

MAGNILUMEN PLUSTM

LED Lighting Retrofit Solutions



by **ZLED**
LIGHTING
ZLEDLIGHTING.COM



Flourescent Fixture Retrofits



HIGH OUTPUT



EMERGENCY BACKUP KIT



COLORS



MAGNIBLEND



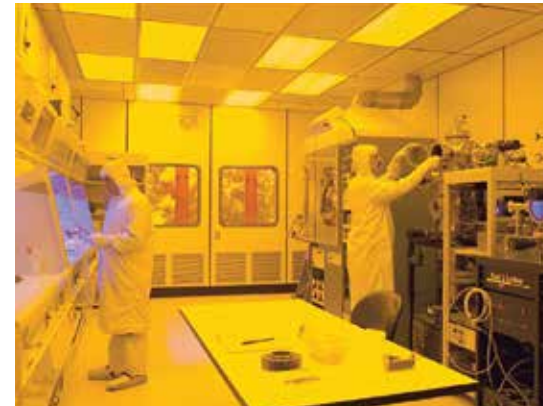
MAGNIBLEND
REFRIGERATION



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
- Back-Lit Mirrors

• Recessed and Suspended Architectural Lighting:

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

• Healthcare Lighting:

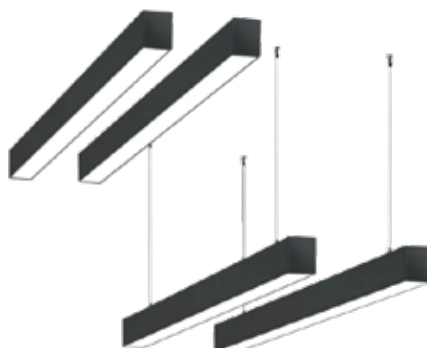
- Patient Room & Restroom Fixtures & Mirror Lighting
- No UV
- Hospitals
- Surgery Centers

• High Bays:

- Industrial/Commercial High Bays (HO)

• Specialty Lighting:

- Coastal Wildlife Friendly
- Cove Lighting (Indirect)
- Industrial Linear Vapor Tights
- Horticulture
- Entertainment Venues
- Industrial/Commercial Low Bay
- Retail Display Cases
- Refrigerated Cases & Doors
- Backlit Ceilings



Airports
Stadiums



Hospitals
Museums



Mercantile
Hospitality



Offices
Education Institutions



Industrial
Food Markets

Location applications are endless...

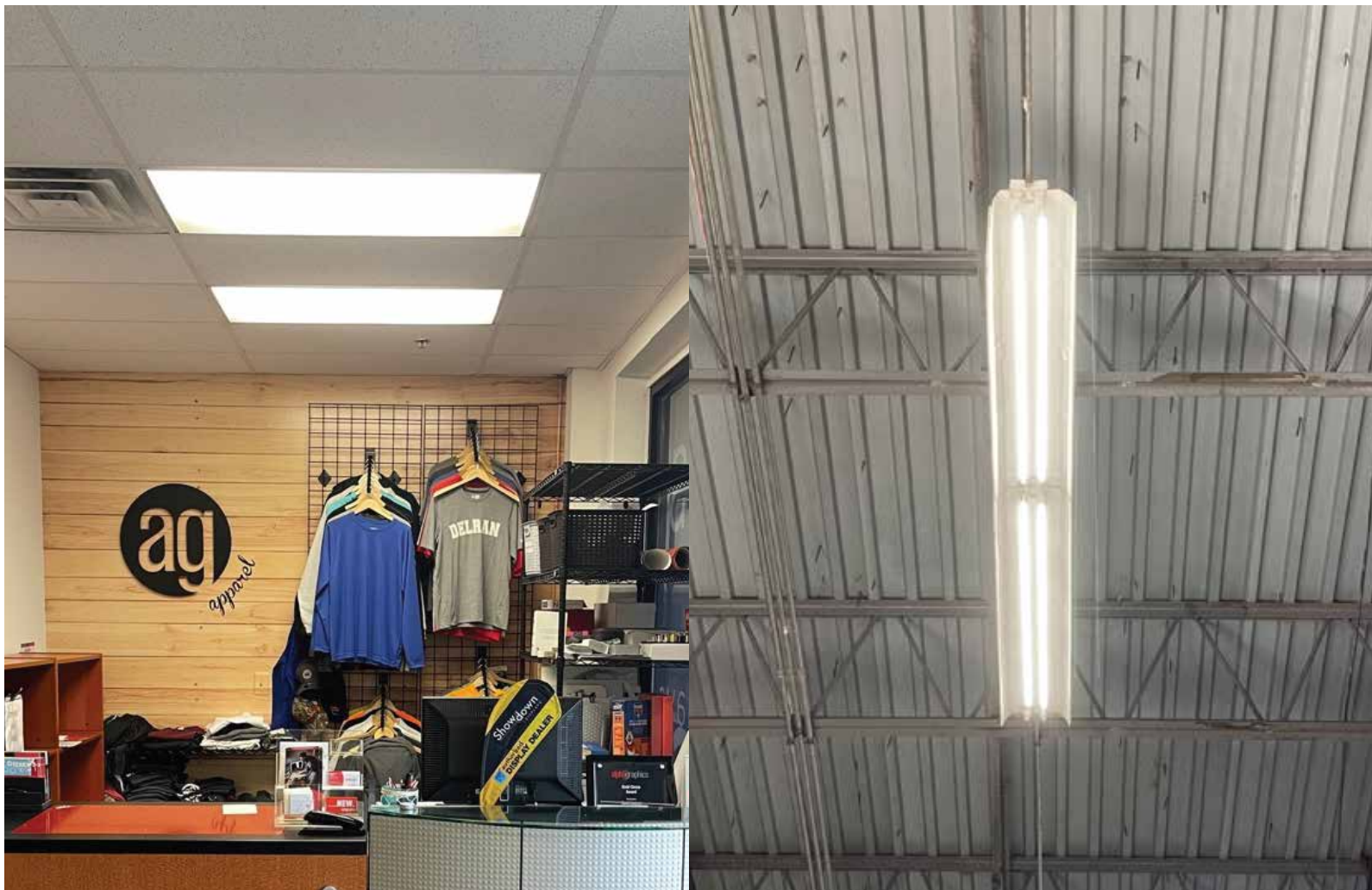


The #1 Magnetic Retrofit Kit in the U.S.A.

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 year Magnilumen Plus™; 5 year High Output, Colors; 3 year Black Light.

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

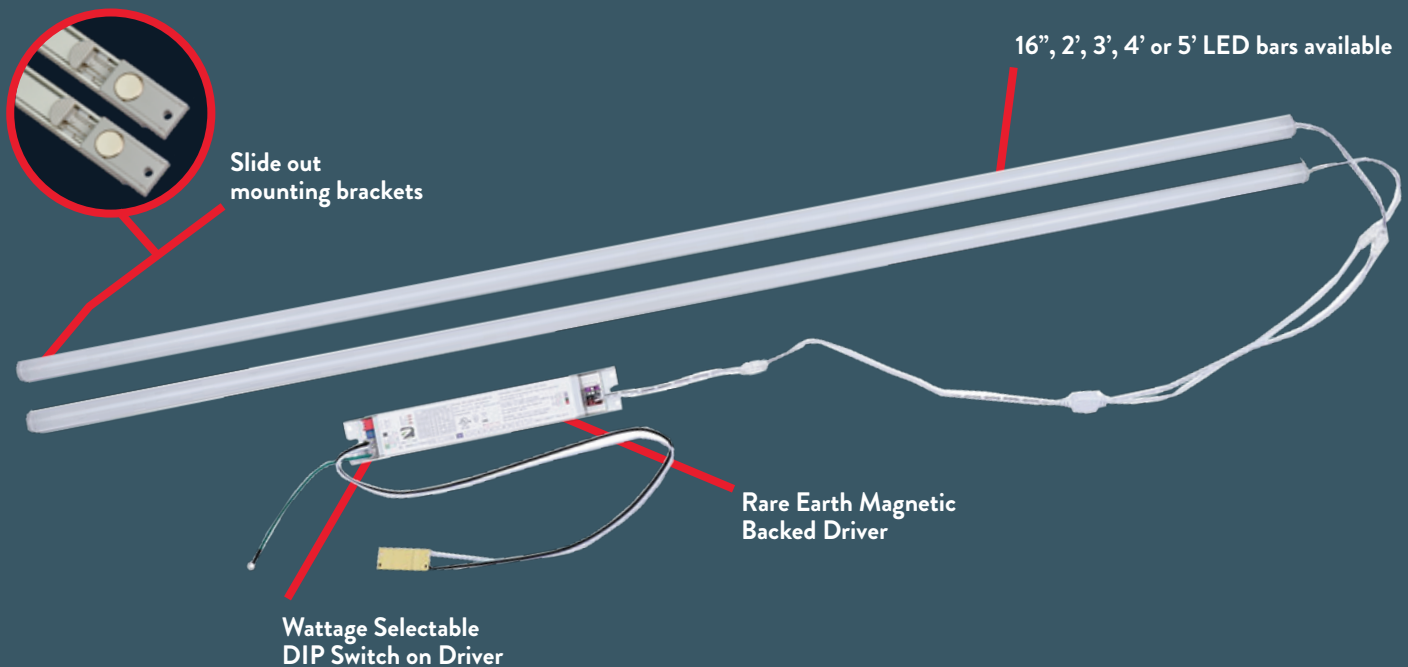


For more information on all the Magnilumen Plus™ products, applications, and accessories, visit www.magnilumennplus.com



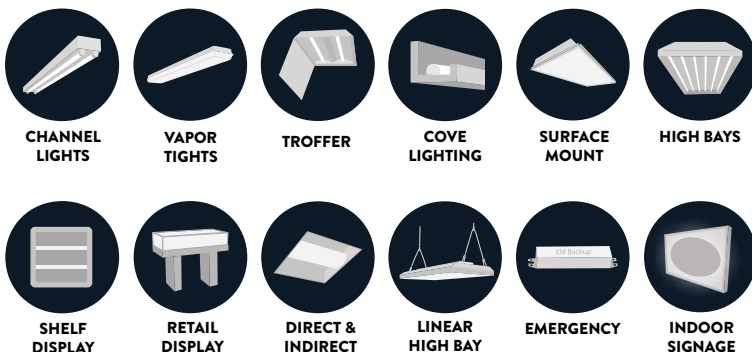
16", 2', 3', 4' and 5' LED Magnetic Retrofit Kits

Magnilumen 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.

