMEN PLUS HIGH OUTPUT KITS AND PART NUMBER

PART NUMBER	# OF BARS	# OF DRIVER(S)	WATTAGE	COLOR TEMP	CLEAR LENS LUMENS
MRK1230-40K-PLUS-HO	1	1 @ 30W	32W	40K	5,280
MRK1230-50K-PLUS-HO	1	1 @ 30W	32W	50K	5,280
MRK2260-40K-PLUS-HO	2	1 @ 60W	62W	40K	10,230
MRK2260-50K-PLUS-HO	2	1 @ 60W	62W	50K	10,230
MRK3295-40K-PLUS-HO	3	1 @ 100W	95W	40K	15,675
MRK3295-50K-PLUS-HO	3	1 @ 100W	95W	50K	15,675
MRK42120-40K-PLUS-HO	4	2 @ 60W	124W	40K	20,460
MRK42120-50K-PLUS-HO	4	2 @ 60W	124W	50K	20,460
MRK1460-40K-PLUS-HO*	1	1 @ 60W	62W	40K	10,230
MRK1460-50K-PLUS-HO*	1	1 @ 60W	62W	50K	10,230
MRK24100-40K-PLUS-HO*	2	1 @ 100W	100W	40K	16,500
MRK24100-50K-PLUS-HO*	2	1 @ 100W	100W	50K	16,500
MRK24120-40K-PLUS-HO*	2	2 @ 60W	124W	40K	20,460
MRK24120-50K-PLUS-HO*	2	2 @ 60W	124W	50K	20,460
MRK34180-40K-PLUS-HO	3	3 @ 60W	186W	40K	30,690
MRK34180-50K-PLUS-HO	3	3 @ 60W	186W	50K	30,690
MRK44240-40K-PLUS-HO	4	4 @ 60W	248W	40K	40,920
MRK44240-50K-PLUS-HO	4	4 @ 60W	248W	50K	40,920

Retail Floor Display (Holds up to 12 RP Kits)

Part #: ZL-DISPLAY-HO



Other combination and lumen packages available.

\* = Available in Retail Pack (RP) Sample Part # MRK24120-50K-PLUS-HO-RP

### AO DRIVERS WITH 12V AUXILIARY OUTPUT FOR CONTROLS



Wattage Selector Switch

#### FEATURES

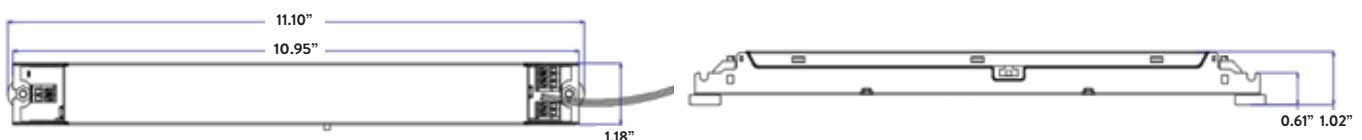
##### 20/30/40W Selectable

- Built-in 0-10V adjustable power LED Driver
- 12V 0.1A Auxiliary source
- Output current 470mA; 660mA; 880mA
- Selectable Wattage: 20W, 30W, 40W
- For luminaires of protection Class P

##### 40/50/60W Selectable

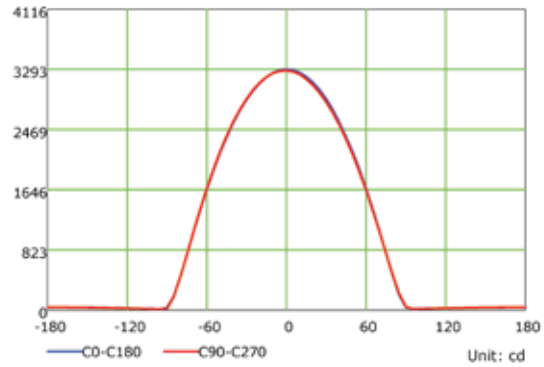
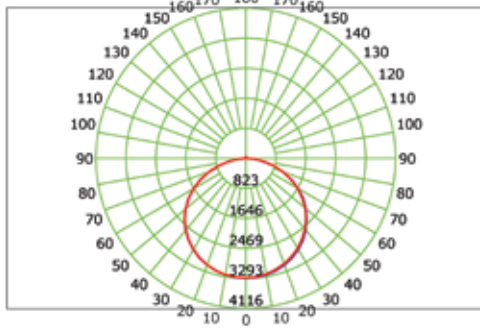
- Built-in 0-10V adjustable power LED Driver
- 12V 0.1A Auxiliary source
- Output current 900mA; 1100mA; 1250mA
- Selectable Wattage: 40W, 50W, 60W
- For luminaires of protection Class P

Part Number	Default Wattage	Input Voltage	Power Factor	Efficiency	THD	Output Voltage	Output Current
MRK-DRIVER-40W-2WH-AO-PLUS	40W	120-277VAC	≥0.9	>85%	<20%	27-42VDC	470mA @ 20W; 660mA @ 30W; 880mA @ 40W
MRK-DRIVER-60W-2WH-AO-PLUS	60W	120-277VAC	≥0.9	>85%	<20%	27-42VDC	900mA @ 40W; 1100mA @ 50W; 1250mA @ 60W



### MAGNILUMEN PLUS HIGH OUTPUT LED BARS FOR HIGH BAY RETROFIT KITS

#### LUMINOUS INTENSITY DISTRIBUTION CURVE



#### DRIVERS

##### 50-60W







##### 100W



The perfect retrofit solution for fluorescent high bay industrial fixtures

Average Installation Time of 20 Minutes.

Mounting Height	HIGH BAY 20-25 FT.	HIGH BAY 20-25 FT.	HIGH BAY 30-40 FT.	HIGH BAY 30-40 FT.
				
Typical Replacement	4 lamp T8	6 lamp T8	6 lamp T5HO	8 lamp T5HO
Original Lamp Lumens	11,800 lumens	17,700 lumens	29,400 lumens	39,200 lumens
Original Delivered Lumens	10,030 lumens	15,045 lumens	24,990 lumens	33,320 lumens
Wattage	128W	192W	324W	432W
Recommended Replacement Lumens	<b>10,000 Lumens @ 62W</b>	<b>20,000 Lumens @ 128W</b>	<b>30,000 Lumens @ 186W</b>	<b>40,000 Lumens @ 248W</b>
Recommended Magnilumen™ Plus HO Kits	<b>MRK1460-50K-PLUS-HO</b> 1 - 4 ft bar 1 - 60W driver	<b>MRK24120-50K-PLUS-HO</b> 2 - 4 ft bar 2 - 60W driver	<b>MRK34180-50K-PLUS-HO</b> 3 - 4 ft bar 3 - 60W driver	<b>MRK44240-50K-PLUS-HO</b> 4 - 4 ft bar 4 - 60W driver
Wattage Reduction	53%	32%	37%	41%

**OPTIONAL LUMEN SETTINGS - Based on No Lens**

Dip Switch Settings	10,000L	20,000L	30,000L	40,000L
62 Watts	10,230	20460	30690	40920
60 Watts	9900	19800	29700	39600
57 Watts	9405	18810	28215	37620
55 Watts	9075	18150	27225	36300
50 Watts	8250	16500	24750	33000
45 Watts	7425	14850	22275	29700
40 Watts	6600	13200	19800	26400

