

INSTRUCTIONS

HAZSHARK™ INSTALLATION



RAB Lighting is committed to creating high-quality, affordable, well-designed and energy-efficient LED lighting and controls that make it easy for electricians to install and end users to save energy. We'd love to hear your comments. Please call the Marketing Department at 888-RAB-1000 or email: marketing@rablighting.com



HAZSHARK2



HAZSHARK4

IMPORTANT

READ CAREFULLY BEFORE INSTALLING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

RAB fixtures must be wired in accordance with the National Electrical Code and all applicable local codes. Proper grounding is required for safety. THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

WARNING: Make certain power is OFF before installing or maintaining fixture. No user serviceable parts inside.

CAUTION: TO REDUCE THE RISK OF IGNITION OF HAZARDOUS ATMOSPHERES, DISCONNECT THE LUMINAIRE FROM SUPPLY CIRCUIT BEFORE OPENING. KEEP TIGHTLY CLOSED WHEN IN OPERATION.

CLASS I, DIVISION 2, GROUPS A, B, C AND D; CLASS II, DIVISION 1, GROUPS E, F AND G; CLASS II DIV. 2 GROUP F AND G; CLASS III. MIN. 105°C SUPPLY CONDUCTORS. SUITABLE FOR WET LOCATIONS.

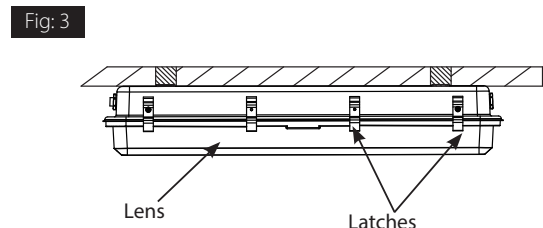
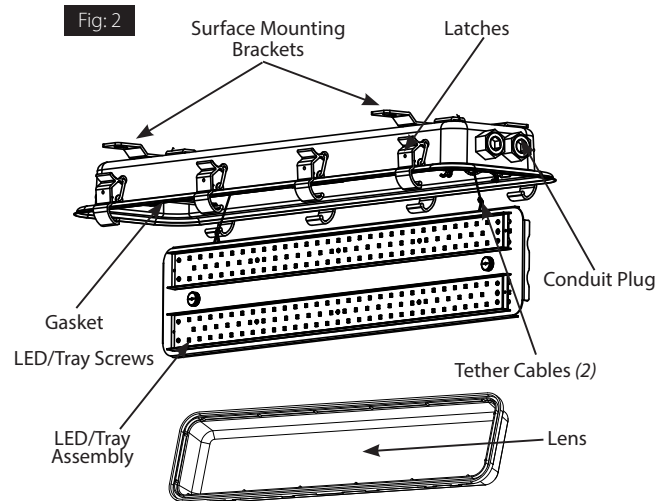
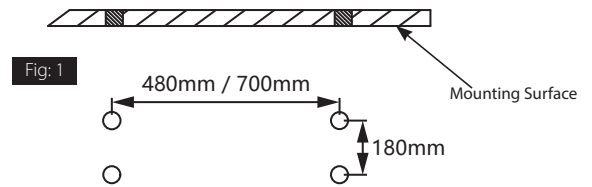
NOTE: Reference table below for maximum wattage on a continuous run, not to exceed 150W. Fixtures with battery backup are not recommended for continuous run.

Catalog #	Maximum Number of Linked Fixtures
HAZSHARK2	Up to 5 fixtures
HAZSHARK4	Up to 3 fixtures

SURFACE MOUNTING

1. Use appropriate mounting hardware (*by others*). Mark the **Mounting Surface** for mounting hardware locations. Recommended **Surface Mounting Bracket** distance is 480mm for HAZSHARK 2FT, 700mm for HAZSHARK 4ft (*Fig. 1*).
2. Secure the Fixture to **Mounting Surface**.
3. Unlatch the **Lens** and remove. Release the **LED/Tray Assembly** from **Housing** by loosening **LED/Tray Screws**. Pre-installed **Tether Cables (2)** will prevent **LED/Tray Assembly** from falling down as shown in *Fig. 2*.
4. Feed supply wires through one of the **Conduit Plugs** using appropriate conduit and fittings to make electrical splices.
5. Use appropriate UL rated wire connectors as required by code to make electrical splices to fixture leads. Follow appropriate mounting and wiring instructions per code, see wiring diagram *Fig. 8*.
6. Replace **LED/Tray Assembly** to the **Housing**. Re-install the **Lens** by clamping **Latches** (*Fig. 3*). Be careful not to pinch the wires. Check that the **Gasket** is full seated (*Fig. 2*).

