

# FASCIA LIGHTS - 4"ECE R65 Class 2 Certified (Vertical Orientation)

EMPS21E2J-(X) - QUICK MOUNT EMPS21E2K-(X) - SCREW MOUNT EMPS21E2L-(X) - STUD MOUNT



Protected by U.S. Patent 10,703,260 and Patents Pending https://soundoffsignal.com/legal/patent-notification/



- HIGH CURRENT interconnects must be properly terminated. Poor crimp quality can cause heat build-up and fire. Follow the crimp connector manufacturer instructions.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to vehicle Owner's Manual for deployment zones.
- Do NOT use system to disconnect headlights, brake lights or other safety equipment.
- Unit may become hot to touch during normal operation.
- Failure to properly install connectors, fuses or wiring may cause vehicle failure or fire.
- Installation must only be performed by trained technician. Installer must determine vehicle wiring configuration and proper integration of system.
- Use proper wire gauge. All power wires connecting to positive (+) or negative (-) battery terminal or local chassis ground (-) must be sized to supply at least 125% of max. current and properly fused at power source.
- Install protective grommets when routing wire through firewall or metal.
- Petroleum/silicone based lubricants will cause the silicone lens to discolor.

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### WARNING

ROUTE WIRES ONLY IN LOCATIONS THAT ARE NOT SUBJECTED TO POTENTIAL WEAR. MAKE SURE TO AVOID ROUTING WIRES IN THE DEPLOYMENT AREA OF YOUR AIR BAG. REFER TO YOUR VEHICLE'S OWNER'S MANUAL FOR AIRBAG DEPLOYMENT ZONES.

#### A WARRNING This product contains high intensity LED devices. To prevent eye damage, DO NOT stare into the light beam at close range.



For more product Information Scan QR Code



#### NOTICE:

Installers and users must comply with all applicable federal, state and local laws regarding use and installation of warning devices. *Improper use or installation may void warranty coverage.* To review our Limited Warranty Statement & Return Policy for this or any SoundOff Signal product, visit our website at **www.soundoffsignal.com/tech-services/returns**/. If you have questions regarding this product, contact **Technical Services**, Monday - Friday, 8 a.m. to 5 p.m. ET at **1.800.338.7337** (press #4). Questions or comments that do not require immediate attention may be emailed to **techservices@soundoffsignal.com**.

1.800.338.7337 / www.soundoffsignal.com

ENHANCING SAFETY THROUGH INNOVATION

# **4" MPOWER DIMENSIONS / SPECIFICATIONS:**



By Day Function: Standard Intensity for day time use.

<u>By Night Function:</u> Reduced Intensity for night time use.



WIRE HOOK-UP TABLE				
WIRE COLOR:	FUNCTION:			
RED	Power (Primary) By Day			
BLACK	Ground			
GREEN	Sync2 *			
WHITE to GROUND	Setup Wire (See pages 7 & 8)			
WHITE to POWER	By Night Function Wire			
RED/WHITE	Power (Secondary) By Night			

\* Sync2. Up to 24 light heads.

IS	TECH	TECHNICAL SPECIFICATIONS					
	Input Voltage: 9-32Vdc						
	4″ MPOWE	4" MPOWER CURRENT CONSUMPTION (Amps)					
	12.8Vdc 25.6Vdc						
	Peak	Average	Peak	Average			
Red	1.05 Amps	0.53 Amp	0.53 Amp	0.27 Amp			
Amber	1.30 Amps	0.65 Amp	0.65 Amp	0.33 Amp			
Blue	1.40 Amps	0.70 Amp	0.70 Amp	0.27 Amp			
<b>AFTER POWER IS ON</b> , touching the WHITE wire to the ground will allow you to change various settings on the module. (Refer							

to pages 7 & 8)

# SCREW MOUNT INSTALLATION:

### Screw Mount (FIG 1)

- 1. Pre-Drill per screw mount pattern indicated in Fig. 1.
- 2. Deburr and clean the surface, as required.
- 3. Make wire connections and feed the wire through the drilled wire hole.
- 4. Install light with 2x Torx drive screws and hand tighten only until mount surface and light are flush.