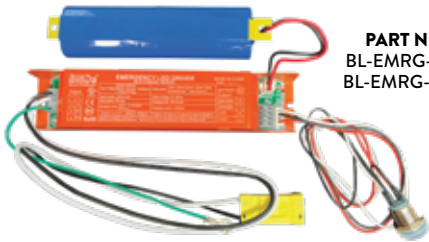
IES Files are Available for Layouts



### MAGNILUMEN PLUS HIGH OUTPUT LED BARS FOR HIGH BAY RETROFIT KITS

#### OPTIONS

##### EMERGENCY BACK-UP LED DRIVER



**PART NUMBER:**  
BL-EMRG-LED-15-1H  
BL-EMRG-LED-20-1H

##### SENSORS

**REMOTE**  
**PART NUMBER:**  
ZL-HAISEN-REMOTE-MK



**SENSOR**  
**PART NUMBER:**  
ZL-SENSOR-HB-MV

**PIR Sensor**



**PART NUMBER:**  
PIR-SENSOR-ANT-4A

Remote Control  
comes with sensor



**Power Supply**  
(Only required when using  
Non-AO Drivers)



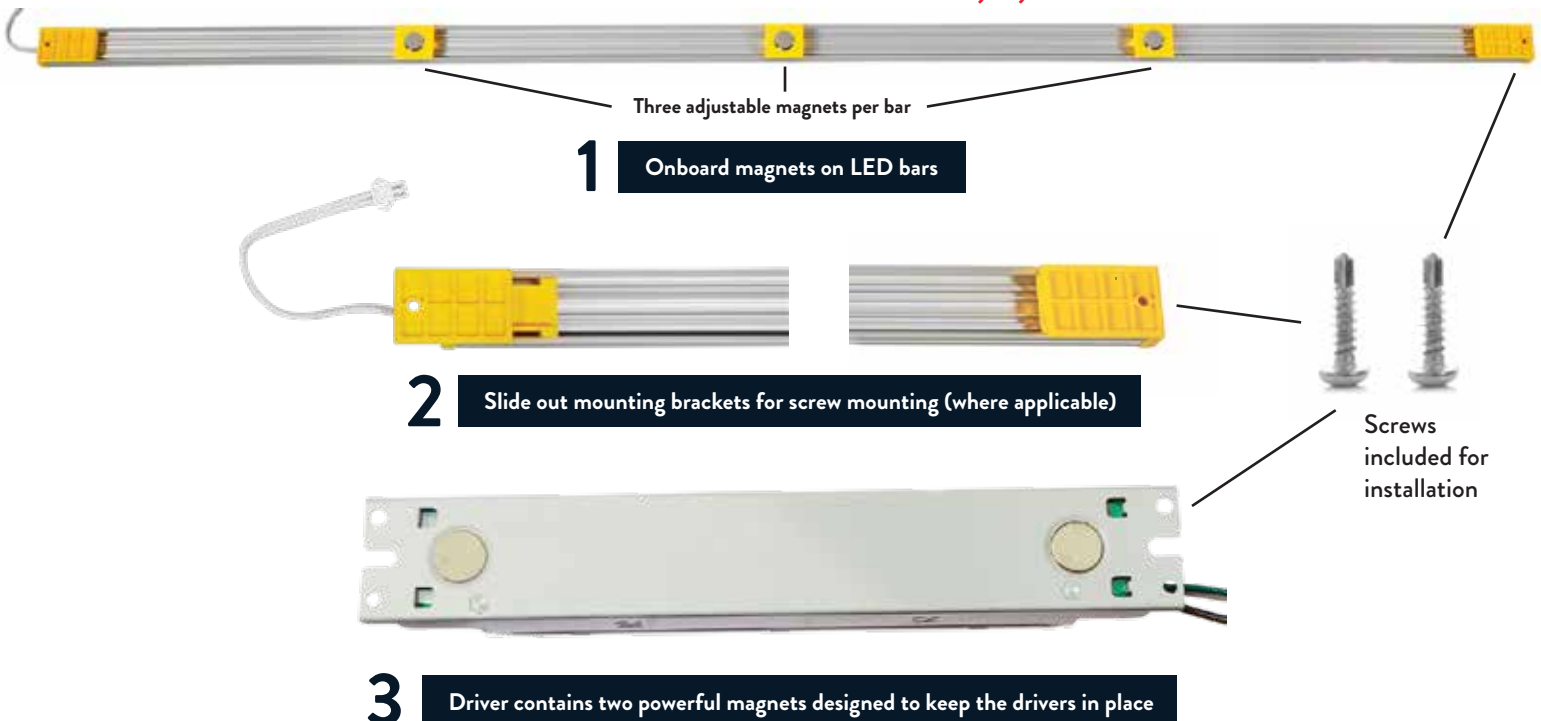
**PART NUMBER:**  
MUSP-12V-03-5W

#### BENEFITS AND FEATURES

Magnilumen™ Plus products are designed for speed and to make installation easy.

- Bars have three onboard adjustable magnets for customize installation based on application needs.
- Bars have a slide-out mounting bracket at each end of the bar with pre-drilled holes for screw mounting where applicable.
- Drivers contain two powerful magnets designed to keep the driver in place. There are also holes for screws if needed.

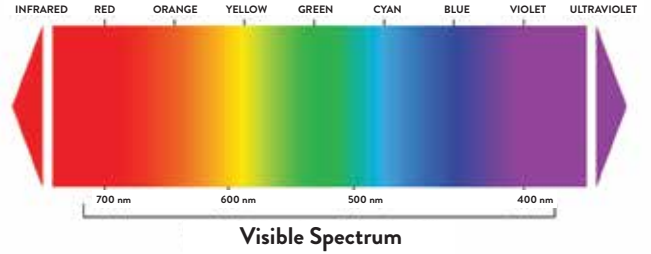
#### INSTALLATION – EASY AS 1, 2, 3





# COLORS

MAGNILUMEN PLUS<sup>™</sup>



**MAX WATTAGE:** 30W - 4ft Color; 15W - 2ft Color  
25W - 4ft Orange; 20W - 4ft Black Light

**COLOR TEMPS:** Red, Black Light, Green, Blue, Amber, Orange, Yellow

**LENS:** All include clear, orange includes frosted

**INPUT VOLTAGE:** 100-277V

**SIZES:** 4ft: 43" Stock, 2ft: 21" (special order)

**CRI:** Standard: >80

Custom Kit Configurations are available

**LED LIFESPAN (L70):** 50,000 hours

**AMBIENT TEMPERATURE:** -40 to 50C; -40 to 122F

**DIMMING:** 0-10V

**LISTED:** ETL

**RATED:** IP20

**WARRANTY:** Color Lighting- 5 years; Black Lighting- 3 years

## PRODUCT BUILDER

ex: MRK2440-AMBER-PLUS

	# of Bars	Length of Bar	Kit Wattage	Color Temp
MRK				
	1	4 = 4 feet (42.91 inches)	15	<b>AMBER = AMBER LED</b> <b>RED = RED LED</b> <b>BLUE = BLUE LED</b> <b>GREEN = GREEN LED</b> <b>YELLOW = YELLOW LED</b> <b>ORANGE = ORANGE LED</b> <b>BLACK = BLACK LIGHT</b>
	2	(Orange and Black Light only)	20	
	3	2 = 2 feet (21.06 inches)	25 (Orange only)	
	4	(Special Order)	30 40 (4 ft. only)	

NANOMETERS	
Amber	585-590nm
Red	620-622.5nm
Blue	450-452.5nm
Green	520-522.5nm
Yellow	580-590nm
Orange	605-610nm
Black Light	395-400nm

EFFICACY	
Amber	41 lm/W
Red	36 lm/W
Blue	80 lm/W
Green	130 lm/W
Yellow	160 lm/W
Orange	65 lm/W
Black Light	0.86 lm/W

Shipped Job Box Packing



**AMBER**



**BLACK LIGHT**



**BLUE**



# NO UV SERIES

## MAGNILUMEN PLUS<sup>+</sup>

Clean-room facilities are utilized as part of specialized industrial production or scientific research, including the manufacturing of pharmaceutical items and microprocessors. Historically, these facilities required special UV shielding from regular fluorescent lamps for their light sensitive materials. ZLEDlighting now offers its Magnilumen Plus+ Magnetic LED Retrofit Kit and a special amber LED to producing No UV radiation, thus creating a safer and more efficient working area!

