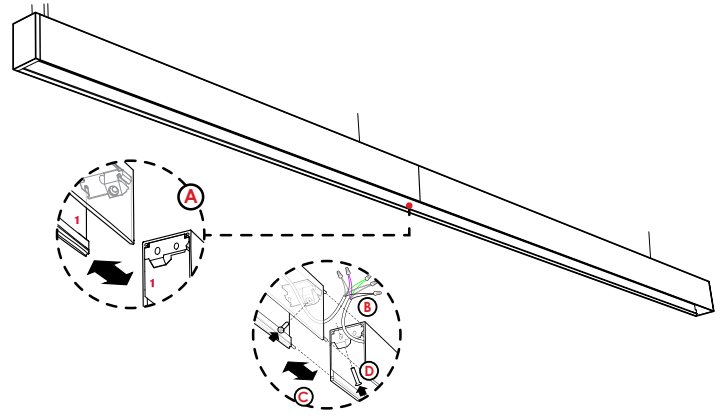
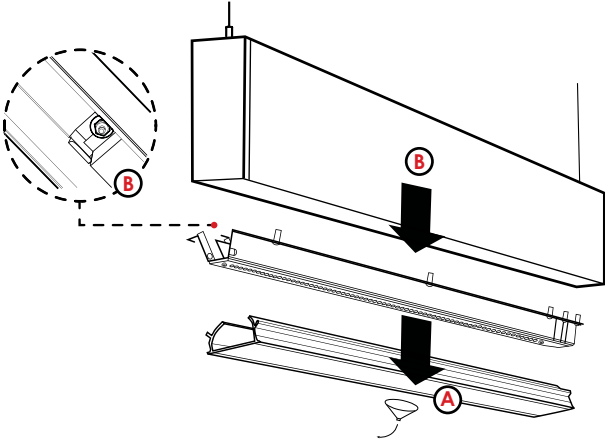


## PROTECTION OF LED SYSTEMS

### Fixture Installation: Removal of LED Trays

Improper installation and mishandling of internal LED components commonly leads to broken connections and incorrect or loose wiring resulting in commissioning problems and warranty claims. Certain mounting requirements (surface ceiling, surface wall, surface bottom, and mullion block) or fixture configurations (joining sections to create a continuous row) require removal of internal gear trays. Follow this [link](#) to see a video showing how to remove an internal gear tray.



#### ROWS

- [A] - When rows are ordered, row sections will be labeled in sequence. Position section in proper order prior to installation (ie place 1 to 1).
- [B] - Housing connection: White+, Black-, Green (if dimming is required): Purple Dim+, Grey Dim-
- [C] - Align corner pins and connect fixture housings with rubber mallet until no gap remains
- [D] - Secure sections with joiner screws

- [A] - Remove the lens. Apply suction cup (provided) to one end and carefully pull lens out.
- [B] - Remove reflectors (if applicable) and internal gear tray by unfastening hardware.

If removal and replacement of internal gear trays is not performed in a careful manner, then connections on LED boards may break and/or incorrect or loose wiring between LED boards and the LED driver may occur.

**Breakage of connectors** is most commonly caused when trays are left hanging by wiring from the fixture housing, removed/re-installed with excessive force, or placed in a careless location within the construction site.

**Incorrect or loose wiring** is most commonly caused when wiring is disconnected to remove the internal gear tray from the fixture housing and is incorrectly or not fully re-installed. Be aware that incorrect wiring could lead to damage to the LED driver.