WARNING: To prevent wiring damage or abrasion, do not expose wiring to edges of sharp objects.



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CABLE MOUNTING

1. Mark the **Mounting Surface** for mounting hardware locations. 480mm for HAZSHARK 2ft 700mm for HAZSHARK 4ft as shown in Fig. 4.
2. Support the fixture using provided **Cables and Hardware**, see Fig. 5. Loop the **Cable** through the center of the **Mounting Bracket** and close the loop using the **Cable Clamp** (set screw is *M4 Allen*). Mount the fixture to **Mounting Surface** using appropriate fasteners (*by others*) to secure the **Ceiling Mounting Plates** (Fig. 6).
3. Unlatch the **Lens** and remove. Release the **LED/Tray Assembly** from **Housing** by loosening **LED/Tray Screws**. Pre-installed **Tether Cables** (2) will prevent **LED/Tray Assembly** from falling down as shown in Fig. 7.
4. Feed supply wires through one of the **Conduit Plugs** using appropriate conduit and fittings to make electrical splices.
5. Use appropriate UL rated wire connectors as required by code to make electrical splices to fixture leads. Follow appropriate mounting and wiring instructions per code, see wiring diagram Fig. 8.
6. Replace **LED/ Tray Assembly** to the **Housing**. Re-install the **Lens** by clamping **Latches**. Be careful not to pinch the wires. Check that the **Gasket** is fully seated.

WARNING: To prevent wiring damage or abrasion, do not expose wiring to edges of sharp objects.