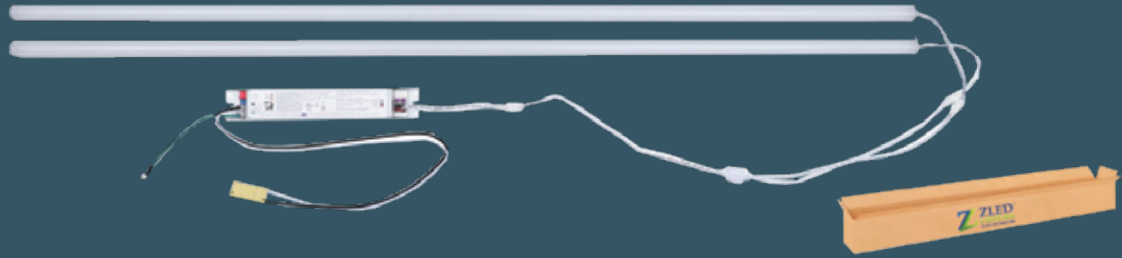
APPLICATIONS



WATTAGE	Wattage selectable drivers
COLOR TEMPS	27K, 30K, 35K, 40K, 50K, 65K, Green, Blue, Orange, Yellow, Red, Amber, Black Light (color selectable in retail pack only)
EFFICACY	150 lm/W with Frosted Lens 170 lm/W with Clear Lens 180 lm/W with No Lens
VOLTAGE INPUT	120/277V
DRIVER OUT VOLTAGE	27-42VDC
CRI	80+ (standard); 90+ (special order)
DIMMING	0-10VDC, (optional: TRIAC, DALI, LUTRON ECOSYSTEM)
AMBIENT TEMP	-20 to 50C; -40 to 122F
SURGE PROTECTION	2KV
RATED	IP20 for damp location
WARRANTY	7 year Magnilumen Standard, 5 year Color, 3 year Black Light
LED LIFESPAN (L70)	100,000 hours Standard Products 50,000 hours Colors
FLICKER	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

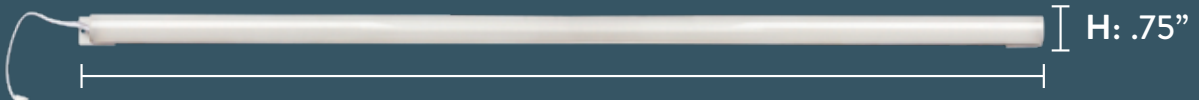
- Toolless color temperature selectable option on harness via switch.
- 35K, 40K, 50K options available.

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).

DIMENSIONS

W: .72"



L: 16 inch: 16" | 2 feet: 21.06" | 3 feet: 30.91" | 4 feet: 42.91" | 5 feet: 58"

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	27K = 2700K 30K = 3000K 35K = 3500K 40K = 4000K 50K = 5000K 65K = 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 40, 60W 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 TR = DRIVER WITH TRIAC DIMMING DALI = Includes DALI 2 Driver LUTRON = Includes Lutron Hi-Lume® 1% ECOSYSTEM® 3 Wire Driver

Job Pack Box



All Color Bars 2ft and 4ft only.
Black Light 4ft only.

① = Black Light Max Wattages
20W - 4 ft.
Lutron, Hi-Lume and EcoSystem are all registered trademarks of Lutron Electronics Co. inc.

Consult factory for additional drivers.

2 FOOT RETAIL KIT

150 lm/W with Frosted Lens (Standard for Retail Pack), 180 lm/W with Lens Removed



PRODUCT NUMBER	COLOR TEMP CSK	QTY/ LENGTH	DRIVER	WATTAGE	LUMENS WITH LENS	LUMENS WITH LENS REMOVED	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 (Standard for Retail Pack), 180 lm/W with Lens Removed



PRODUCT NUMBER	COLOR TEMP CSK	QTY/ LENGTH	DRIVER	WATTAGE	LUMENS WITH LENS	LUMENS WITH LENS REMOVED	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

Retail Floor POP Display - Supports up to 20 retail-packaged 4' kits and 8 retail-packaged 2' kits.
PART #: MAG-POP-CSK-OPTION [1; 2; 3]



Working Displays - Both include two bars, 4" x 9" brochure holder and descriptive header.



Standard Working Display
PART #: Magnilumen Plus™
Stand-Up Working Display-4ft



Working Display with Retail Box Wings
PART #: Magnilumen Plus™
Stand-Up Working Display-Wings

Display includes two retail packs attached to side wings

Counter Top 2 Foot Display
For locations with smaller footprints.

Magnilumen Plus™ Stand-Up Working Display-2ft

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

MAGNILUMEN PLUS™ DRIVER SPECIFICATIONS



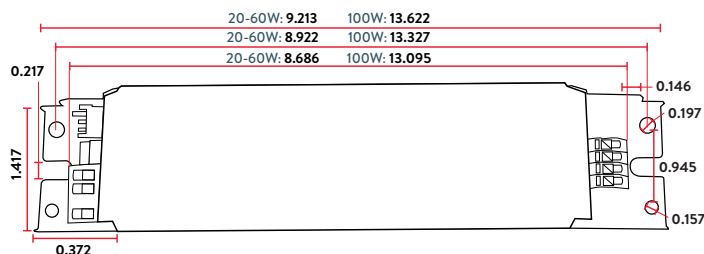
PART NUMBER

MRK-DRIVER-20W-2WH-PLUS
MRK-DRIVER-30W-2WH-PLUS
MRK-DRIVER-40W-2WH-PLUS
MRK-DRIVER-50W-2WH-PLUS
MRK-DRIVER-60W-2WH-PLUS
MRK-DRIVER-100W-4WH-PLUS

- Wattages: 20W, 30W, 40W, 50W, 60W, 100W
- Input Voltage: 120/277V
- Power Factor: ≥ 0.9
- Efficiency: $\geq 88\%$
- THD: $\leq 10\%$
- Output Voltage: 27-42VDC

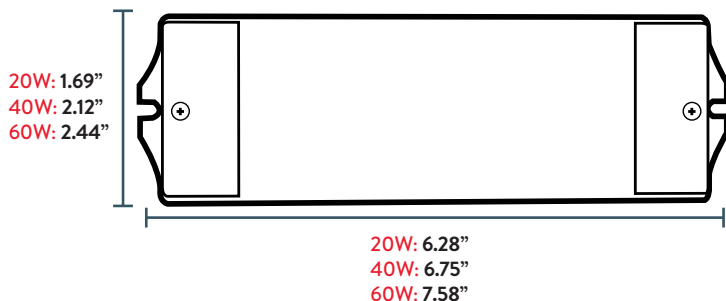
MAGNILUMEN PLUS™ DRIVER DIMENSIONS

(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)



PART NUMBER

ZL-DRIVER-20W-TRIAC
ZL-DRIVER-40W-TRIAC
ZL-DRIVER-60W-TRIAC

- Wattages: 20W, 40W, 60W
- Input Voltage: 120/277V
- Power Factor: ≥ 0.95

OPTIONAL MOUNTING HARDWARE

MAGNETS FOR DIRECTIONAL USE

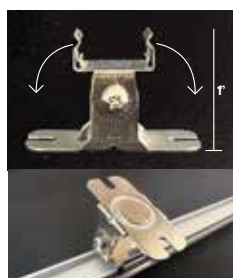
45 Degree Angle Magnet

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

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 Plus™ Kits.

ENCLOSURES FOR MAGNILUMEN PLUS™ DRIVERS



100W DRIVER ENCLOSURE (with two knockouts)

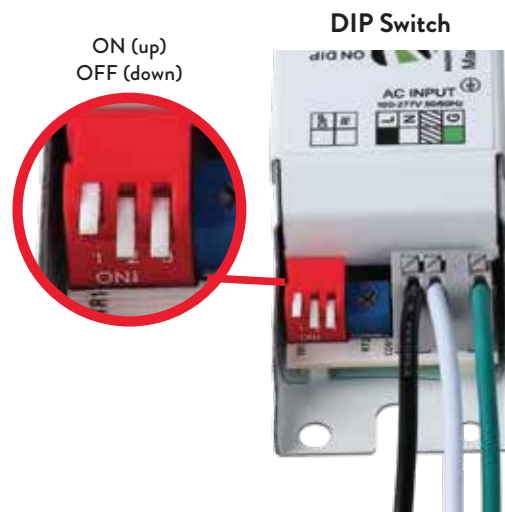
PN: MRK-100W-DRIVER-ENCLOSURE

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

20-60W DRIVER ENCLOSURE (with two knockouts)

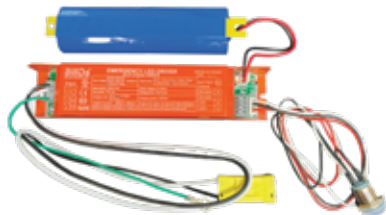
PN: MRK-20/60W-DRIVER-ENCLOSURE

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



OPTIONS

EMERGENCY BACK-UP LED DRIVER



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

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

SENSORS/REMOTES

Microwave Sensor 3Pin Style With 90° Angle



PART NUMBER:
ZL-MV-SENSOR-HB-ARM-HD07R
OPTIONAL PART
BUILDER NUMBER: MV

Power Supply: 10-15VDC, <30mA
Dim Control Output: DIM 0-10V
Mounting Height: 12m/39ft Max.
Detection Distance: ≥3m/9ft
Operating Temp: -40°C-60°C
IP Rating: IP65

Optional Remote: (Sold Separately)



PART NUMBER:
ZL-REMOTE-HD05R

PIR Sensor



PART NUMBER:
ZL-MS-SENSOR-ANT-4A
OPTIONAL PART
BUILDER NUMBER: MS

Power Supply: 12-24VDC, >50mA
Dim Control Output: -10V, max. 25mA sinking current
Mounting Height: 15ft (4.5m) max.
Detection Angle: 120°
Operating Temp: -20°C-70°C
IP Rating: IP20

Optional Remote: (Sold Separately)



PART NUMBER:
ZL-REMOTE-RC-105

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



PART NUMBER:
MUSP-12V-03-SW

AO DRIVERS WITH 12V AUXILIARY OUTPUT FOR CONTROLS

FEATURES

PART NUMBER

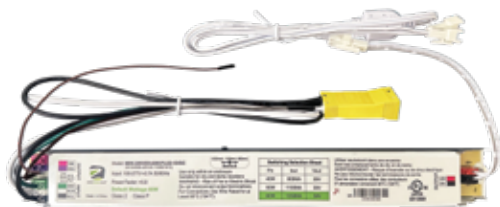
MRK-DRIVER-40W-2WH-AO-PLUS

MRK-DRIVER-60W-2WH-AO-PLUS

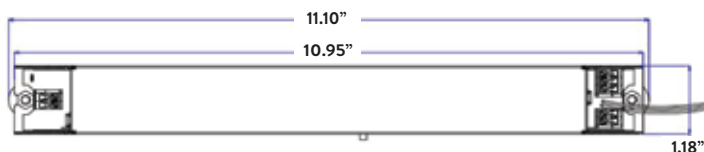
- Built-in 0-10V adjustable power LED Driver
- 12V 0.1A Auxiliary source
- For luminaires of protection Class P



- **Wattages:** 20/30/40W selectable
40/50/60W selectable
- **Input Voltage:** 120/277V
- **Power Factor:** ≥0.9
- **Efficiency:** >85%
- **THD:** <20%
- **Output Voltage:** 27-42VDC
- **Output Current:** 20W- 470mA
30W- 660mA
40W- 900mA
50W- 1100mA
60W- 1250mA



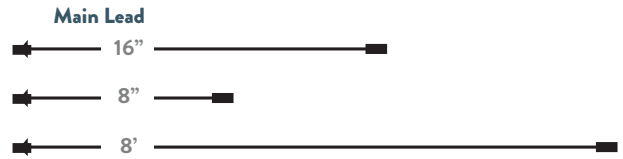
Wattage Selector Switch



OPTIONS – HARNESSES

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



PLUG & PLAY HARNESSES & EXTENSIONS

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.