- Each kit contains everything needed to retrofit the existing fluorescent fixture including the driver with luminaire disconnect, LED bars, magnetic mounting clips, a plug and play wireless harness, along with wire nuts and screws.
- Available sizes include: 2', 4'

Magnilumen Plus Retrofit LED Lighting Kits for Photosensitive applications provide precision illumination with LEDs designed for environments requiring low-wavelength light. Ideal for laboratories, research facilities, and specialized applications, these high-performance kits minimize harmful light emissions to reduce interference while maintaining optimal visibility. Engineered for efficiency, durability, and reliability, they are perfect for scientific, medical, and industrial settings where wavelength-specific lighting is essential.

### KEY FEATURES & BENEFITS

- **High-Purity Light:** Delivers precise illumination without UV wavelengths, ensuring safety for photosensitive applications.
- **Versatile Retrofits:** Ideal for troffers, surface mounts, channel lights, vapor tights, high bays, and direct/indirect fixtures.
- **Complete Retrofit Solution:** Each kit includes a driver with luminaire disconnect, LED bars, magnetic mounting, a plug-and-play wireless harness, and screws for easy installation.
- **Protection from Degradation:** Prevents photochemical reactions in pharmaceuticals and sensitive compounds.
- **Safe Handling:** Reduces the risk of material photodegradation while ensuring a safe work environment.
- **Enhanced Visibility:** Provides clear, flicker-free lighting without UV exposure, maintaining the integrity of pharmaceuticals and research materials.

### APPLICATIONS

- **Healthcare & Laboratories:** Safeguards sensitive equipment, materials, and patients against ultraviolet radiation exposure.
- **Art Museums & Conservation:** Mitigates fading and deterioration of delicate artworks.
- **Scientific Research & Drug Manufacturing:** Provides precisely managed light environments for applications in biology, chemistry, and photobiology.
- **Food & Pharmaceutical Storage:** Impedes photochemical reactions to ensure product stability and safety.

### SPECIALTY LIGHTING FOR PHOTOSENSITIVE

- **Amber LEDs:** Reduce UV and blue light exposure, ideal for semiconductor manufacturing, biological research, and pharmaceutical applications.
- **Blue LEDs:** High-efficiency lighting for machine vision, quality control, and precision tasks.
- **Red LEDs:** Minimize light-induced degradation in pharmaceuticals, food processing, and optical imaging systems.
- **Green LEDs:** Provide excellent visibility and contrast for inspection processes, enhancing accuracy in precision-base applications. Used in medical settings, cleanrooms, and biotechnology research where stable and high-contrast lighting is required.

ZLEDlighting offers wattage-selectable drivers and color temperatures (2700K to 6500K) to match different applications. Retrofit Kits are also available in fixed-color red, green, or blue tones. Contact the factory for more details.

### BENEFITS

- No UV Radiation
- Energy Efficiency
- Certification

### APPLICATIONS

- Pharmaceutical
- Biosafety
- Schools and Universities
- Containment Areas
- Laboratories
- Research and Development
- Manufacturing



### 4FT AMBER LIGHT TEST

### COLOR PARAMETERS 585NM - AMBER

CHROMATICITY COORDINATE: x=0.5926 y=0.4060 / u(u')=0.3545 v=0.3643 v'=0.5465

CCT: Tc=1526K (duv=0.00389)

PEAK WAVELENGTH: 596.3nm

DOMINANT WAVELENGTH: 593.2nm

CRI: Ra=-26.0

COLOR RATIO: R=0.214 G=0.786 B=0.000

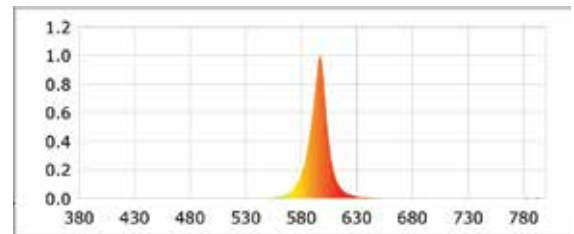
HALF BANDWIDTH: 14.9nm

COLOR PURITY: 0.997

TM30: Rf= 2, Rg= 5

### PHOTOMETRIC PARAMETERS 585NM - AMBER

FE 10.106 W EFFICACY 31 lm/W



## BUILD YOUR OWN MAGNILUMEN PLUS SYSTEM

ex: MRK1220585NM-AMBER-PLUS

MODEL	# OF STRIPS	LENGTH	DRIVER WATTAGE	COLOR TEMP.
MRK	1 = 1 Bar 2 = 2 Bars 3 = 3 Bars 4 = 4 Bars	2' = 2 ft. bar (21") 4' = 4 ft bar (43")	20 = 20 Watt Driver 40 = 40 Watt Driver 50 = 50 Watt Driver 60 = 60 Watt Driver 90 = 100 Watt Driver (set to 90 Watts)	585NM-AMBER 610NM-RED (Special Order)
				PLUS
				Retrofit Kits are also available in fixed-color green, or blue tones. Contact the factory for more details.
				2 ft bar, 15W max per bar 4 ft bar, 30W max per bar

## Amber Retrofit Kits For Turtle Safe Lighting



Amber Magnilumen<sup>TM</sup> Plus bars are great retrofits for fixtures in garages, parking lots, outdoor docks and decks, pool structures, and more. Available in 2 and 4 foot lengths to accommodate almost any retrofit project for turtle safety.

- **Max Wattage Per Bar:** 2 foot: 15W / 4 foot: 30W
- **Color Temp:** Amber
- **Input Voltage:** 100-277V
- **Dimensions:** 2 feet (21"); 4 feet (43")
- **Wavelength:** 585-590 nanometers
- **Part Number:** 2 ft: MRK-LED-BAR-2FT-AMBER-PLUS-585-NM  
Qty 2 x 2ft Amber Led Bars and 1 x 20 Watt Driver  
4 ft: MRK-LED-BAR-4FT-AMBER-PLUS-585-NM  
Qty 2 x 4ft Amber Led Bars and 1 x 40 Watt Driver

### COMPLETE VAPOR TIGHT FIXTURES FOR TURTLE SAFE LIGHTING



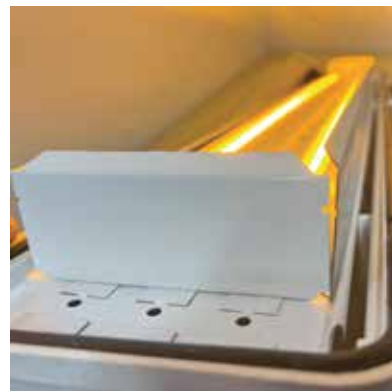
**OPTIONS AVAILABLE:**  
Emergency Kit  
Motion Sensor

Vapor Tight Kit comes complete and ready for immediate installation. Kits include vapor tight fixture, amber bars, and a driver ready in options of a 2 or 4 foot length. Frosted Lens Standard Optional Shield Available below.