Fig: 4

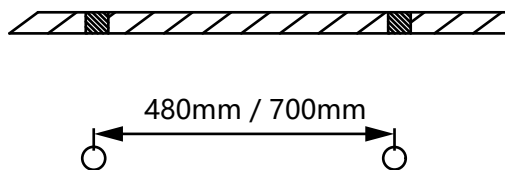


Fig: 5

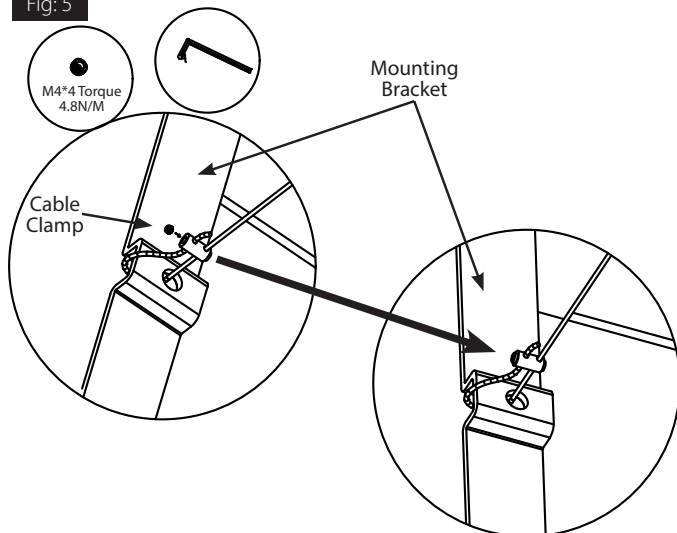


Fig: 6

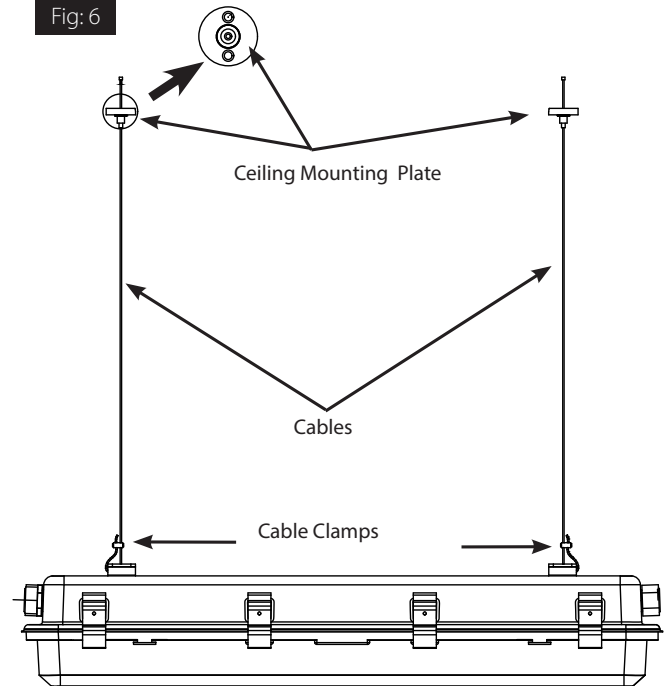
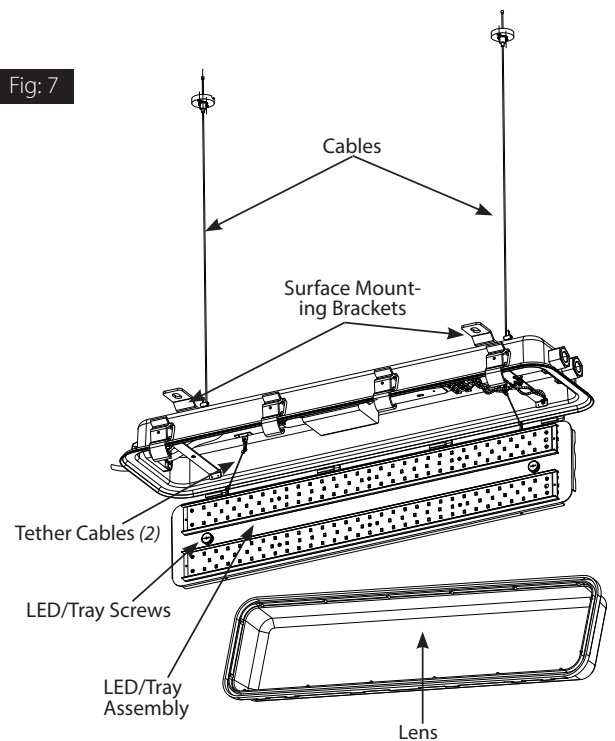


Fig: 7



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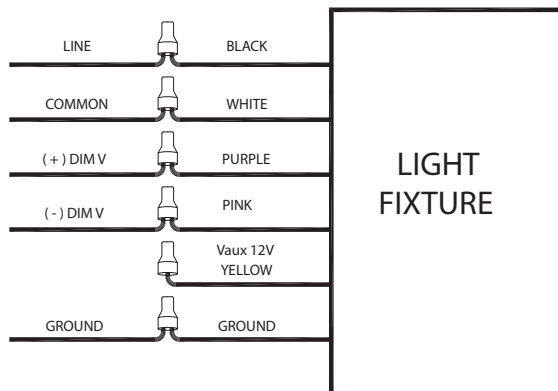
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0-10V DIMMABLE WIRING

Universal voltage driver permits operation at 120V through 277V, 50 or 60 Hz. For 0-10V dimming follow the wiring directions shown in Fig. 8.

1. Connect the black fixture lead to the LINE supply lead.
2. Connect the white fixture lead to the COMMON supply lead.
3. Connect the GROUND wire from fixture to supply ground. Do NOT connect the GROUND to the output.
4. Connect the purple fixture lead to the (V+) DIM lead.
5. Connect the pink fixture lead to the (V-) DIM lead.
6. Cap the yellow fixture lead, if present. Do NOT connect.

Fig: 8



CLEANING & MAINTENANCE

CAUTION: Be sure fixture temperature is cool enough to touch. Do not clean or maintain while fixture is energized.

1. Clean polycarbonate lens with non-abrasive glass cleaning solution. **For a list of damaging chemicals reference product information on rablighting.com.**
2. Do not open the fixture to clean the LED. Do not touch the LED.

TROUBLESHOOTING

1. Check that the line voltage at the fixture is correct. Refer to wiring directions.
2. Is the fixture grounded properly?

Note: These instructions do not cover all details or variations in equipment nor do they provide for every possible situation during installation, operation or maintenance.

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BATTERY BACKUP MODELS

WIRING

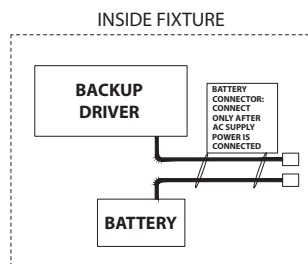
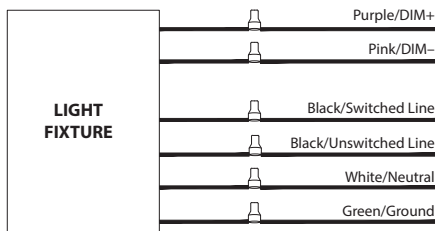
CAUTION: FOR BATTERY BACKUP FIXTURE. Voltage can be present in **BATTERY**. To prevent high voltage from being present on output leads, Inverter connector must be open. Do not join **BATTERY** connector until installation is complete and AC power is supplied to the emergency driver (Fig. 9).