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

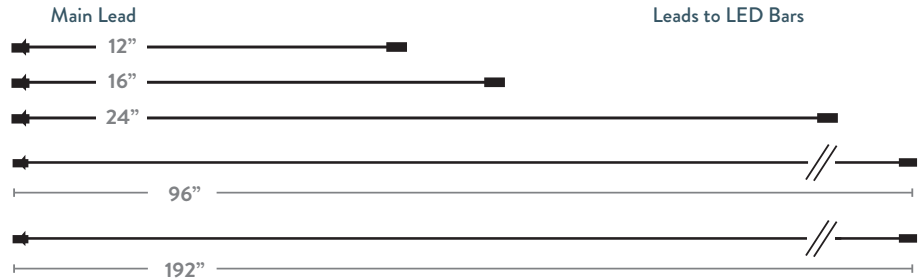
Connects 1 LED bar to 1 driver.

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



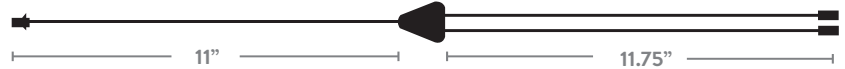
2-WAY HARNESS (STANDARD) – Connects 2 LED bars to 1 driver

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"



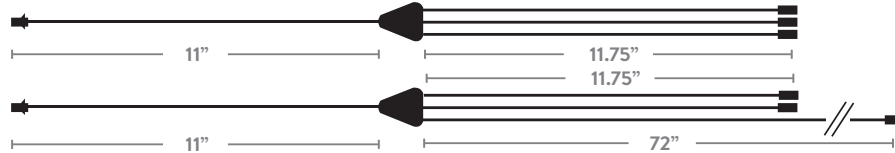
3-WAY HARNESS – Connects 3 LED bars to 1 driver

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 short, 1 long)

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

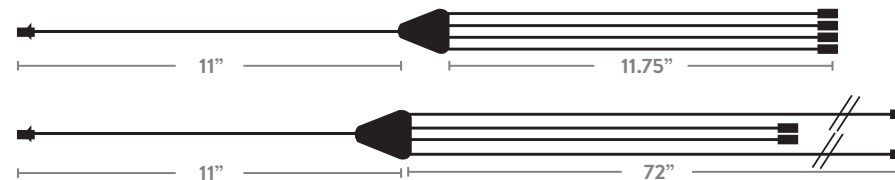
PART NUMBER: HARNESS-4-WAY

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 HARNESSES

Color Selectable Switch with Magnetic Back



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

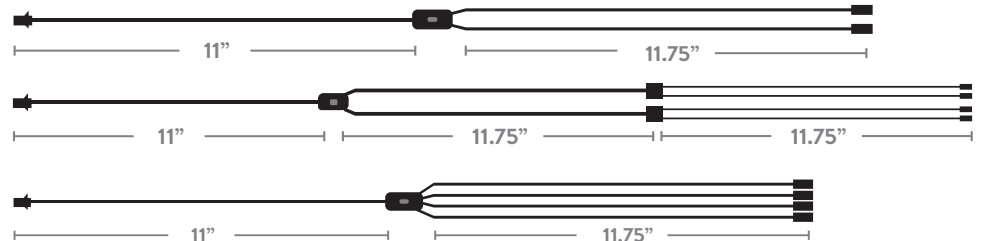
Lead from driver connection to CSK switch: 11.00";
2 leads to bars: each 11.75"

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"



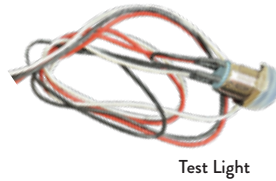
EMERGENCY BACK-UP LED DRIVER

Install with Any Magnilumen Plus™ Retrofit Kits



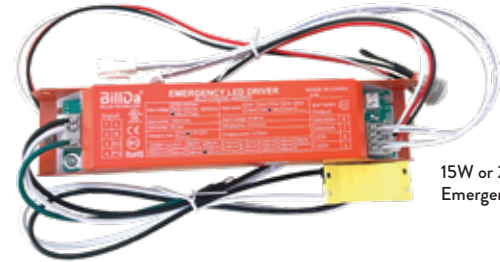
FEATURES

- Wattages: 15W, 20W
- Voltage Input: 120/277V
- 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
- Driver Dimensions (LxHxD): 15W: 7.4" x 1.5" x 1.1"
20W: 7.4" x 1.5" x 1.2"
- Battery Dimensions (LxHxD): 15W: 6" x 1.5" x .75"
20W: 6" x 2.25" x .75"
- Plug and Play Installation
- Warranty: 5 year
- Listed: UL
- Part Number: BL-EMRG-LED-15-1H
BL-EMRG-LED-20-1H



Test Light

External Li-ion battery-14.8V/2000mAH



15W or 20W
Emergency Driver

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

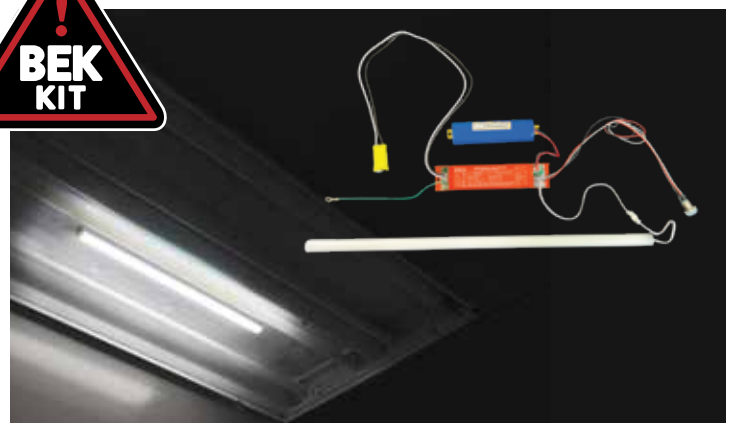


BEK KIT (BACKUP EMERGENCY KIT) WITH MAGNILUMEN PLUS™ BAR, EM DRIVER AND BATTERY

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

FEATURES

- Wattages: 15W
- Kit Lengths: 2 ft. = 21.06"
- Voltage Input: 120/277V
- Color Temperatures: 40K
- Charge Time: 24 hour charge time
- Emergency Time: 90 minute charge
- Plug and Play Installation
- Warranty: 5 year
- 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 RETROFIT KIT LED BARS FOR HIGH BAYS

EASY-TO-INSTALL MAGNETIC LED BAR 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	120/277V
DRIVER OUTPUT	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 year



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 RETROFIT KIT LED BARS FOR HIGH BAYS

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 POP Display
(Holds up to 12 RP Kits)

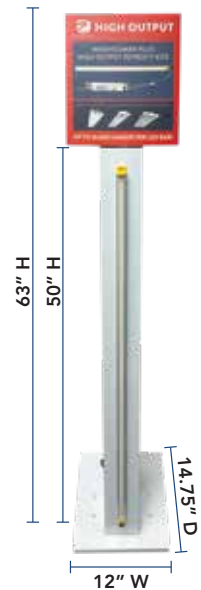
PART #:
ZL-DISPLAY-HO



Custom configurations available
contact factory or Sales Rep.

Magnilumen Plus™ HO 1 Bar
Working Display

PART #:
Magnilumen Plus HO Working Display



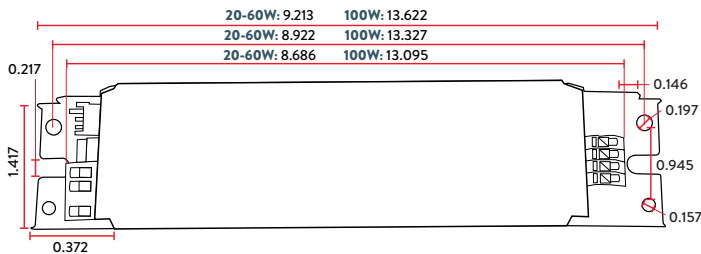
Include the selected number of LED bars, required drivers, wiring harness, onboard pre-installed magnets, and self-drilling screws.

- Available in 4000K and 5000K color temperatures
- Optional frosted lens for diffused light output
- Components selected based on retrofit needs
- Simple, fast installation with magnetic mounting and tool-free hardware



DRIVERS

(Unit: inches)



60W MRK-DRIVER-60W-2WH-PLUS

MAX WATTAGE: 62
INPUT VOLTAGE: 120/277V
OUTPUT VOLTAGE: 27-42VDC
DIMENSIONS: 9.21" x 1.43" x 1.15"
RATING: Damp Locations



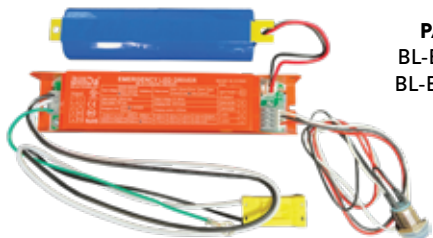
100W MRK-DRIVER-100W-2WH-PLUS

MAX WATTAGE:
INPUT VOLTAGE: 120/277V
OUTPUT VOLTAGE: 27-42VDC
DIMENSIONS: 13.62" x 1.43" x 1.15"
RATING: Damp Locations

MAGNILUMEN PLUS™ HIGH OUTPUT RETROFIT KIT LED BARS FOR HIGH BAYS

OPTIONS

EMERGENCY BACK-UP LED DRIVER

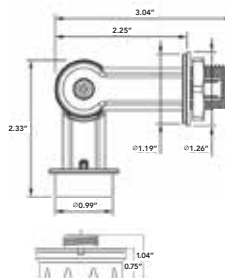


PART NUMBER:
BL-EMRG-LED-15-1H
BL-EMRG-LED-20-1H

SENSOR



Optional Part Builder Part Number: MV
Part Number with 90° Angle:
ZL-MV-SENSOR-HB-ARM-HD07R



Part Number Remote Control:
ZL-REMOTE-HD05R
(Sold Separately)



SPECIFICATIONS

Power Supply	10-15VDC, <30mA
Dim Control Output	DIM 0-10V
Mounting Height	12m/39ft Max.
Detection Distance	±3m/9ft
Operating Temperature	-40°C-60°C
IP Rating	IP65

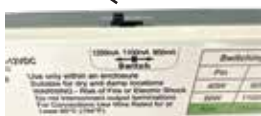
WARNING

1. The sensor should be installed by qualified electrician and ensure power is OFF before installation.
2. Please read the instruction carefully before using the product and keep it well for other users to read any time.
3. We reserve the right to modify any incorrect text, image and technical parameters.
4. Any unauthorized modification is forbidden. Otherwise all guarantees will be immediately invalid.
5. Product could be optimized without prior notice.