#### Complete Vapor Tight With Amber Magnilumen<sup>TM</sup> Plus Light Engine and Driver

LENGTH	VAPOR TIGHT INCLUDES	PART NUMBER
2 foot	2 x 2ft. Amber LED Bars 20W Driver	ZL-CIT2-LED-2FT-AMBER-585
4 foot	2 x 4ft. Amber LED Bars 20W Driver	ZL-CIT2-LED-4FT-AMBER-585

### OPTIONAL SHIELD FOR BEACH-FACING VAPOR TIGHT FIXTURES FOR TURTLE COMPLIANT LIGHTING



- **Part Number:** ZL-2FT-Vapor-Bracket  
ZL-4FT-Vapor-Bracket



Three-sided shield directs light downward and away from beach.  
Two end shields measure 4.5" x 2"  
Length of vapor tight shield: 2 ft: 24" x 2"; 4 ft: 45.5" x 2"

NOTE: Color of lighting may appear differently in photos.

## Makes Cove Lighting Easy and Illuminating

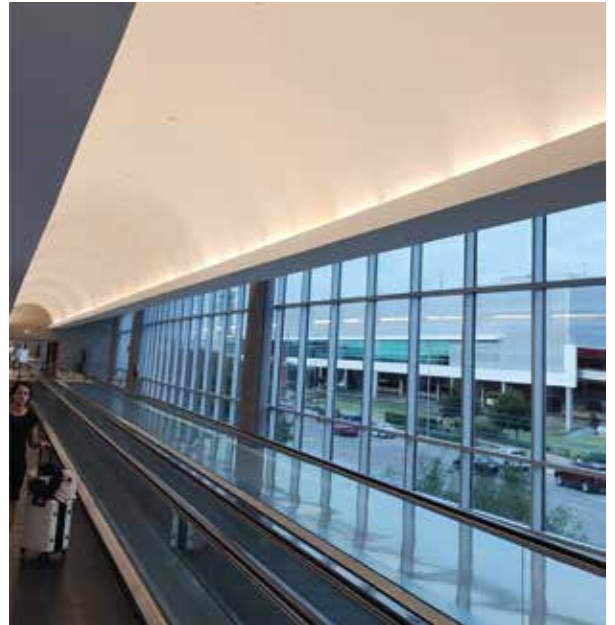
Cove Lighting is a form of indirect lighting typically built into ledges like crown molding, valences and cornices for windows, or any upper-wall recesses of a room. Light is directed up towards the ceiling and can be used as primary or ambient light. It is also commonly used as decorative lighting to accent a room or highlight particularly embellished ceilings.

Installing cove lighting is stress-free and easy when using Magnilumen™ Plus Retrofit Kits. The bars give a seamless interlocking connection with no hot or dark spots. LED bars run in a series for each installation up to 32' from one driver.

### PRODUCT FEATURES:

- **Max Wattages Per Bar:** 4ft: 30W; 3ft: 22W; 2ft: 15W; 1ft: 8W
- **Color Temperatures:** CSK: 30K, 35K, 40K
- **Voltage Input:** 120/277 VAC
- **Lengths:** 4ft. (47.75"); 3ft. (35.75"); 2ft. (23.75")
- **Lumens:** 150 lm/W with lens  
180 lm/W without lens
- **CRI:** >83. Higher CRI available
- **Warranty:** 5 years
- **0-10V Dimming Standard, Triac Dimming Upon Request.** Custom Integration available for connection to most Lighting Control systems.

Any combinations of footage bars can be used in each run. Balancing the wattage and lumens per foot with our dip switch adjustable drivers is easy.



Fluorescent Bulbs create gaps in lighting



Magnilumen™ Plus Cove Lighting creates a continuous flow of lighting with no gaps!

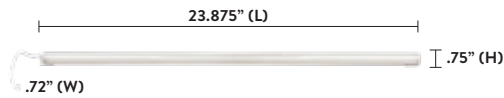
Interlocking ends make for an easy and straight fit.  
(Locking bars is optional)



CSK switch on the harness allows for easy color temperature selection.



**DIMENSIONS:**



Through power allows for up to 32 feet (8 bars ) of direct power with one driver. Based on selected wattage per foot.

Enclosures are available for drivers.



**100W DRIVER ENCLOSURE (with two knockouts)**

PN: MRK-100W-DRIVER-ENCLOSURE

DIMENSIONS: 16" (L) x 1.75" (W) x 1.3125" (D)

**20-60W DRIVER ENCLOSURE (with two knockouts)**

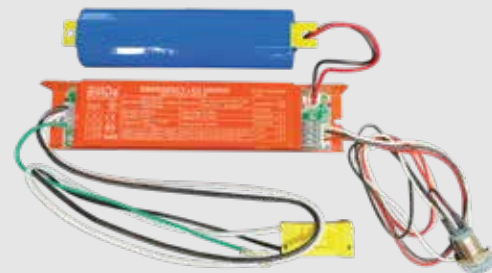
PN: MRK-20/60W-DRIVER-ENCLOSURE

DIMENSIONS: 12" (L) x 1.75" (W) x 1.3125" (D)

**OPTIONS:**

- A variety of magnets and harnesses are available

- Emergency Driver can be added for up to 8 feet



- PIR Sensor with aux. supply with remote.