NOTE: Make sure that the necessary branch circuit wiring is available. An **UNSWITCHED AC** source of power is required. The emergency driver must be fed from the same branch circuit as the LED driver.

CAUTION: Do not use any supply voltage other than 120-277V 50/60 Hz.

1. Connect **UNSWITCHED HOT** fixture lead to **HOT AC** supply line.
2. If using an **UNSWITCHED** circuit, connect **UNSWITCHED** and **SWITCHED** lines together.
3. If using a **SWITCHED** circuit, connect **SWITCHED HOT AC** fixture lead to the external **SWITCHED** circuit
4. For 0-10V dimming, connect **DIM (+)** purple and **DIM (-)** pink leads to dimming connections.
5. **Check that the battery is connected to the backup module.**
6. All unused leads must be capped and insulated.
7. After installation is complete, supply AC power to the fixture.
8. When power is on, the fixture should be on and the **CHARGING INDICATOR LIGHT** should illuminate to indicate the battery is charging.
9. Once the **BATTERY** has charged for at least one hour, a short duration test may be performed by pressing the **Test Button** as shown in Fig. 11.
10. After the battery has charged for 24 hours, a long duration test can be performed by disconnecting power to the fixture.

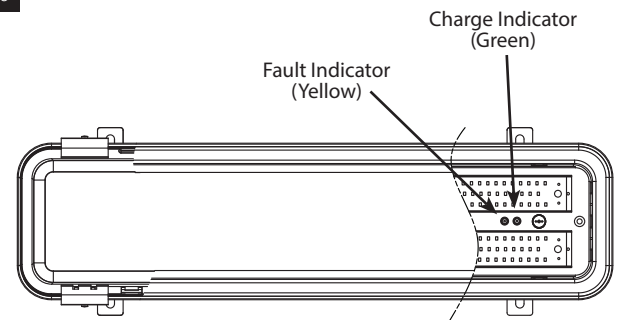
FIG. 9



OPERATION

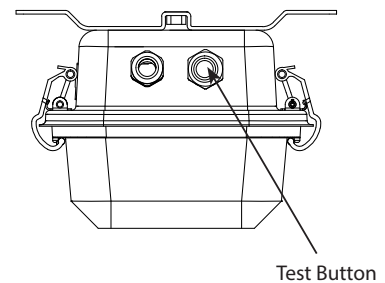
1. When AC power is applied the charging indicator light is illuminated indicating that the **BATTERY** is being charged.
2. When power fails the standby power automatically switches to emergency power (*internal battery*) operating at reduced illumination.
3. When AC power is restored the emergency driver automatically returns to charging mode.
4. **LED Indicator State** listed below (Fig. 10). Visible through fixture lens on the **LED/Tray Assembly**.

Fig: 10



LED Indicator State	Representation
● Green Light On	Battery charging capacity, is more than 80% or fully charged.
● Yellow Light On	Battery Backup System fault or low battery charge.

FIG. 11



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BATTERY BACKUP MODELS

MAINTENANCE

Although no routine maintenance is required to keep the emergency driver functional, it should be checked periodically to ensure that it is working. The following schedule is recommended:

1. Visually inspect the **Charging Indicator** light **monthly**. It should be illuminated.
2. Test the emergency operation of the fixture at 30-day intervals. To perform a **monthly** test (*30 second light up*), press the **Test Button** (Fig. 11) five times. The **Green Indicator** will then flash 5 times (*1/2 seconds apart*), the **Green Indicator** will then flash once per second during the test.
3. Test the emergency operation of the fixture at **one year** intervals. To perform a **yearly** test (*90 minute light up*), press the **Test Button** (Fig. 11) seven times. The **Green Indicator** will then flash 7 times (*1/2 seconds apart*), the **Green Indicator** will then flash once per second during the test.

TROUBLESHOOTING

1. Be sure the fixture is grounded properly.
2. If the charging indicator light does not illuminate after pressing the **Test Button** (Fig. 10), check if battery is connected properly.