AO DRIVERS WITH 12V AUXILIARY OUTPUT FOR CONTROLS



Wattage Selector Switch



FEATURES

PART NUMBER

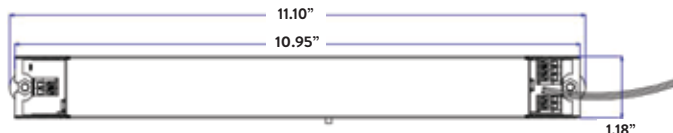
MRK-DRIVER-40W-2WH-AO-PLUS

MRK-DRIVER-60W-2WH-AO-PLUS

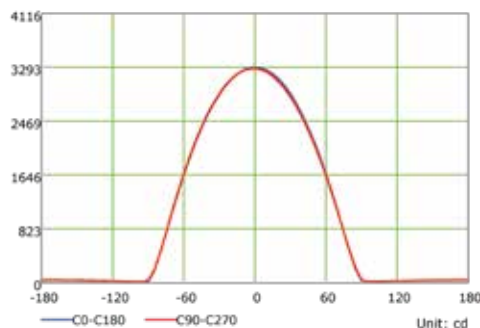
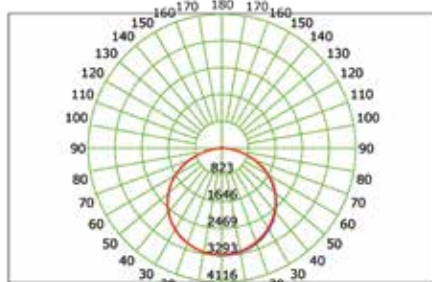
- Built-in 0-10V adjustable power LED Driver
- 12V 0.1A Auxiliary source
- For luminaires of protection Class P



- Wattages: 20/30/40W selectable
40/50/60W selectable
- Input Voltage: 120/277V
- Power Factor: ≥0.9
- Efficiency: >85%
- THD: <20%
- Output Voltage: 27-42VDC
- Output Current: 20W- 470mA
30W- 660mA
40W- 900mA
50W- 1100mA
60W- 1250mA

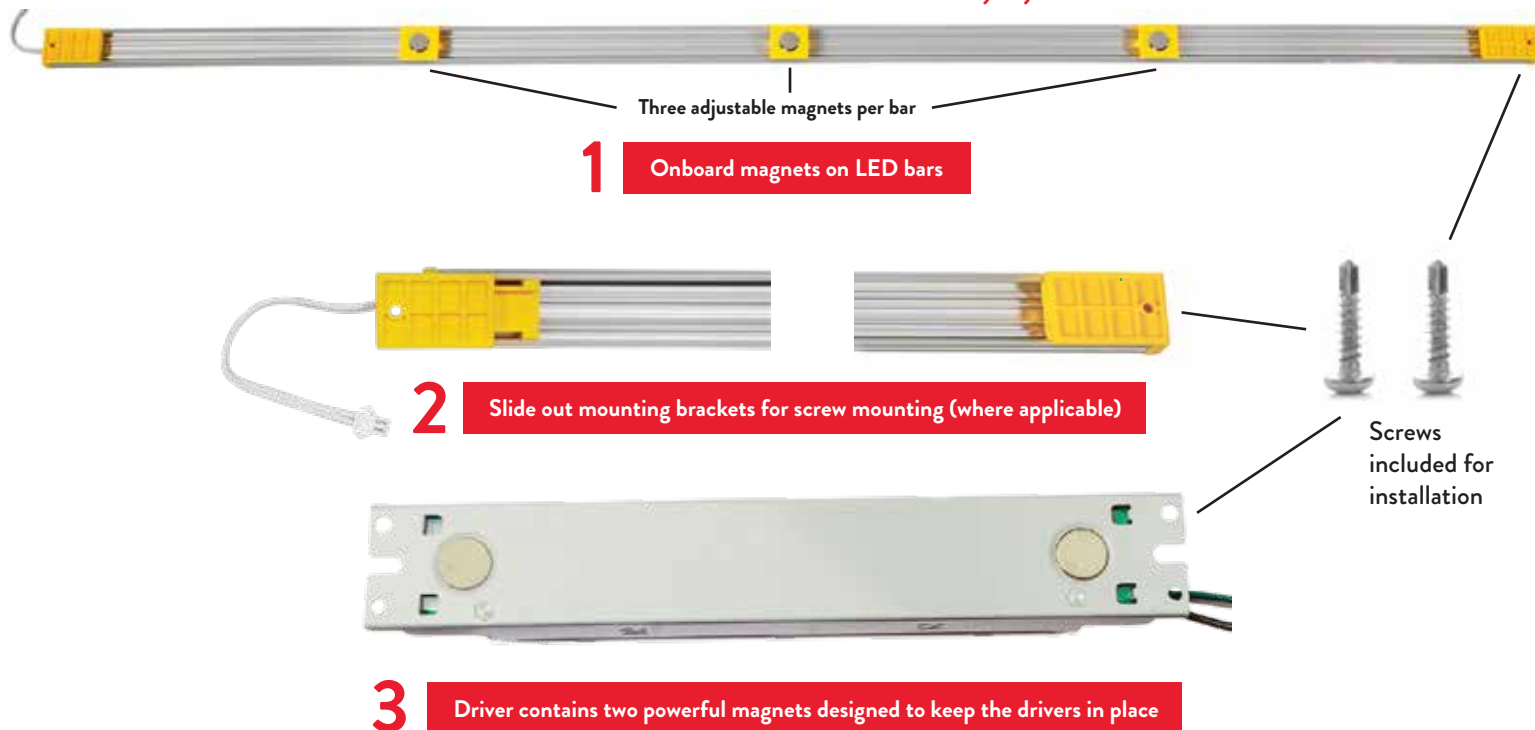


LUMINOUS INTENSITY DISTRIBUTION CURVE



MAGNILUMEN PLUS™ HIGH OUTPUT RETROFIT KIT LED BARS FOR HIGH BAYS

INSTALLATION – EASY AS 1, 2, 3



POWER HARNESS FOR THE HIGH OUTPUT BARS

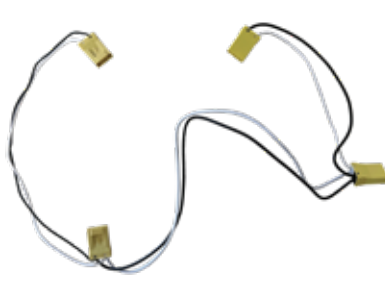
This wiring harness included in every kit containing multiple drivers features prewired quick-connects designed to seamlessly link up to four LED drivers within a fixture. Engineered for efficiency and ease of installation, it eliminates the need for complex wiring by providing secure, plug-and-play connections. The harness includes durable, insulated wiring with precision connectors, ensuring reliable electrical conductivity and reducing installation time. Its compact design optimizes space within the fixture while maintaining a neat and organized wiring layout. Ideal for LED lighting systems, this harness simplifies driver connections, enhancing both safety and performance.

Four Driver Sample



2 Driver

ZL-HO-POWER-JUMP-HO-TWO-DRIVER



3 Driver

ZL-HO-POWER-JUMP-HO-THREE-DRIVER



4 Driver

ZL-HO-POWER-JUMP-HO-FOUR-DRIVER

The perfect retrofit solution for fluorescent high bay industrial fixtures

Average Installation Time of 20 Minutes.

FLUORESCENT	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
MAGNILUMEN PLUS™ HO	Recommended Replacement Lumens	10,000 Lumens @ 62W	20,000 Lumens @ 128W	30,000 Lumens @ 186W	40,000 Lumens @ 248W
	Recommended Magnilumen Plus™ HO Kits	MRK1460-50K-PLUS-HO 1 - 4 ft bar 1 - 60W driver	MRK24120-50K-PLUS-HO 2 - 4 ft bar 2 - 60W driver	MRK34180-50K-PLUS-HO 3 - 4 ft bar 3 - 60W driver	MRK44240-50K-PLUS-HO 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



COLORS

MAGNILUMEN PLUS[™]



MAX WATTAGE: 30W - 4ft Color
 25W - 4ft Orange
 20W - 4ft Black Light
 15W - 2ft Color (Special Order)

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

LENS: All include clear, orange includes frosted

INPUT VOLTAGE: 120/277V

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

CRI: Standard: >80

Custom Kit Configurations are available

LED LIFESPAN (L70): 50,000 hours

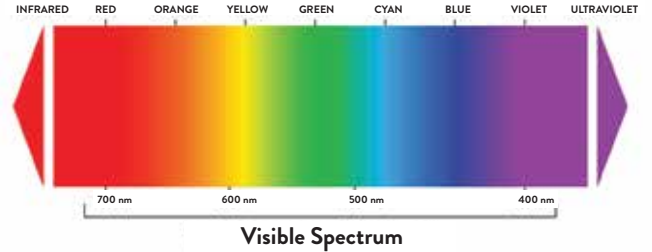
AMBIENT TEMPERATURE: -40 to 50C; -40 to 122F

DIMMING: 0-10V

LISTED: ETL

RATED: IP20

WARRANTY: Color- 5 year; Black Light- 3 year



PRODUCT BUILDER

ex: MRK2440-AMBER-PLUS

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

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



MAGNILUMEN PLUS[™]

NO UV SERIES

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



COLOR PARAMETERS 585NM - AMBER

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

CCT: $T_c=1526K$ ($duv=0.00389$)

PEAK WAVELENGTH: 596.3nm

DOMINANT WAVELENGTH: 593.2nm

CRI: $R_a=-26.0$

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

HALF BANDWIDTH: 14.9nm

COLOR PURITY: 0.997

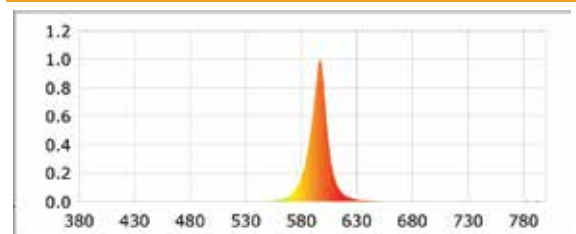
TM30: $R_f=2$, $R_g=5$

PHOTOMETRIC PARAMETERS 585NM - AMBER

FE 10.106 W EFFICACY 31 lm/W



4FT AMBER LIGHT TEST



BUILD YOUR OWN MAGNILUMEN PLUS[™] SYSTEM

ex: MRK1220585NM-AMBER-PLUS

MODEL	# OF STRIPS	LENGTH	DRIVER WATTAGE	COLOR TEMP.	
MRK					- PLUS
	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-ORANGE 622NM-RED (Special Order)	

2 ft bar, 15W max per bar
4 ft bar, 30W max per bar

Retrofit Kits are also available in fixed-color green, or blue tones. Contact the factory for more details.

AMBER RETROFIT KITS FOR TURTLE SAFE LIGHTING



Amber Magnilumen 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.