**PIR Sensor**



**PART NUMBER:**  
PIR-SENSOR-ANT-4A

**Power Supply**



**PART NUMBER:**  
MUSP-12V-03-5W

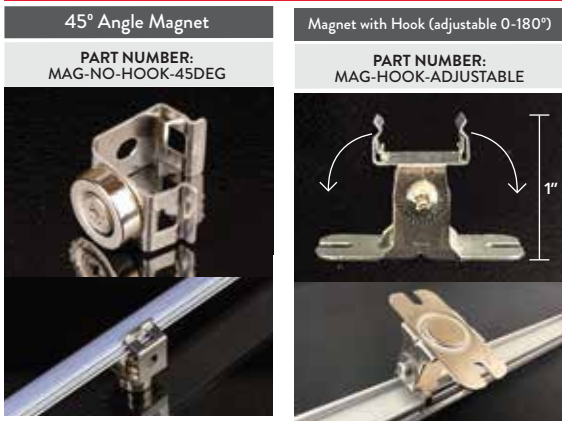


Remote Control comes with sensor

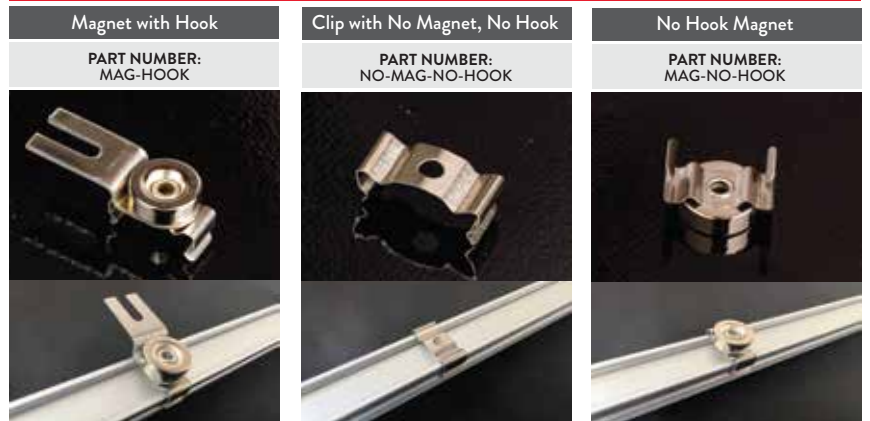
# MAGNETS

Standard for Cove Installations 45° Angle Magnet included

## MAGNETS FOR DIRECTIONAL USE



## MOUNTING MAGNETS AND HARDWARE



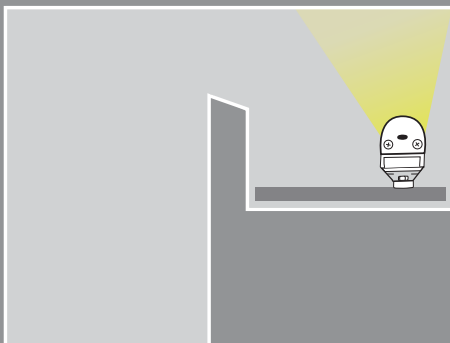
## PART BUILDER

Series	Length	Watts per foot	Color Temp	PLUS
MRK-COVE				
Two (2) 45° magnets are included per bar	6 FT = six feet 8 FT = eight feet 10 FT = ten feet 12 FT = twelve feet 16 FT = sixteen feet 20 FT = twenty feet 25 FT = twenty five feet 30 FT = thirty feet 40 FT = forty feet 50 FT = fifty feet	5W = 5 Watts per foot (750 Lumens per foot) 4W = 4 Watts per foot (600 Lumens per foot) 3W = 3 Watts per foot (450 Lumens per foot) 2W = 2 Watts per foot (300 lumens per foot)	CSK = Color selectable (3000, 3500, 4000K)	

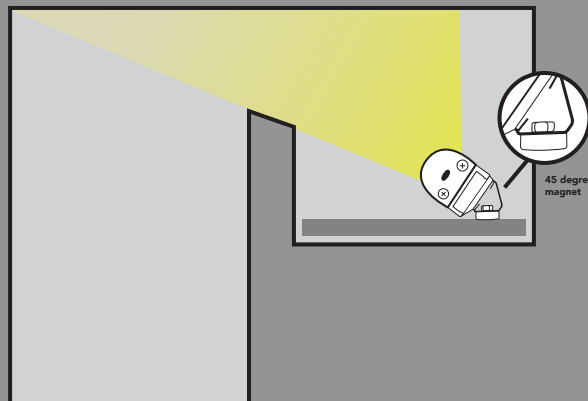
Maximum wattage per driver/run must not exceed 100 Watts

**Cove Bar Lighting Layouts available upon request. Contact Factory.**

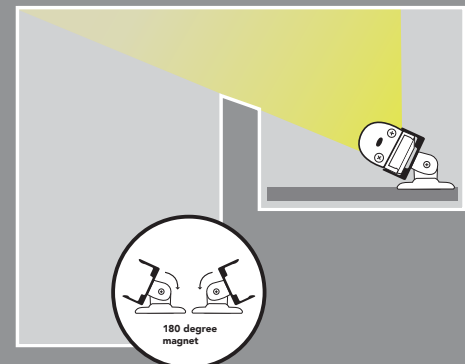
**STANDARD MAGNET**  
(Optional)



**TWO (2) 45° MAGNETS**  
(Magnets are included standard per bar)



**180° MAGNET**  
(Optional)



# MAGNI BLEND

A High CRI Color Temperature Blending Retrofit from the Creators of Magnilumen™ Plus



LED bars have either 30K/40K or 30K/50K chips installed in every other color temperature pattern.



High CRI color mixing (Kelvin) is the key to making people, products, and environments look “true to color” in retail, classrooms, and workplaces, benefiting shoppers, students, and employees alike. ZLEDLighting has introduced high 90 CRI Kelvin blended LED retrofit bars to its Magnilumen™ Plus product line, addressing the need for ideal color temperatures.

Recognizing that 3000K can be too warm and 4000K too cold, ZLEDLighting has developed the new MagniBlend bar. This innovative solution combines high 90 CRI with various Kelvin temperature LED chips, allowing for a wider color palette in standard 3500K or 4000K environments.

Once installed, these bars not only reduce energy costs but also enhance the appearance of your people, products, and spaces by showcasing true colors. This brings together the best of both worlds: the mixing enhances the full color spectrum, while the 90 CRI adds vibrancy and clarity.

ZLEDLighting is here to help with custom lighting design tailored to project needs!

## Product Features:

- **Wattages:** 20W, 30W, 40W, 50W, 60W, 100W (selectable)
- **Color Blends:** 30/40K (35K equivalent)  
30/50K (40K equivalent)
- **Lumens:** 130 lm/W with Lens  
150 lm/W without Lens
- **Voltage Input:** 100-277VAC, 100-347VAC (special order)
- **Output Driver Voltage:** 27-42VDC
- **CRI:** 90+
- **Dimming:** 0-10VDC
- **Operating Temperature:** -40 - 122F
- **Surge Protection:** 2KV
- **Rated:** IP20 for damp location
- **Warranty:** 7 years
- **LM70 Rating:** 100,000 hours
- **Listed:** ETL



## MAGNIBLEND SPECIFICATIONS

### JOB PACK - Magnetic LED Bars, selectable magnetic driver, 24" 2, 3, or 4-way harness, and screws

MAGNIBLEND PRODUCT NUMBER	COLOR TEMPERATURE	BAR QTY/LENGTH	DRIVER	WATTAGE	LUMENS WITH LENS	LUMENS WITHOUT LENS	LISTED
<b>30/40K</b>							
MRK2220-30/40K-BLEND-PLUS	30/40K	2PCS 2ft	20W	Max. 20W	2600	3000	ETL
MRK2230-30/40K-BLEND-PLUS	30/40K	2PCS 2ft	30W	Max. 30W	3900	4500	ETL
MRK4240-30/40K-BLEND-PLUS	30/40K	4PCS 2ft	40W	Max. 40W	5200	6000	ETL
MRK4250-30/40K-BLEND-PLUS	30/40K	4PCS 2ft	50W	Max. 50W	6500	7500	ETL
MRK4260-30/40K-BLEND-PLUS	30/40K	4PCS 2ft	60W	Max. 60W	7800	9000	ETL
<b>30/50K</b>							
MRK2220-30/50K-BLEND-PLUS	30/50K	2PCS 2ft	20W	Max. 20W	2600	3000	ETL
MRK2230-30/50K-BLEND-PLUS	30/50K	2PCS 2ft	30W	Max. 30W	3900	4500	ETL
MRK4240-30/50K-BLEND-PLUS	30/50K	4PCS 2ft	40W	Max. 40W	5200	6000	ETL
MRK4250-30/50K-BLEND-PLUS	30/50K	4PCS 2ft	50W	Max. 50W	6500	7500	ETL
MRK4260-30/50K-BLEND-PLUS	30/50K	4PCS 2ft	60W	Max. 60W	7800	9000	ETL