### STUD MOUNT INSTALLATION:

#### Stud Mount (FIG. 2)

- 1. Pre-Drill per quick mount pattern indicated in Fig 2.
- 2. Clean the surface, as required.
- 3. Deburr hole, as required.
- 4. Make wire connections and feed wire through the drilled wire hole.
- 5. Install light, inserting 2 studs into the 2 drilled holes.
- 6. Install 2 lock nuts onto studs behind mount surface. After the nut makes full contact with the mounting surface, hand tighten 1/8th turn (torque no more than 15 in-lbs.)



# **QUICK MOUNT INSTALLATION:**

### Quick Mount (FIG. 3)

- 1. Pre-Drill per quick mount pattern indicated in Fig. 3. (Wire hole only).
- 2. Deburr hole as required.
- 3. Clean surface with supplied alcohol wipe.
- 4. Make wire connection and feed wire through the drilled wire hole.
- 5. Remove adhesive backer and align light into desired position. Apply to surface and hold firmly for 30 seconds.

### NOTE: APPLY UNIFORM PRESSURE ACROSS FULL FACE OF LIGHT.



### **EDGE MOUNT INSTALLATION:**

### Edge-Mount Bracket (FIG. 4) P/N: PMP2BKEDGE

- 1. Install Heat Sink onto "mpower Stud Mount, Threaded" light as indicated. Wire passed through center hole.
- 2. Install bracket onto "mpower Stud Mount, Thread" light as indicated. Wire passed through rear relief and into lower edge grip relief.
- 3. Install 2 lock nuts onto "mpower Stud Mount, Thread" light. Hand tighten until final adjustment.
- 4. Place bracket over desired vehicle's edge surface (i.e. rear hood), ensure wire is fully seated in rear relief, wrapping around edge lying flat.
- 5. Tighten 2 setscrews to vehicle's edge surface.
- 6. Adjust angle of light to desired direction and tighten 2 lock nuts until secure. After the nut makes full contact with the mounting surface, hand tighten 1/8th turn (torque no more than 15 in-lbs.)
- 7. Make wire connections.



DO NOT USE POWER TOOLS TO TIGHTEN

\*\*\*LIGHT MEETS THE SPECIFIED ECE R65 CATEGORY X REQUIREMENTS WHEN MOUNTED IN THE VERTICAL ORIENTATION\*\*\*



## MULTI-MOUNT INSTALLATION:

#### Multi-Mount Bracket (FIG. 5) P/N: PMP2BKDGAJ

- 1. Pre-drill mount holes as indicated in Fig. 5.
- 2. Place bracket onto desired vehicle's surface and secure with screws (not provided).
- 3. Install Heat Sink onto "mpower Stud Mount, Threaded" light as indicated. Wire passes through center hole.
- 4. Install "mpower Stud Mount, Thread" light onto bracket as indicated. Wire passes though rear relief.
- 5. Install 2 lock nuts onto "mpower Stuf Mount, Thread" light as indicated. Hand tighten until final adjustment.
- 6. Adjust angle of light to desired direction and tighten 2 lock nuts until secure. After the nut makes full contact with the mounting surface, hand tighten 1/8th turn (torque no more than 15 in-lbs.)
- 7. Make wire connections.