PRODUCT SPECIFICATIONS

MAX WATTAGE PER BAR	2ft- 15W; 4ft- 30W
COLOR TEMP	Amber
INPUT VOLTAGE	120/277VAC
WAVELENGTH	585-590 nanometers
DIMENSIONS	2ft- 21"; 4ft- 43"

PART NUMBERS

MRK2220-AMBER-585NM-PLUS

Qty 2 x 2ft Amber LED Bars and 1 x 20 Watt Driver

MRK2440-AMBER-585NM-PLUS

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.

Complete Vapor Tight With Amber Magnilumen 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 40W Driver	ZL-CIT2-LED-4FT-AMBER-585

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



PART NUMBERS

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.



Fluorescent Bulbs create gaps in lighting

PRODUCT FEATURES:

- **Max Wattages:** 4ft: 30W; 3ft: 22W; 2ft: 15W, 1ft: 8W
- **Color Temperatures:** CSK: 30K, 35K, 40K
- **Voltage Input:** 120/277V
- **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 year

Any combinations of bar lengths can be used in each run. Balancing the wattage and lumens per foot with our adjustable drivers is easy.



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)

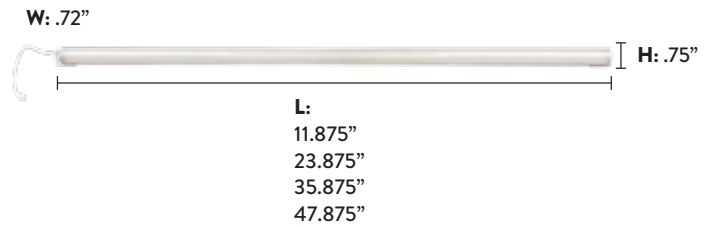


Through power allows for up to 32 feet (ex. 8 4ft. bars) of direct power with one driver. Based on selected wattage per foot.



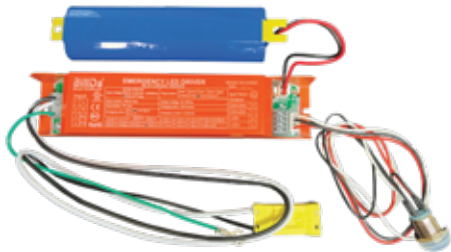
CSK switch on the harness allows for easy color temperature selection.

DIMENSIONS



OPTIONS

EMERGENCY BACK-UP LED DRIVER



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

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

SENSORS/REMOTES

PIR Sensor



PART NUMBER:
ZL-MS-SENSOR-ANT-4A

OPTIONAL PART
BUILDER NUMBER: MS

Power Supply: 12-24VDC, >50mA
Dim Control Output: -10V, max. 25mA
sinking current
Mounting Height: 15ft (4.5m) max.
Detection Angle: 120°
Operating Temp: -20°C-70°C
IP Rating: IP20

Optional Remote: (Sold Separately)



PART NUMBER:
ZL-REMOTE-RC-105

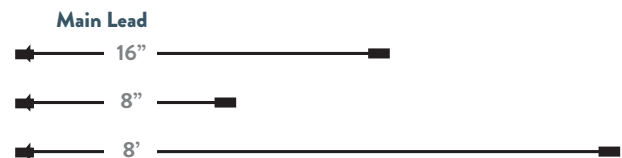
Power Supply (Only required when using Non-AO Drivers)



PART NUMBER:
MUSP-12V-03-SW

COVE LIGHTING HARNESS OPTIONS

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



MAGNETS

KITS INCLUDE TWO
45 DEGREE MAGNETS

45 Degree Angle Magnet

PART NUMBER:
MAG-NO-HOOK-45DEG



OPTIONAL MOUNTING MAGNETS AND HARDWARE

Magnet with Hook

PART NUMBER:
MAG-HOOK



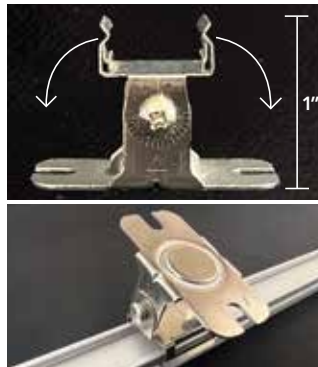
Clip with No Magnet, No Hook

PART NUMBER:
NO-MAG-NO-HOOK



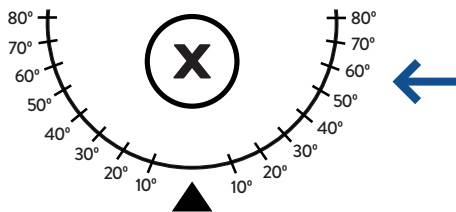
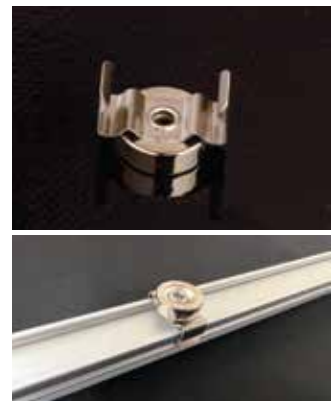
Magnet with Hook
(adjustable 0-180 degrees)

PART NUMBER:
MAG-HOOK-ADJUSTABLE

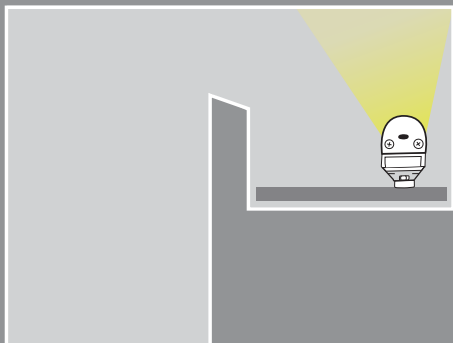


No Hook Magnet

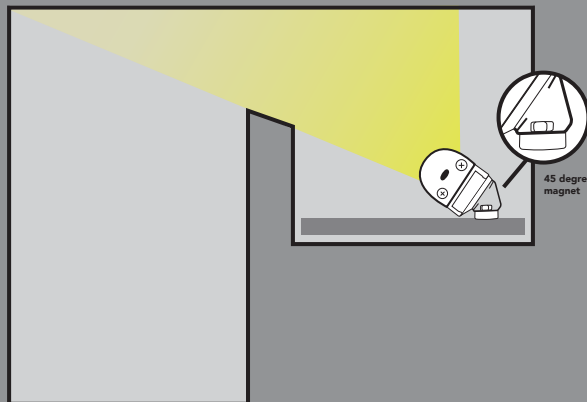
PART NUMBER:
MAG-NO-HOOK



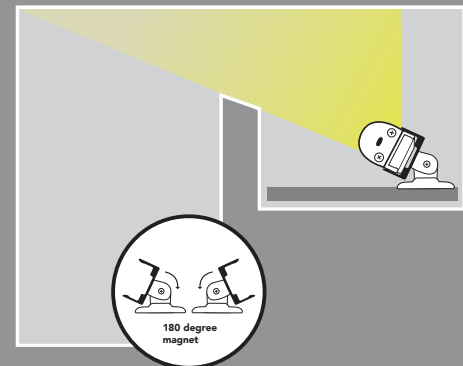
STANDARD MAGNET
(Optional)



45° MAGNET
(Magnets are included standard per bar)



180° MAGNET
(Optional)



DRIVER SPECIFICATIONS



FEATURES

- **Input Voltage:** 120/277V
- **Power Factor:** ≥ 0.9
- **Efficiency:** $\geq 88\%$
- **THD:** $\leq 10\%$
- **Dimming:** 27-42VDC
- **Dimming:** 0-10V
- **Flicker Index:** 0.001
- 7 Selectable Accurate Wattages By DIP Switch
- Adjustable Current By Potentiometer
- Warranty: 5 year
- Magnetic Backed For Easy Installation
- UL Class P Listed

MODEL NUMBER	DEFAULT WATTAGE
MRK-DRIVER-20W-2H-PLUS	20W
MRK-DRIVER-30W-2H-PLUS	30W
MRK-DRIVER-40W-2H-PLUS	40W
MRK-DRIVER-50W-2H-PLUS	50W
MRK-DRIVER-60W-2H-PLUS	60W
MRK-DRIVER-100W-4WH-PLUS	100W

OPTIONAL TRIAC DRIVERS

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

20W, 40W, 60W with DIP Switch (Triac, Forward Phase, MLV, ELV)

20W CONSTANT CURRENT DRIVER WITH DIP SWITCH

Input Voltage:
120/277V
Dimension:
6.28" x 1.69" x .78"



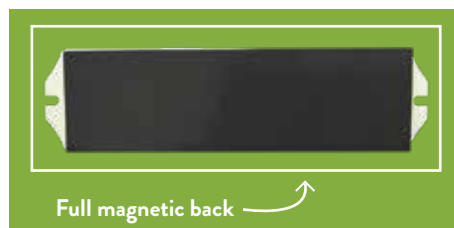
40W CONSTANT CURRENT DRIVER WITH DIP SWITCH

Input Voltage:
120/277V
Dimension:
6.75" x 2.12" x .78"



60W CONSTANT CURRENT DRIVER WITH DIP SWITCH

Input Voltage:
120/277V
Dimension:
7.58" x 2.44" x .94"



DRIVER SPECIFICATIONS



100W DRIVER ENCLOSURE (with two knockouts)

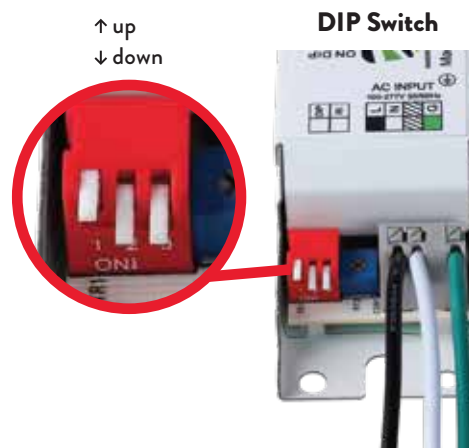
PN: MRK-100W-DRIVER-ENCLOSURE

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)



DIP SWITCH SETTING CHART

MRK-DRIVER-20W-PLUS					
Input Wattage	Input Voltage	Output Voltage	Switch		
			1	2	3
8W	190MA	27-42V	UP	UP	UP
10W	240MA	27-42V	DOWN	UP	UP
14W	320MA	27-42V	UP	DOWN	UP
16W	370MA	27-42V	UP	UP	DOWN
18W	410MA	27-42V	DOWN	UP	DOWN
20W	470MA	27-42V	UP	DOWN	DOWN
22W	510MA	27-42V	DOWN	DOWN	DOWN

MRK-DRIVER-40W-PLUS					
Input Wattage	Input Voltage	Output Voltage	Switch		
			1	2	3
24W	560MA	27-42V	UP	UP	UP
28W	650MA	27-42V	DOWN	UP	UP
30W	700MA	27-42V	UP	DOWN	UP
32W	770MA	27-42V	UP	UP	DOWN
38W	840MA	27-42V	DOWN	UP	DOWN
40W	880MA	27-42V	UP	DOWN	DOWN
42W	940MA	27-42V	DOWN	DOWN	DOWN