### JOB PACK - Magnetic LED Bars, selectable magnetic driver, 24" 2, 3, or 4-way harness, and screws

MAGNIBLEND PRODUCT NUMBER	COLOR TEMPERATURE	BAR QTY/LENGTH	DRIVER	WATTAGE	LUMENS WITH LENS	LUMENS WITHOUT LENS	LISTED
<b>30/40K</b>							
MRK2420-30/40K-BLEND-PLUS	30/40K	2PCS 4ft	20W	Max. 20W	2600	3000	ETL
MRK2430-30/40K-BLEND-PLUS	30/40K	2PCS 4ft	30W	Max. 30W	3900	4500	ETL
MRK2440-30/40K-BLEND-PLUS	30/40K	2PCS 4ft	40W	Max. 40W	5200	6000	ETL
MRK2450-30/40K-BLEND-PLUS	30/40K	2PCS 4ft	50W	Max. 50W	6500	7500	ETL
MRK4460-30/40K-BLEND-PLUS	30/40K	4PCS 4ft	60W	Max. 60W	7800	9000	ETL
MRK44100-30/40K-BLEND-PLUS	30/40K	4PCS 4ft	100W	Max. 100W	13000	15000	ETL
<b>30/50K</b>							
MRK2420-30/50K-BLEND-PLUS	30/50K	2PCS 4ft	20W	Max. 20W	2600	3000	ETL
MRK2430-30/50K-BLEND-PLUS	30/50K	2PCS 4ft	30W	Max. 30W	3900	4500	ETL
MRK2440-30/50K-BLEND-PLUS	30/50K	2PCS 4ft	40W	Max. 40W	5200	6000	ETL
MRK2450-30/50K-BLEND-PLUS	30/50K	2PCS 4ft	50W	Max. 50W	6500	7500	ETL
MRK4460-30/50K-BLEND-PLUS	30/50K	4PCS 4ft	60W	Max. 60W	7800	9000	ETL
MRK44100-30/50K-BLEND-PLUS	30/50K	4PCS 4ft	100W	Max. 100W	13000	15000	ETL

## MAGNBLEND 30/40K MIX IS BEST FOR 35K ENVIRONMENT

- Mercantile retail, offices, classrooms



## MAGNBLEND 30/50K MIX IS BEST FOR 40K ENVIRONMENT

- Grocery, retail, pharmacy and jewelry display  
offices, classrooms, assembly areas



Custom blends are available. MOQ may apply.



# MAGNIBLEND REFRIGERATION

MAGNILUMEN PLUS<sup>™</sup>

by **Z** ZLED<sup>™</sup>  
LIGHTING  
ZLEDLIGHTING.COM



Bright and energy-efficient LED refrigerated case lighting can **significantly enhance product visibility and appeal.**

By illuminating fresh produce, meats, seafoods, and prepared foods with vibrant, true color light, this not only **creates an inviting atmosphere but also improves the shopping experience for customers.** Plus, with the added benefit of energy efficiency, it can **reduce operational costs while maintaining optimal visually appealing display conditions.** It's a smart investment for any commercial refrigeration space!



MagniBlend Refrigeration LED Lighting not only Improves a shopping experience it creates **consistent uniformity, minimal glare and eliminates dark spots**. Shopping Markets and retailers benefit with **eco-friendly, lower maintenance, and costs due to lower power consumption**. MagniBlend LED Lighting solutions are designed to **help retailers and shopping markets easily switch cases from older forms of lighting technology to MagniBlend Refrigeration LED**.

Suggested Color Blends by department for Grocery Stores:

## Meat / Produce / General / Bakery

30/50K-90 CRI Creates a 40K Lighting Environment

MRK-LED-BAR-45"-30/50K-PLUS-BLEND-CRI90-PT-WP-R-FR-HH

Magnilumen Plus LED Bar, 45", 30K/50K, Blend, CRI90, Refrigerated Case

MRK-LED-BAR-33"-30/50K-PLUS-BLEND-CRI90-PT-WP-R-FR-HH

Magnilumen Plus LED Bar, 33", 30K/50K, Blend, CRI90, Refrigerated Case

MRK-LED-BAR-22"-30/50K-PLUS-BLEND-CRI90-PT-WP-R-FR-HH

Magnilumen Plus LED Bar, 22", 30K/50K, Blend, CRI90, Refrigerated Case



## Cheese / Poultry

30/40K-90 CRI Creates a 35K Lighting Environment

MRK-LED-BAR-45"-30K/40K-PLUS-BLEND-CRI90-PT-WP-R-FR-HH

Magnilumen Plus LED Bar, 45", 30K/40K, Blend, CRI90, Refrigerated Case

MRK-LED-BAR-33"-30K/40K-PLUS-BLEND-CRI90-PT-WP-R-FR-HH

Magnilumen Plus LED Bar, 22", 30K/40K, Blend, CRI90, Refrigerated Case

MRK-LED-BAR-22"-30K/40K-PLUS-BLEND-CRI90-PT-WP-R-FR-HH

Magnilumen Plus LED Bar, 22", 30K/40K, Blend, CRI90, Refrigerated Case



## Olive Bar

30/40K-90 CRI Creates a 35K Lighting Environment

MRK-LED-BAR-47-7/8"-30K/40K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 47 7/8", 30K/40K, Blend, CRI90, Refrigerated Case or Bar

MRK-LED-BAR-35-7/8"-30K/40K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 35 7/8", 30K/40K, Blend, CRI90, Refrigerated Case or Bar

MRK-LED-BAR-23-7/8"-30K/40K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 23 7/8", 30K/40K, Blend, CRI90, Refrigerated Case or Bar

MRK-LED-BAR-11-7/8"-30/40K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 11-7/8", 30K/40K, Blend, CRI90, Refrigerated Case or Bar



## Hot and Cold Bar

30/50K-90 CRI Creates a 40K Lighting Environment

MRK-LED-BAR-47-7/8"-30K/50K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 47 7/8", 30K/50K, Blend, CRI90, Refrigerated Bar

MRK-LED-BAR-35-7/8"-30K/50K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 35 7/8", 30K/50K, Blend, CRI90, Refrigerated Bar

MRK-LED-BAR-23-7/8"-30K/50K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 23 7/8", 30K/50K, Blend, CRI90, Refrigerated Bar

MRK-LED-BAR-11-7/8"-30/50K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 11-7/8", 30K/50K, Blend, CRI90, Refrigerated Bar



## Door Refrigeration

30/50K-90 CRI Creates a 40K Lighting Environment

MRK-LED-BAR-KT-70"-30K/50K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 70", 30K/50K, Blend, CRI90, Refrigerated Glass Doors

MRK-LED-BAR-KT-58"-30K/50K-PLUS-BLEND-CRI90-PT-WP-CV-CL-HH

Magnilumen Plus LED Bar, 58", 30K/50K, Blend, CRI90, Refrigerated Glass Doors





# MAGNIBLEND REFRIGERATION

MAGNILUMEN PLUS™

## LED Magnetic Retrofit Kits



LED bars have either 30K/40K or 30K/50K chips installed in every other color temperature pattern.