DO NOT USE POWER TOOLS TO TIGHTEN



\*\*\*LIGHT MEETS THE SPECIFIED ECE R65 CATEGORY X REQUIREMENTS WHEN MOUNTED IN THE VERTICAL ORIENTATION \*\*\*

## BACKPLATE MOUNT INSTALLATION:

#### BACKPLATE MOUNT (FIG. 6) P/N: PMP2BKGBPB

- 1. Pre-drill mount holes as required (bracket holes and spacing are indicated on page 3, Fig. 2.)
- 2. Place bracket onto desired vehicle's surface and secure with screws (not provided).
- 3. Install "mpower Stud Mount" light onto bracket as indicated. Wire passes though rear relief.
- 4. Install 2 lock nuts onto "mpower Stud Mount" light as indicated. Hand tighten until final adjustment.
- 5. Adjust light to desired position and tighten 2 lock nuts until secure. After the nut makes full contact with the mounting surface, hand tighten 1/8th turn (torque no more than 15 in-lbs.)
- 6. Make wire connections.



DO NOT USE POWER TOOLS TO TIGHTEN



## QUICK CLIP INSTALLATION:

### \*ONLY WORKS WITH QUICK MOUNT MPOWER LIGHTS Quick Mount w/Quick Clip (FIG. 7) P/N: PMP2BKQCLP

- 1. Prep surface with supplied alcohol wipe. 2. Feed wires through quick clip as shown in Fig. 7.
- Remove adhesive liner on the light and install clip to light. Make sure to properly align ends before placing down, see Fig. 8.
- 4. Route wires into recessed pocket lying flat in pocket.
- With red pull tabs still in place, clip light over edge of vehicle surface. Be careful to make sure red pull tabs as shown in Fig. 9.
  DO NOT PEEL, FOLD UNDER OR WRINKLE. Make sure wire is lying flat and is not pinched
- 6. With light properly oriented, pull red tabs to secure light to surface, see Fig 10.
- 7. Make wire connections.









## **ELECTRICAL INSTRUCTIONS:**

#### **OVER-VOLTAGE PROTECTION**

When an over-voltage condition is detected, the module will flash an over-voltage warning pattern of 50mS ON/950mS OFF to alert of the over-voltage condition and protect the electronics from damage due to heat/voltage.

#### THERMAL COMPENSATION PROTECTION

The LED module is designed to provide maximum power output while providing protection to the electronic components by reducing the output power at extreme temperatures.

#### **FUNCTION TABLES**

Changing the function table is only enabled when the LED module is in primary flashing mode. The functional operation of the LED module can be changed while applying +V to the Red wire with the black wire connected to ground. When the light is flashing, momentarily connect the White wire to ground for >4S and <5S (light will go steady high, steady low, off, steady high, steady low) then release. The function table will now advance to the next table (table 1 to table 2, table 2 to table 3, or table 3 to table 1). Repeat above process until required function table is active.

	FUNCTION TABLE 2				
	WIRE		LIGHT		
RED	R/W	WHT	SINGLE COLOR		
+9-32V			FLASH "BY DAY"		
+9-32V		+9-32V	FLASH "BY NIGHT"		
	+9-32V		CRUISE		
	+9-32V	+9-32V	CRUISE		
+9-32V	+9-32V	+9-32V	FLASH "BY NIGHT"		
		+9-32V	NO OP		
+9-32V	+9-32V		FLASH "BY DAY"		

FLASH PATTERNS			
PATTERN # SINGLE COLOR			
1	ECE Single		
2	ECE Dual		
3	ECE Triple		

### SYNC 2

Synchronizing the flashing of multiple light modules is accomplished by connecting the Green wires of different light modules together. Up to 24 light modules can be connected for synchronized flashing. All light module flash patterns must be set to the same flash pattern # to ensure proper operation. Refer to the Sequence Type section in Set-Up Table (page 11) to setup light modules to flash in alternate or simultaneous flash pattern.