MRK-DRIVER-60W-PLUS					
Input Wattage	Input Voltage	Output Voltage	Switch		
			1	2	3
40W	920MA	27-42V	UP	UP	UP
45W	1020MA	27-42V	DOWN	UP	UP
50W	1120MA	27-42V	UP	DOWN	UP
55W	1230MA	27-42V	UP	UP	DOWN
57W	1290MA	27-42V	DOWN	UP	DOWN
60W	1360MA	27-42V	UP	DOWN	DOWN
62W	1410MA	27-42V	DOWN	DOWN	DOWN

MRK-DRIVER-30W-PLUS					
Input Wattage	Input Voltage	Output Voltage	Switch		
			1	2	3
10W	230MA	27-42V	UP	UP	UP
16W	360MA	27-42V	DOWN	UP	UP
20W	440MA	27-42V	UP	DOWN	UP
24W	530MA	27-42V	UP	UP	DOWN
28W	610MA	27-42V	DOWN	UP	DOWN
30W	660MA	27-42V	UP	DOWN	DOWN
32W	730MA	27-42V	DOWN	DOWN	DOWN

MRK-DRIVER-50W-PLUS					
Input Wattage	Input Voltage	Output Voltage	Switch		
			1	2	3
25W	580MA	27-42V	UP	UP	UP
30W	710MA	27-42V	DOWN	UP	UP
38W	880MA	27-42V	UP	DOWN	UP
40W	910MA	27-42V	UP	UP	DOWN
45W	990MA	27-42V	DOWN	UP	DOWN
50W	1100MA	27-42V	UP	DOWN	DOWN
52W	1160MA	27-42V	DOWN	DOWN	DOWN

MRK-DRIVER-100W-PLUS					
Input Wattage	Input Voltage	Output Voltage	Switch		
			1	2	3
65W	1520MA	27-42V	UP	UP	UP
70W	1630MA	27-42V	DOWN	UP	UP
75W	1740MA	27-42V	UP	DOWN	UP
80W	1850MA	27-42V	UP	UP	DOWN
85W	1940MA	27-42V	DOWN	UP	DOWN
90W	2050MA	27-42V	UP	DOWN	DOWN
95W	2150MA	27-42V	DOWN	DOWN	DOWN
100W	2250MA	27-42V	DOWN	DOWN	DOWN

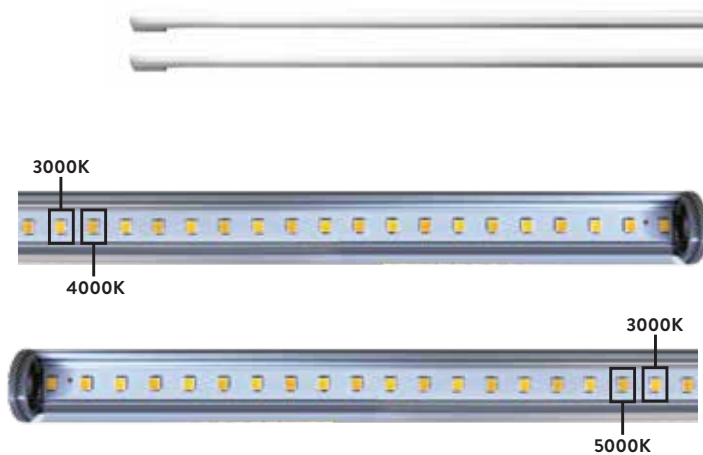
COVE LIGHTING KIT CONFIGURATIONS BASED ON LUMENS PER FOOT

PART NUMBER	LENGTH	RUN WATTAGE	DRIVER WATTAGE	Magnilumen Cove Kit at Color Selectable = 3000/3500/4000K
5 WATTS PER FOOT (750 lumens per foot)				
MRK-COVE-6FT-5W-CSK-PLUS	6 ft	30	30	Two 3ft bars - 6ft long, 5W per ft
MRK-COVE-8FT-5W-CSK-PLUS	8 ft	40	40	Two 4ft bars - 8ft long, 5W per ft
MRK-COVE-10FT-5W-CSK-PLUS	10 ft	50	50	Two 4ft bars, One 2 ft bar - 10ft long, 5W per ft
MRK-COVE-12FT-5W-CSK-PLUS	12 ft	60	60	Three 4ft bars - 12ft long, 5W per ft
MRK-COVE-20FT-5W-CSK-PLUS	20 ft	100	100	Five 4ft bars - 20ft long, 5W per ft
4 WATTS PER FOOT (600 lumens per foot)				
MRK-COVE-6FT-4W-CSK-PLUS	6 ft	24	30	Two 3ft bars - 6ft long, 4W per ft
MRK-COVE-8FT-4W-CSK-PLUS	8 ft	32	40	Two 4ft bars - 8ft long, 4W per ft
MRK-COVE-10FT-4W-CSK-PLUS	10 ft	40	40	Two 4ft bars, 1 2ft bar - 10ft long, 4W per ft
MRK-COVE-12FT-4W-CSK-PLUS	12 ft	48	50	Three 4ft bars - 15ft long, 4W per ft
MRK-COVE-20FT-4W-CSK-PLUS	20 ft	80	100	Five 4ft bars - 20ft long, 4W per ft
MRK-COVE-25FT-4W-CSK-PLUS	25 ft	100	100	Four 4ft bars, Three 3ft bars - 25ft long, 4W per ft
3 WATTS PER FOOT (450 lumens per foot)				
MRK-COVE-6FT-3W-CSK-PLUS	6 ft	18	20	Two 3ft bars - 6ft long, 3W per ft
MRK-COVE-8FT-3W-CSK-PLUS	8 ft	24	30	Two 4ft bars - 8ft long, 3W per ft
MRK-COVE-10FT-3W-CSK-PLUS	10 ft	30	30	Two 4ft bars, One 2ft bar - 10ft long, 3W per ft
MRK-COVE-12FT-3W-CSK-PLUS	12 ft	36	40	Three 4ft bars - 12ft long, 3W per ft
MRK-COVE-15FT-3W-CSK-PLUS	25 ft	45	50	Three 4ft bars, One 3ft bar - 15ft long, 3W per ft
MRK-COVE-20FT-3W-CSK-PLUS	20 ft	60	60	Five 4ft bars - 20ft long, 3W per ft
MRK-COVE-25FT-3W-CSK-PLUS	35 ft	75	100	Four 4ft bars, Three 3ft bars - 25ft long, 3W per ft
MRK-COVE-30FT-3W-CSK-PLUS	30 ft	90	100	Seven 4ft bars, One 2ft bar - 30ft long, 3W per ft
2 WATTS PER FOOT (300 lumens per foot)				
MRK-COVE-6FT-2W-CSK-PLUS	6 ft	12	20	Two 4ft bars - 8ft long, 2W per ft
MRK-COVE-8FT-2W-CSK-PLUS	8 ft	16	20	Two 4ft bars - 8ft long, 2W per ft
MRK-COVE-10FT-2W-CSK-PLUS	10 ft	20	20	Two 4ft bars, One 2ft bar - 12ft long, 2W per ft
MRK-COVE-12FT-2W-CSK-PLUS	12 ft	24	30	Three 4ft bars - 15ft long, 2W per ft
MRK-COVE-20FT-2W-CSK-PLUS	20 ft	40	40	Five 4ft bars - 20ft long, 2W per ft
MRK-COVE-25FT-2W-CSK-PLUS	25 ft	50	50	Four 4ft bars, Three 3ft bars - 25ft long, 2W per ft
MRK-COVE-30FT-2W-CSK-PLUS	30 ft	60	60	Seven 4ft bars, One 2ft bar - 30ft long, 2W per ft
MRK-COVE-40FT-2W-CSK-PLUS	40 ft	80	100	Ten 4ft bars - 40ft long, 2W per ft
MRK-COVE-50FT-2W-CSK-PLUS	50 ft	100	100	Twelve 4ft bars, One 2 ft bar - 50ft long, 2W per ft

Custom lengths and configurations available. Consult factory.



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:** 120/277V
- **Output Driver Voltage:** 27-42VDC
- **CRI:** 90+
- **Dimming:** 0-10VDC
- **Operating Temperature:** -40 - 122F
- **Surge Protection:** 2KV
- **Rated:** IP20 for damp location
- **Warranty:** 7 year
- **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	RATED
30/40K							
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
30/50K							
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	RATED
30/40K							
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
30/50K							
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

30/40K MIX = 35K ENVIRONMENT

- Mercantile retail, offices, classrooms



30/50K MIX = 40K ENVIRONMENT

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



ATLAS INTERIOR HOME FASHIONS

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 wall coverings, 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.



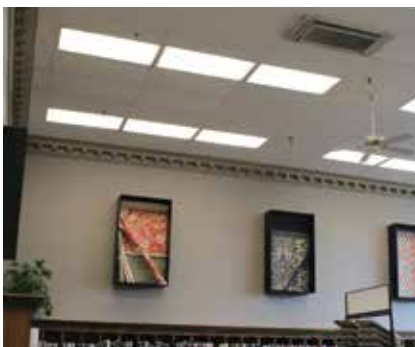
Atlas Home Interiors
Cherry Hill, NJ

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.



MAGNIBLEND REFRIGERATION

by **ZLED**
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 / Seafood / Produce / General / Bakery

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

45" MRK-LB-45"-30/50K-BL-FR-HH

33" MRK-LB-33"-30/50K-BL-FR-HH

22" MRK-LB-22"-30/50K-BL-FR-HH



Cheese / Poultry

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

45" MRK-LB-45"-30/40K-BL-FR-HH

33" MRK-LB-33"-30/40K-BL-FR-HH

22" MRK-LB-22"-30/40K-BL-FR-HH



Door Refrigeration

MagniBlend Linear Door Retrofit Lighting 30/50K-90 CRI Creates a 40K Lighting Environment

70" MRK-DR-70"-30/50K-BL-FR-HH

58" MRK-DR-58"-30/50K-BL-FR-HH



Includes 4- No Magnet Hooks for mounting



Olive Bar

MagniBlend Hot Cold Bar Linear Case Lighting Kits 30/40K-90 CRI Creates a 35K Lighting Environment

47 7/8" MRK-HCB-KT-47-7/8"-30/40K-BL-CL-HH

35 7/8" MRK-HCB-KT-35-7/8"-30/40K-BL-CL-HH

23 7/8" MRK-HCB-KT-23-7/8"-30/40K-BL-CL-HH

11 7/8" MRK-HCB-KT-11-7/8"-30/40K-BL-CL-HH



Includes 2- Bar Clips for mounting



Hot and Cold Bar

MagniBlend Hot Cold Bar Linear Case Lighting Kits 30/50K-90 CRI Creates a 40K Lighting Environment

47 7/8" MRK-HCB-KT-47-7/8"-30/50K-BL-CL-HH

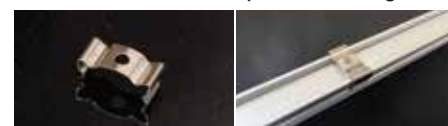
35 7/8" MRK-HCB-KT-35-7/8"-30/50K-BL-CL-HH

23 7/8" MRK-HCB-KT-23-7/8"-30/50K-BL-CL-HH

11 7/8" MRK-HCB-KT-11-7/8"-30/50K-BL-CL-HH



Includes 2- Bar Clips for mounting



MAGNIBLEND REFRIGERATION

LED Magnetic Retrofit Kits



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

WATTAGE	Wattage selectable drivers
COLOR TEMPS	30K/40K and 30K/50K
EFFICACY	125 lm/W with Frosted Lens 150 lm/W with Clear Lens 160 lm/W with No Lens
VOLTAGE INPUT	120/277V
DRIVER OUT VOLTAGE	27-42VDC
CRI	90+
DIMMING	0-10VDC, (optional: TRIAC)
AMBIENT TEMP	-20 to 50C; -40 to 122F
SURGE PROTECTION	2KV
LED CHIPS	Conformal coating applied
RATED	IP20 for damp location
WARRANTY	5 year
LED LIFESPAN (L70)	50,000 hours
FLICKER	Meets Title 24 Flicker Requirements
LISTED	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.