<b>WATTAGE</b>	Wattage selectable drivers
<b>COLOR TEMPS</b>	30K/40K and 30K/50K
<b>EFFICACY</b>	125 lm/W with Frosted Lens 150 lm/W with Clear Lens 160 lm/W with No Lens
<b>VOLTAGE INPUT</b>	100-277VAC
<b>DRIVER OUT VOLTAGE</b>	27-42VDC
<b>CRI</b>	90+
<b>DIMMING</b>	0-10VDC, (optional: TRIAC)
<b>AMBIENT TEMP</b>	-20 to 50C; -40 to 122F
<b>SURGE PROTECTION</b>	2KV
<b>LED CHIPS</b>	Conformal coating applied
<b>RATED</b>	IP20 for damp location
<b>WARRANTY</b>	7 years Magnilumen™ Standard
<b>LED LIFESPAN (L70)</b>	100,000 hours
<b>FLICKER</b>	Meets Title 24 Flicker Requirements
<b>LISTED</b>	ETL



Recognizing that 3000K can be too warm and 4000K too cold, ZLEDLighting has developed the new MagniBlend bar. This innovative solution combines high 90 CRI with various Kelvin temperature LED chips, allowing for a wider color palette in standard 3500K or 4000K environments.

### EASY TO INSTALL:

Pre-installed onboard magnets on both bars and driver. Slide out mounting brackets on bars, pre drilled holes on driver for easy screw mount installation. (Self drilling screws included). Optional Directional Magnets are available. See Magnet Accessories.



Hot and Cold Door Refrigeration Lighting LED Bars include Mounting Clips for Installation.



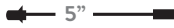
High CRI color mixing (Kelvin) is essential for ensuring that people, products, and environments appear “true to color” in settings such as refrigeration units, hot and cold self-serve food bars, and refrigerated displays/doors. This benefits shoppers by providing clear, vibrant visuals of food presentation. The ZLEDLighting, Magnilumen Plus, MagniBlend High Humidity line features LED retrofit bars with a high 90 CRI Kelvin blend, designed to meet the demand for optimal color temperatures in these environments.

## Accessories

### Harnesses with Male and Female waterproof end connections

### Leads to LED Bars

PART NUMBER: HARNESS-5IN-JUMP-HH  
5 in Waterproof Harness for Refrigerated Case



PART NUMBER: HARNESS-8IN-JUMP-HH  
8 in Waterproof Harness for Refrigerated Case



PART NUMBER: HARNESS-12IN-JUMP-HH  
12 in Waterproof Harness for Refrigerated Case



PART NUMBER: HARNESS-24IN-JUMP-HH  
24 in Waterproof Harness for Refrigerated Case



PART NUMBER: HARNESS-36IN-JUMP-HH  
38 in Waterproof Harness for Refrigerated Case



PART NUMBER: HARNESS-8FT-JUMP-HH  
8 ft Waterproof Harness for Refrigerated Case



PART NUMBER: HARNESS-12FT-JUMP-HH  
12 ft Waterproof Harness for Refrigerated Case



PART NUMBER: HARNESS-16FT-JUMP-HH  
16 ft Waterproof Harness for Refrigerated Case



End Cap



Clear Lens



Frosted Lens



Part Number	Description
6"-Driver-Bridge-Harness-HH	6 inch Waterproof Driver Bridge Harness from Driver ①
B&W-LEAD-TO-WP-TAIL-HH	B&W Lead 6 inch to WP Tail from Harness QC ②
HARNESS-2-WAY-3FT-HH	MRK Harness 2-Way, 3ft each leg High Humidity
ZL-MRK-ENDCAP-BAR-HH	End of run endcap for conformal bar
2FT-Clear-Lens-22"-HH	2FT-Clear-Lens for 22" HH LED MC-PCBA's
4FT-Clear-Lens-45"-HH	4FT-Clear-Lens for 45" HH LED MC-PCBA's
2FT-Frosted-Lens-23 7/8"-HH	2FT-Frosted-Lens for 23 7/8" HH LED MC-PCBA's
3FT-Frosted-Lens-35 7/8"-HH	3FT-Frosted-Lens for 35 7/8" HH LED MC-PCBA's
4FT-Frosted-Lens-47 7/8"-HH	4FT-Frosted-Lens for 47 7/8" HH LED MC-PCBA's

## Optional Mounting Hardware - Magnets and Clips for Directional Use

### 45 Degree Angle Magnet for Doors/Shelves

PART NUMBER: MAG-NO-HOOK-45DEG-HH



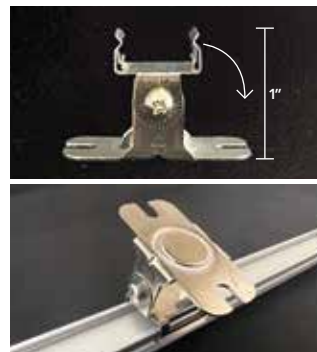
### Magnet with Hook

PART NUMBER: MAG-HOOK-HH



### Magnet with Hook (adjustable 0-180 degrees)

PART NUMBER: MAG-HOOK-ADJUSTABLE-HH

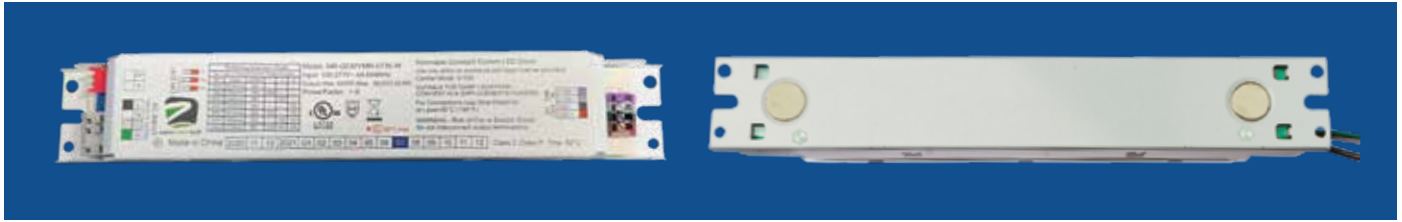


### Bar Clip

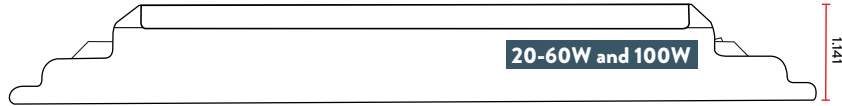
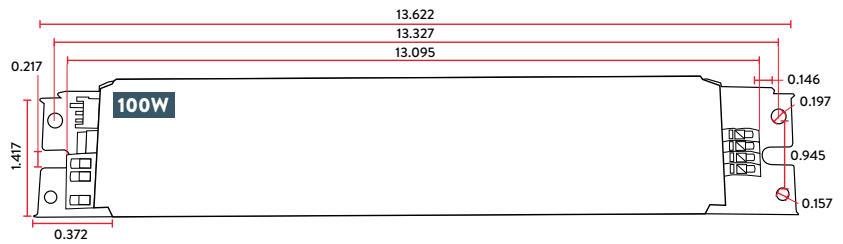
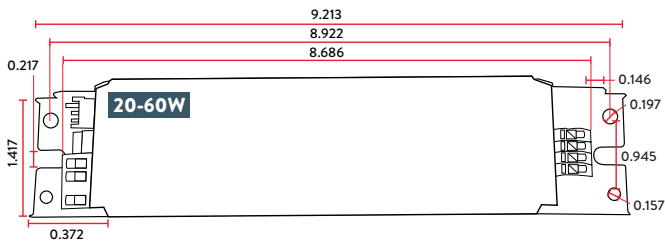
PART NUMBER: SH1-HCB-CLIP-HH