	FUNCTION TABLE 1				
	WIRE		LIGHT		
RED R/W WHT		WHT	SINGLE COLOR		
+9-32V			FLASH "BY DAY"		
	+9-32V		FLASH "BY NIGHT"		
+9-32V	+9-32V		FLASH "BY NIGHT"		
		+9-32V	NO OP		
+9-32V		+9-32V	FLASH "BY NIGHT"		
	+9-32V	+9-32V	FLASH "BY NIGHT"		
+9-32V	+9-32V	+9-32V	FLASH "BY NIGHT"		

FUNCTION TABLE 3				
	WIRE		LIGHT	
RED	R/W	WHT	SINGLE COLOR	
+9-32V			FLASH "BY DAY"	
	+9-32V		STEADY CLR 1	
+9-32V	+9-32V		STEADY CLR 1	
		+9-32V	NO OP	
+9-32V		+9-32V	CRUISE	
	+9-32V	+9-32V	STEADY CLR 1	
+9-32V	+9-32V	+9-32V	STEADY CLR 1	

#### **4 IN HORIZONTAL SINGLE ECE MPOWER**

			ECE	R65 X
	#	FLASH PATTERN	DAY	NIGHT
	1	SINGLE	II	I
RED	2	DOUBLE	II	I
	3	TRIPLE	II	I
	1	SINGLE	II	I
BLUE	2	DOUBLE	II	
	3	TRIPLE		I
	1	SINGLE	II	I
AMBER	2	DOUBLE	II	I
	3	TRIPLE		I

I = Class 1 Rating , II = Class 2 Rating

### **ELECTRICAL INSTRUCTIONS CONTINUED:**

#### **ADVANCE PATTERN**

Flash pattern can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >250mS and <1S (light will go steady high) then release. The flash pattern will advance to the next pattern. If the light module was at the last pattern, the pattern will reset to the 1st pattern.

#### **BACKUP PATTERN**

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >1S and < 2S (light will go steady high, steady low) then release. The flash pattern will backup to the previous pattern. If the light module was at the first pattern, the pattern will change to the last pattern on the list.

#### SIMULTANEOUS/ALTERNATE

This function can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions) and only has an effect when at least 2 LED modules have the green sync wire connected together.

#### **PATTERN RESET**

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >5S and <6S (light will go steady high, steady low, off, steady high, steady low, off) then release. The flash pattern will reset to the 1st pattern in the list.

#### FACTORY RESET

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >6S and <7S (light will go steady high, steady low, off, steady high, steady low, off, steady high, steady low, off, steady high) then release. The LED module will reset to: pattern=1, Function Table=1, Color Swap=OFF, Simultaneous.

#### LOCKOUT CONFIGURATION WIRE

This function will disable the wire tap configuration mode that is activated by holding the white wire to ground. The lock out is activated by applying ground to the white wire for >7 seconds and <8 seconds per the table below. The function can be disabled by tapping the wire to ground and releasing 8 times within 5 seconds. The light will flash 8 times when the feature is enabled or disabled to notify the user of a setting change.

SETUP TABLE				
SECONDS			USER INTERFACE	
FROM	то	VISUAL FEEDBACK	ACTION TAKEN	
0	1	STEADY-HIGH (60%)	FORWARD ONE PATTERN	
1	2	STEADY-LOW (30%)	BACKWARD ONE PATTERN	
2	3	OFF	NONE	
3	4	STEADY - HIGH (60%)	SEQUENCE TYPE: SIMULTANEOUS OR ALTERNATE	
4	5	STEADY - LOW (30%)	SEE FUNCTION TABLE	
5	6	OFF	RESET TO PATTERN 1	
6	7	STEADY-HIGH (60%)	FACTORY RESET (PATTERN 1, SIMULTANEOUS) SEPARATE COLOR CONTROL: OFF	
7	8	STEADY-LOW (30%)	WHITE WIRE CONFIGURATION LOCKOUT	
If held longer than 7 seconds, the light will go back to flashing the current pattern and no action will be taken.				

## **ELECTRICAL INSTRUCTIONS CONTINUED:**

#### REMOTE MODE: FOR USE WITH bluePRINT SYSTEM ONLY

Connecting the Green wire to ground before applying power to the Red wire will place the LED module into remote mode and the light output color will be directly controlled by the Red wire.

For Cruise mode or Low Power control of the LED module, the signal to the control wires must be 100 +/- 2Hz using the duty cycle inputs listed below to produce the light output.