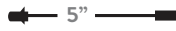


High CRI color mixing (Kelvin) is essential for ensuring that people, products, and environments appear “true to color” in settings such as refrigeration units, hot and cold self-serve food bars, and refrigerated displays/doors. This benefits shoppers by providing clear, vibrant visuals of food presentation. 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

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
36 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



Leads to LED Bars

3M™ VHB™ TAPE



Optional tape for door mounting



Clear Lens



Frosted Lens



End Cap

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 conformational 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
ZL-TAPE-HH	Double-coated acrylic foam tape for mounting

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



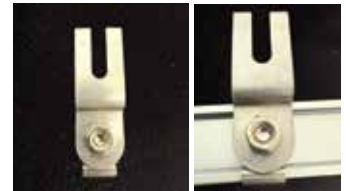
No Magnet No Hook 45 Degree

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



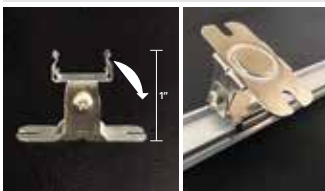
No Magnet Hook

PART NUMBER:
NO-MAG-HOOK-HH



Magnet with Hook (adjustable 0-180 degrees)

PART NUMBER:
MAG-HOOK-ADJUSTABLE-HH

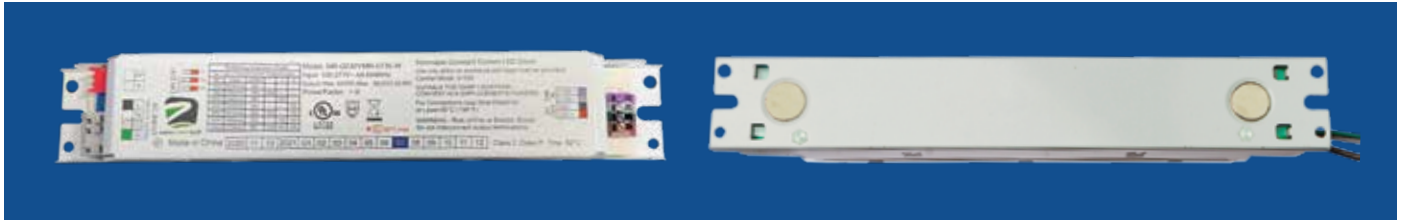


Bar Clip

PART NUMBER:
BAR-CLIP-HH



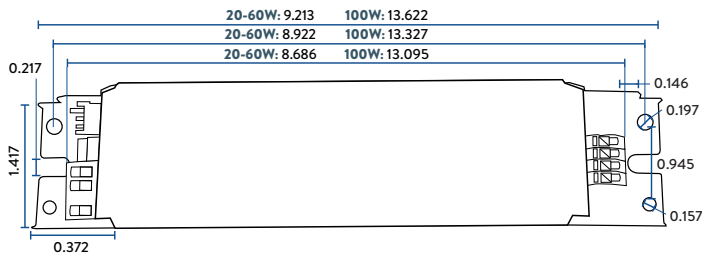
Drivers



FEATURES

- **Input Voltage:** 120/277VAC
- **Power Factor:** ≥ 0.9
- **Efficiency:** $\geq 88\%$
- **THD:** $\leq 10\%$
- **Dimming:** 27-42VDC
- **Dimming:** 0-10V

MODEL NUMBER	DEFAULT WATTAGE	WATTAGE POWER SELECTABLE OPTIONS
MRK-DRIVER-20W-2H-PLUS	20W	8W, 10W, 14W, 16W, 18W, 20W, 22W
MRK-DRIVER-30W-2H-PLUS	30W	10W, 16W, 20W, 24W, 28W, 30W, 32W
MRK-DRIVER-40W-2H-PLUS	40W	24W, 28W, 30W, 32W, 38W, 40W, 42W
MRK-DRIVER-50W-2H-PLUS	50W	25W, 30W, 38W, 40W, 45W, 50W, 52W
MRK-DRIVER-60W-2H-PLUS	60W	40W, 45W, 50W, 55W, 57W, 60W, 62W
MRK-DRIVER-100W-4WH-PLUS	100W	65W, 70W, 75W, 85W, 90W, 95W, 100W



Enclosures for Drivers



100W DRIVER ENCLOSURE (with two knockouts)

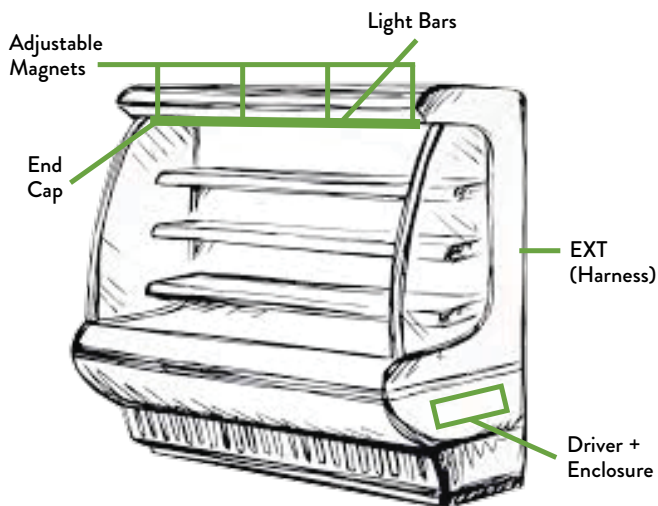
PN: MRK-100W-DRIVER-ENCLOSURE
DIMENSIONS: 16" (L) x 1.75" (W) x 1.3125" (D)

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-LB-45"-30/50K-BL-FR-HH	MagniBlend Linear Case Lighting 30/50K-90 CRI Creates a 40K Lighting Environment	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, little to no UV 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 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.



Retrofit fluorescent mirror lighting with ZLEDLighting Magnilumen PlusTM Retrofit LED Bars, and enjoy the perfect combination of style, energy efficiency, and durability.

Design your own Backlighting for Mirrors

Enhance a mirror's aesthetics and functionality with the **Magnilumen PlusTM LED Lighting Retrofit Bars** from ZLEDLighting. These high-quality, energy-efficient LED retrofit bars are specifically designed to provide stunning backlighting for mirrors, creating a sleek and modern ambiance in any space. Whether you're upgrading your bathroom, dressing room, or any area with mirrors, these retrofit bars deliver an even, crisp, and vibrant light that complements any décor style.

KEY FEATURES:

- **Brilliant LED Technology:** Equipped with the latest LED technology, the Magnilumen PlusTM bars deliver consistent, bright lighting with minimal energy consumption.
- **Easy Retrofit Installation:** Designed for easy installation, the retrofit bars can seamlessly integrate with existing mirror setups without the need for complex modifications.
- **Customizable Light:** Achieve the perfect lighting effect with adjustable brightness and a warm, natural glow that adds depth and elegance to your mirror.
- **Durable & Long-lasting:** Built to last, these LED bars are crafted from high-quality materials for optimal durability and performance, with a long lifespan.
- **Versatile Design:** Suitable for a wide range of mirrors, the Magnilumen PlusTM Retrofit Bars can be used in both residential and commercial settings.



PERFECT FOR:

- Bathroom mirrors
- Commercial mirror installations
- Bedroom or vanity mirrors
- Backlit art frames



DESIGN YOUR OWN BACKLIGHT LED MIRROR KIT

WATTAGE	20W, 30W, 40W, 50W
COLOR TEMPS	30K, 35K, 40K, 50K
EFFICACY	150 lm/W with Frosted Lens
VOLTAGE INPUT	120/277V
DRIVER OUT VOLTAGE	27-42VDC
CRI	80+ (standard)
DIMMING	0-10VDC, (optional: TRIAC, DALI, LUTRON ECOSYSTEM)
AMBIENT TEMP	-20 to 50C; -40 to 122F
SURGE PROTECTION	2KV
RATED	IP20 for damp location
WARRANTY	7 year
LED LIFESPAN (L70)	100,000 hours

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

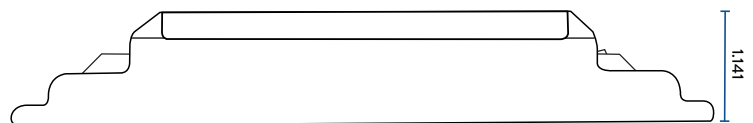
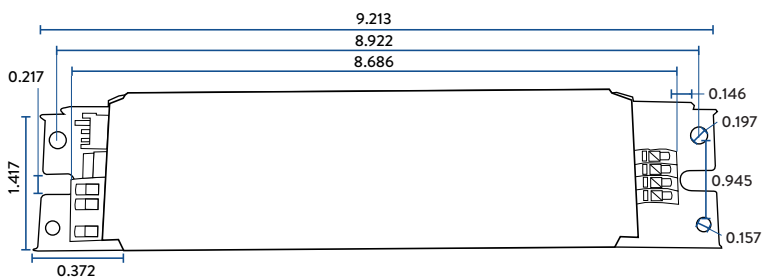


DRIVER SPECIFICATIONS



WATTAGE	INPUT VOLTAGE	POWER FACTOR	EFFICIENCY	THD	OUTPUT VOLTAGE
20W, 30W, 40W, 50W	120-277V	≥0.9	≥88%	≤10%	27-42VDC

DIMENSIONS (Unit: inches)



OPTIONAL MOUNTING HARDWARE

MAGNETS FOR DIRECTIONAL USE

45 Degree Angle Magnet

PART NUMBER:
MAG-NO-HOOK-45DEG

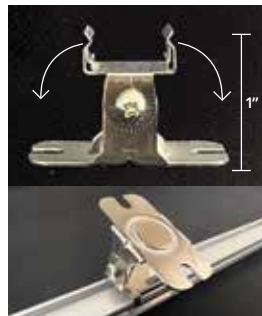
OPTIONAL PART BUILDER NUMBER: 45



Magnet with Hook (adjustable 0-180 degrees)

PART NUMBER:
MAG-HOOK-ADJUSTABLE

OPTIONAL PART BUILDER NUMBER: AD



MOUNTING MAGNETS AND HARDWARE

Magnet with Hook

PART NUMBER:
MAG-HOOK

OPTIONAL PART BUILDER NUMBER: HK



Clip with No Magnet, No Hook

PART NUMBER:
NO-MAG-NO-HOOK

OPTIONAL PART BUILDER NUMBER: CL



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

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

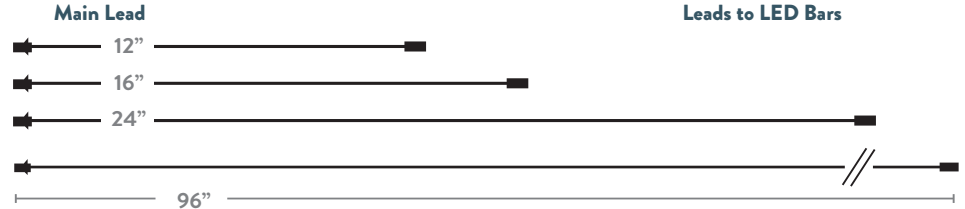
Connects 1 LED bar to 1 driver.