Figure 3: Broken Connector to LED Board

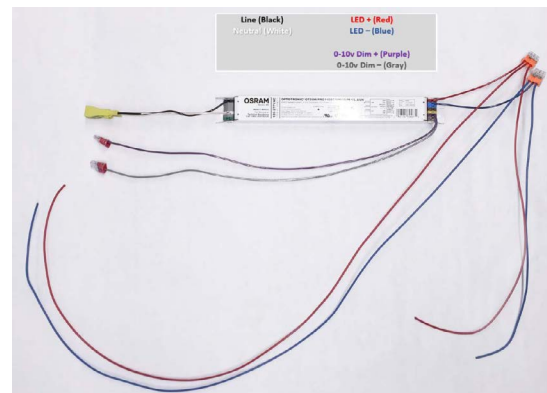


Figure 4: Example Driver Wiring

## ESD Protection for LED Systems

What is electrostatic discharge (ESD)? Electrostatic discharge is a tiny version of lightning signified by a shock or spark which causes a high electrical current pulse, typically resultant from a large difference in electrically insulating materials. One of the most common occurrences of ESD is through human contact. Positive charges are common to natural materials such as human skin, hair, or animal fur. Negative charges are common to synthetic materials such as Styrofoam or plastic. A common example of ESD is the shock that sometimes occurs when removing a sweater.

LED can be damaged by ESD causing total failure. When total failure occurs to an LED, the LED will no longer light up and will no longer be electrically conductive. Any LEDs wired in series will also not light, even if they are undamaged. This means that if only one diode on an LED board fails, the whole board will no longer light up. If an LED is damaged but still electrically conductive it is considered disturbance. When disturbance occurs to an LED, the LED will initially light but quickly become dim. Any LEDs wired in series will still light. This means that only the LED with disturbance will not light, and the remaining LEDs on the board continue to light normally. After ESD occurs to an LED, failure is noticeable after a short period of time. Typically an hour after installation, failure will be visible.

In order to protect LEDs from ESD, we take specific measures for static protection at the factory including:

- Grounding
  - Conductive Flooring
- Neutralization
  - Anti-static fan / ionizer
- Prevention
  - Anti-static gloves and coats, at an ESD protected clean workspace; there should be no unnecessary articles that may transfer a charge, LED boards are individually wrapped in anti-static materials and not allowed to touch each other or come into contact with potential insulators (hair, fabric, etc.).

In the field, it is recommended that similar measures be taken to reduce the occurrence of ESD. Here are some helpful tips:

- Wear anti-static cotton gloves when handling LED boards or LED gear trays.
- If working in a carpeted area, place a rubber floor mat over the carpet in the area that you will be working
- Keep all synthetic materials to at least 4 inches away from unprotected LED components
- Limit rapid movement of air near LEDs (ex. do not allow a fan to blow directly on unprotected LED components)
- Do not stack unprotected LED boards on top of one another, try to keep in protective wrapping until installation.

## 5-Year LED System Warranty

If an LED component has failed, please contact the factory to request a replacement under warranty (see Warranty Terms below). Please provide as much information as possible to ensure we can provide the correct replacement in a timely manner. Information to provide includes: sales order number, project name, fixture type(s) affected, description of issue and/or quantity of defective components, and defective component type and part number. For drivers, please make sure to include the tuning and dimming information from the factory sticker.

## Limited Warranty for a•light Lighting Fixtures

Effective January 1, 2017

With the exception of ballasts, lamps, emergency packs and sensors, a•light warrants all equipment to be free from defects in manufacturing, under normal use and proper storage for a period of one (1) year. a•light does not offer warranty on ballasts, lamps, emergency packs, sensors or other items manufactured outside our factory. These manufacturers have their own warranty; customer must contact the ballast, lamp, emergency pack or sensor manufacturer directly for credit and/or replacements on failures. LED products (LED boards, LED drivers) will be covered for a period of five (5) years. For products that a•light has determined defective or not shipped as ordered, customer must receive an authorization for return or repair (RGA). a•light liability extends to the repair and replacement of the defective part(s) only. The defective product must be shipped back to the factory where the defect will be corrected. a•light reserves the right to correct the issue as the company sees fit. Any field alterations to or unintended use of any product provided by a•light shall void all factory warranties.



Figure 5: ESD Protection Measure during fixture assembly



Figure 6: DO NOT STACK LED TRAYS as shown above