Cruise Mode Duty Cycle (@ 100Hz)					
Input Light Output					
40%	OFF				
50%	5%				
60%	10%				

Low Power Flash D.C. (@ 100Hz)			
Input	Light Output		
70%	30%		
80%	40%		
90%	50%		

### **NOTES:**

## WARRANTY & RETURN GOODS PROCEDURE

#### WARNING MESSAGES - PLEASE READ:

**WARNING** - DRILLING ANY HOLES INTO THE MPOWER LIGHT IS NOT RECOMMENDED! THE RISK OF DAMAGING INTERNAL COMPONENTS AND THE RESULTING FAILURE OF THE MPOWER LIGHT WILL VOID ANY WARRANTY OF THIS PRODUCT.

**WARNING** - CARE MUST BE TAKEN WHEN DRILLING THROUGH THE VEHICLE NOT TO DRILL INTO ANY EXISTING WIRING CHECK BOTH SIDES OF THE MOUNTING SERVICE PRIOR TO DRILLING. DE-BURR ANY HOLES AND REMOVE ANY METAL SHARDS OR REMNANTS. INSTALL GROMMETS INTO ALL WIRE PASSAGE HOLES.

**WARNING** - ROUTE WIRES ONLY IN LOCATIONS THAT ARE NOT SUBJECTED TO POTENTIAL WEAR. MAKE SURE TO AVOID ROUTING WIRES IN THE DEPLOYMENT AREA OF YOUR AIR BAG. REFER TO YOUR VEHICLE OWNER'S MANUAL FOR AIR BAG DEPLOYMENT ZONES.

**WARNING** - ALL CUSTOMER SUPPLIED POWER WIRES CONNECTING TO THE POSITIVE (+) OR NEGATIVE (-) BATTERY TERMINAL OR LOCAL CHASSIS GROUND (-) MUST BE SIZED TO SUPPLY AT LEAST 125% OF THE MAXIMUM CURRENT AND PROPERLY FUSED AT THE POWER SOURCE WITH APPROPRIATELY RATED FUSE.

#### WARRANTY RETURN PROCESS:



Please scan QR code or visit https://soundoffsignal.com/support-page/returns/.

Alternatively contact your SoundOff Signal Sales Representative, Customer Services staff or our Technical Department (800.338.7337) for a RMA #, Return Merchandise Authorization Number.

The following information is required for issuance of the RMA #:

- Reason for returning the product\*
- Address where replacement product is to be shipped\*
- Telephone number where you may be reached\*
- SoundOff Signal invoice number on which product was purchased\*\*
- SoundOff Signal part number and serial number\*\*
- E-mail address where RMA # should be e-mailed\*\*
- Fax number where RMA # should be faxed\*\*

\* RMA # will not be given without this information. \*\* If available, please provide this information.

SoundOff Signal will NOT accept returns without an RMA #. Each RMA # is good for only one (1) return and will expire (30) days after the date it was issued. Products must be shipped back to SoundOff Signal and the RMA # clearly marked on the outside of the package near the shipping label. Please use the following address on your shipping label:

SoundOff Signal ATTN: RMA # / Technical Services 3900 Central Parkway Hudsonville, MI 49426

#### WARRANTY EXCLUSIONS:

Shipping & Handling, labor and service fees are non-refundable. SoundOff Signal is not liable for any damage due to installation or personal injury as a result of using SoundOff Signal product.

#### WARRANTY FORFEITURE:

Warranty will not be granted if the Warranty Return Policy & Procedure rules are not strictly followed. Physical damage resulting from customer abuse will void warranty. Warranty will also be voided if any SoundOff Signal and/or manufacturer serial tags, product stickers, seals, or the like, are removed, altered or tampered with. Returned product that is damaged by shipping via the RMA # procedure is not the responsibility of SoundOff Signal.

Document effective date on cover and below supersedes previously dated policies and statements.

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