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



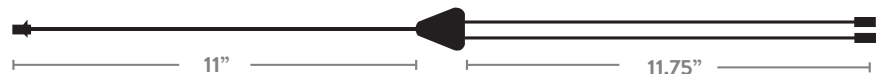
2-WAY HARNESS (STANDARD) – Connects 2 LED bars to 1 driver

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"



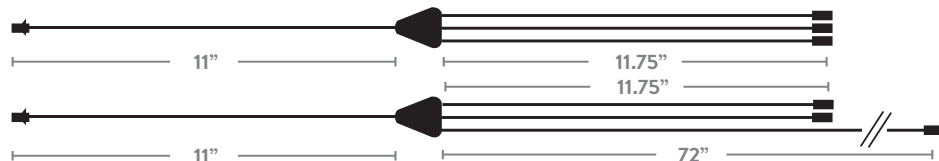
3-WAY HARNESS – Connects 3 LED bars to 1 driver

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 short, 1 long)

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

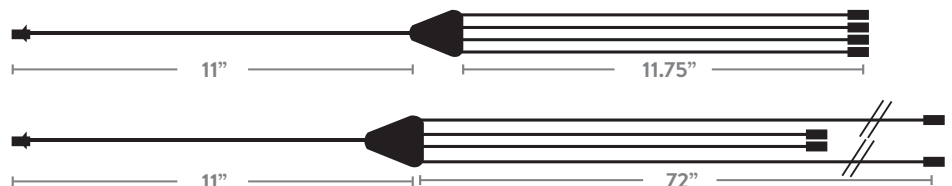
PART NUMBER: HARNESS-4-WAY

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"



DESIGN YOUR OWN BACKLIGHT LED MIRROR KIT

MRK	MIRROR	Height x 2 Bars	Length x 2 Bars	Kit Driver Wattage	Color Temp	Mounting	Options
		(will include 2 bars) 16=16 in. 2=2ft (21.06 in.) 3=3ft (30.91 in.) 4=4ft (42.91 in.) 5=5ft (58 in.)	(will include 2 bars) 16=16 in. 2=2ft (21.06 in.) 3=3ft (30.91 in.) 4=4ft (42.91 in.) 5=5ft (58 in.)	20=20W 30=30W 40=40W 50=50W	30K=3000K 35K=3500K 40K=4000K 50K=5000K	45=45 Degree Angle Magnet AD=Magnet with Hook (adjustable 0-180 degrees) HK=Magnet with Hook (adjustable 0-180 degrees) CL=Magnet with Hook Clip with No Magnet, No Hook	90CRI=HIGH CRI BL=MAGNIBLEND

WATTAGE DRIVER LUMENS

DRIVER WATTAGE POWER SELECTABLE OPTIONS

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

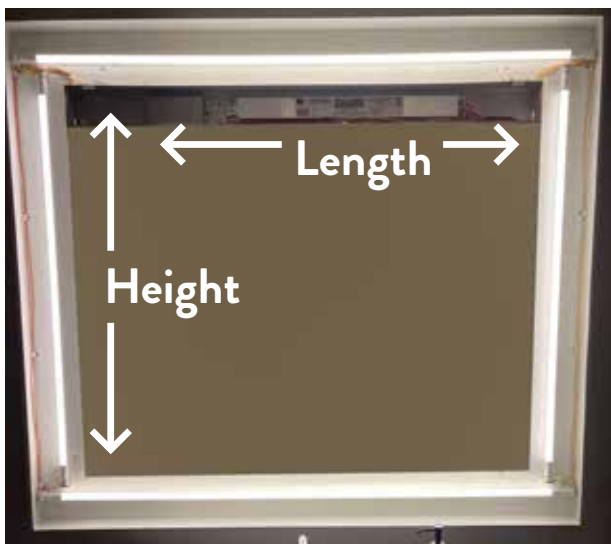
DEFAULT WATTAGE	WATTAGE POWER SELECTABLE OPTIONS
20W	8W, 10W, 14W, 16W, 18W, 20W, 22W
30W	10W, 16W, 20W, 24W, 28W, 30W, 32W
40W	24W, 28W, 30W, 32W, 38W, 40W, 42W
50W	25W, 30W, 38W, 40W, 45W, 50W, 52W

MAX WATTAGE PER BAR BY LENGTH

16"-10W Max
2ft-15W Max
3ft-22W Max
4ft-30W Max
5ft-38W Max
4 Watts Per foot



Toolless
Wattage
Selectable
Switch (red
switch)
• Setting info on
driver and website.



SAMPLE KIT



- 2 - 2ft LED bars (Height)
- 2 - 2ft LED bars (Length)
- Driver
- One 3-way EXT harness
- One 2 way harness

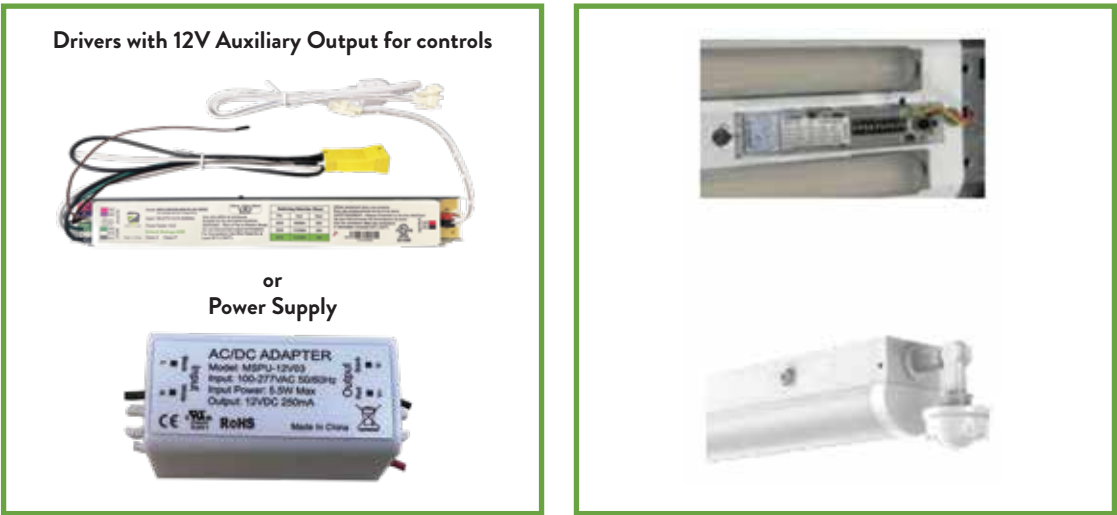
4 Watts per foot

Smart Controls for Magnilumen Plus™ LED Lighting Products – Integrated & Stand-Alone

Magnilumen Plus™ LED lighting solutions can be paired with a range of **smart control options** to deliver optimal performance, energy efficiency, and flexibility. Our controls are designed to meet the needs of modern lighting systems, whether you require simple stand-alone operation or fully integrated smart building management.

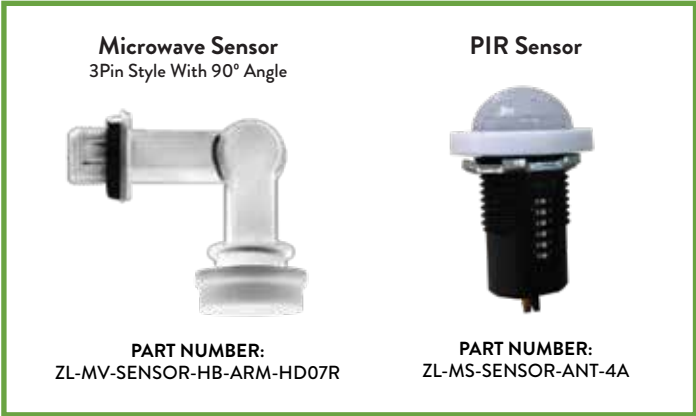
INTEGRATED SMART CONTROLS

- Seamlessly built into Magnilumen Plus™ LED fixtures for streamlined installation and control.
- Compatible with advanced systems such as 0-10V dimming, DALI, and wireless protocols (Bluetooth Mesh).
- Allow for centralized scheduling, occupancy sensing, daylight harvesting, and scene settings.
- Perfect for larger-scale applications like warehouses, offices, and industrial facilities requiring automation and networked lighting management.



STAND-ALONE CONTROLS

- Simple plug-and-play solutions for individual fixtures or smaller setups.
- Options include wall-mounted dimmers, occupancy/vacancy sensors, and daylight sensors.
- No additional infrastructure needed, making them ideal for retrofit projects or smaller spaces.
- Provides flexible control without requiring a full smart building system.



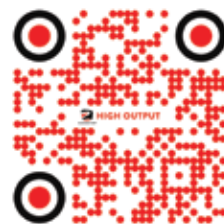
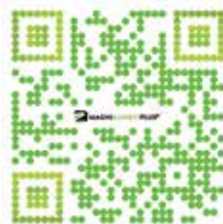
CONTROLS COMPATIBILITY	
	Yes
	Yes
	Yes
	Yes
	Yes

ADDITIONAL FEATURES & BENEFITS

- **Energy Savings & Compliance:** Smart controls reduce energy consumption and help meet energy codes (e.g., Title 24, ASHRAE).
- **Wireless & App-Based Control:** Pair with mobile apps for remote access, grouping fixtures, creating lighting scenes, and scheduling.
- **Scalability:** Start with stand-alone controls and upgrade to integrated smart systems as needs grow, without replacing fixtures.
- **IoT & Sensor Integration:** Options for occupancy sensing, daylight harvesting, and adaptive lighting based on real-time conditions.
- **Emergency & Safety Features:** Integration with emergency lighting controls and override functions for critical operations.
- **Data & Analytics (for integrated systems):** Monitor energy usage, performance, and predictive maintenance through connected platforms.
- **Retrofit-Friendly:** Both integrated and stand-alone controls are designed to work seamlessly with Magnilumen Plus™ retrofit bars and kits.



Eco-Friendly Illumination



www.magnilumenplus.com
www.zledlighting.com
(800) 679-9243