## Drivers



MODEL NUMBER	DEFAULT WATTAGE	INPUT VOLTAGE	POWER FACTOR	EFFICIENCY	THD	OUTPUT VOLTAGE
MRK-DRIVER-20W-2H-PLUS	20W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-30W-2H-PLUS	30W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-40W-2H-PLUS	40W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-50W-2H-PLUS	50W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-60W-2H-PLUS	60W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC
MRK-DRIVER-100W-4WH-PLUS	100W	100-277VAC	≥0.9	≥88%	≤10%	27-42VDC



## Enclosures for Drivers



### 100W DRIVER ENCLOSURE (with two knockouts)

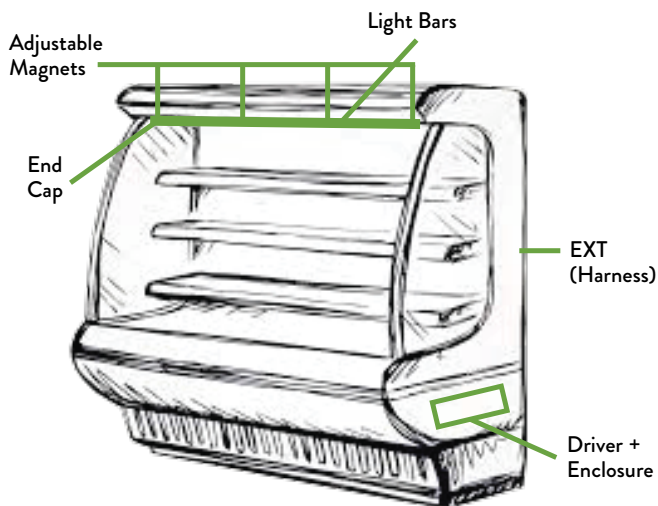
PN: MRK-100W-DRIVER-ENCLOSURE  
 DIMENSIONS: 16" (L) x 1.75" (W) x 1.3125" (D)

### 20-60W DRIVER ENCLOSURE (with two knockouts)

PN: MRK-20/60W-DRIVER-ENCLOSURE  
 DIMENSIONS: 12" (L) x 1.75" (W) x 1.3125" (D)



Creating a Bill of Materials (BOM) for a Magnilumen refrigeration lighting retrofit system involves listing all necessary components and materials required for installation. Start by identifying the specific Magnilumen LED lighting model suitable for the refrigeration unit, including wattage, voltage, and dimensions. Include the number of LED fixtures needed, along with power supplies, wiring, connectors, mounting hardware, and any necessary control devices such as dimmers or motion sensors. Review any additional materials like brackets, adhesive tapes, or protective covers, ensuring compatibility with the existing refrigeration system. Document part numbers, quantities, and supplier details for each item to streamline procurement.



## Example Bill of Material

Part Number	Description	Qty
MRK-LED-BAR-33"-30K/40K-PLUS-BLEND-CRI90-PT-WP-R-FR-HH	Magnilumen Plus LED Bar, 33" 30K/40K, Blend, CRI90, Refrigerated Case	2
HARNESS-12FT-JUMP-HH	12ft Waterproof Harness for Refrigerated Case	1
MRK-20/60W-DRIVER-ENCLOSURE	Metal Driver Enclosure for 20/60W Mag Plus Driver with Grommet	1
MRK-DRIVER-40W-2H-PLUS	Magnilumen Plus, Driver, 40W DFW, Wattage Selectable	1
ZL-MRK-ENDCAP-BAR-HH	End of run endcap for refrigeration Bars (Included)	1

### Impact of LED Lighting on Food Spoilage in Grocery Stores:

#### Key Points:

- **LED Adoption:** Increasing due to energy efficiency, long lifespan, and environmental benefits.
- **Food Spoilage Concern:** LED lighting characteristics can affect perishable food quality and shelf life.

#### Main Spoilage Mechanisms:

- **Microbial Growth:** Promoted by temperature and humidity changes.
- **Oxidation:** Light exposure accelerates lipid oxidation.
- **Photo-Degradation:** Breaks down vitamins and pigments.
- **Temperature Fluctuations:** Encourage microbial activity.

### Best Practices for LED Use in Grocery Stores:

#### Optimize Light Conditions:

- Use warm-spectrum LEDs (2700K-3500K) for sensitive items.
- Implement dimmable LEDs and timers to reduce exposure during off-hours.

#### Protect Products:

- Apply UV filters and shielding to minimize photo-degradation.
- Customize lighting zones to balance product preservation and illumination.

### How LED Lighting Affects Different Food Categories:

#### 1. Fresh Produce:

- **Positive:** Cooler LEDs reduce heat stress, extending shelf life.
- **Negative:** High-intensity light degrades pigments, causing discoloration.

#### 2. Dairy Products:

- **Positive:** Reduced heat minimizes temperature fluctuations.
- **Negative:** UV-rich LEDs degrade vitamins (e.g., riboflavin).

#### 3. Meat & Seafood:

- **Positive:** Lower heat prevents surface drying.
- **Negative:** Light exposure accelerates lipid oxidation, leading to off-flavors.

#### 4. Packaged Foods:

- **Positive:** Consistent lighting enhances visual appeal.
- **Negative:** Prolonged exposure causes oxidation and staleness.

### Monitor & Adjust:

- Regularly track temperature, humidity, and light exposure.
- Adjust LED settings based on real-time environmental data for optimal food preservation.





# ATLAS INTERIOR HOME FASHIONS



Atlas Home Interiors  
Cherry Hill, NJ

## PROJECT BACKGROUND

For over 90 years, Atlas Interior Home Fashions has been a trusted leader in providing decorating solutions for residential and commercial clients across Southern New Jersey and beyond. Known for its wide range of wallcoverings, paint, and top-tier interior design vendors, Atlas has built a strong reputation for quality and style. However, after nearly a century in operation, the company encountered a significant challenge: accurately displaying the true colors of their products to their loyal customers.

Understanding the importance of precise color representation for customer satisfaction and informed decision-making, Atlas recognized the need for a lighting solution that would enhance the visual appeal of their showroom products. This led to a collaboration with ZLEDLighting, resulting in the development of a specialized retrofit lighting system designed to bring out the best in their diverse product range.

## SOLUTION

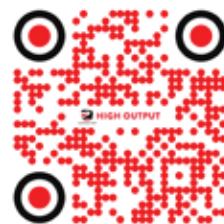
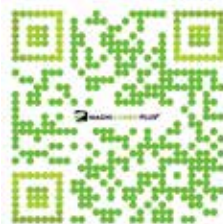
ZLEDLighting developed a unique Magnilumen™ Magniblend LED bars featuring alternating chips of both color temperatures.

This solution for Atlas Paint and Wallpaper, addresses a common challenge retailers face: accurately showcasing product colors in showrooms. Recognizing that standard color temperatures like 3000K and 4000K can distort colors, ZLEDLighting developed a unique Magnilumen™ (Magniblend PCB Strips) LED bars featuring alternating chips of both color temperatures. This configuration, combined with a high Color Rendering Index (CRI) of 90, was tested successfully over various wallpaper and paint samples, enhancing the visibility of blue, silver, grey, red, and brown tones.

After installation in Atlas's showroom, the transformation was remarkable; the new lighting showcased the true colors of the displayed products, significantly improving the overall ambiance and visual appeal. This innovative solution not only met the retailer's needs but also set a new standard for color accuracy in lighting for retail environments.



Eco-Friendly Illumination



[www.magnilumenplus.com](http://www.magnilumenplus.com)  
[www.zledlighting.com](http://www.zledlighting.com)  
(800) 679-9243