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Architectural Linear

TruGroove surface micro

IS-TM11 Surface Direct

System Overview

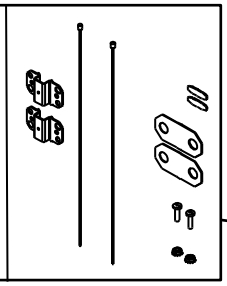
These instructions review how to install TruGroove surface micro fixtures. Modules can be installed as individual 2ft, 2.5ft, 3ft, 3.5ft, 4ft, 5ft, 6ft or 8ft standalone units, or they can be joined together to create continuous runs.

IMPORTANT: Read all instructions including fixture/sensor wiring AND mechanical details **before** beginning installation. **All ceiling brackets must be secured to ceiling structure (studs or cross-braces). Power feed connections for TruGroove surface micro modules can be made through a recessed 2"X4" utility box (by others) or with a surface mounted junction box/exposed conduit (by others).**

TM Surface Joint Kit

- TM joiner aligner pair (x2)
- TM Surface Ceiling Bracket (x2)
- #10-32 x 3/4" screw (x2)
- #10-32 nut (x2)
- 1ft A/C cable (x2)

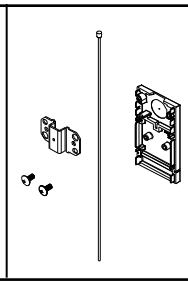
*Note: 1 kit required for each joint

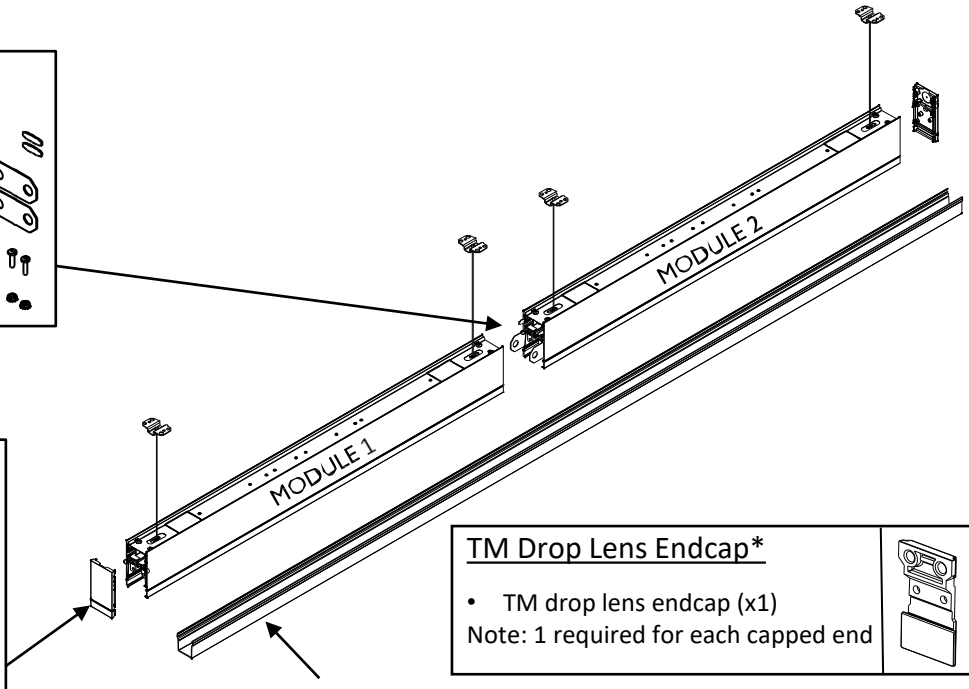


TM Surface Endcap Kit

- TM Surface Endcap (x1)
- #8-32 x 3/8" screw (x2)
- 1ft A/C cable (x1)
- TM Surf Ceiling Bracket (x1)

*Note: 2 kits required for capped ends





TM Drop Lens Endcap*

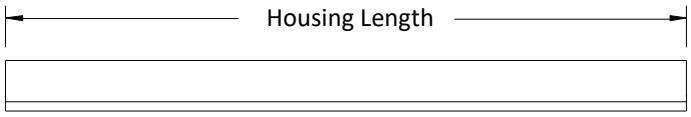
- TM drop lens endcap (x1)

Note: 1 required for each capped end

*Optional

Module Lengths

TruGroove surface micro fixtures come in the module lengths shown. Add 0.25" for each endcap for accurate run length.



Length without endcaps	feet	2.0	2.5	3.0	3.5	4.0	5.0	6.0	8.0
	Inches	24.0	30.0	36.0	42.0	48.0	60.0	72.0	96.0
	mm	610	762	914	1067	1219	1524	1829	2438

TOOLS REQUIRED:

- *#2 Phillips screwdriver*
- *Flat-head screwdriver*
- *#2 Robertson screwdriver (optional)*
- *small ratchet*
- *Ø7/8 drill bit*

! ATTENTION: Install in accordance with local and national building and electric codes.

IS-TM11 Surface Mount Installation Instructions

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interreference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning! Shock Hazard!

IMPORTANT:
Disconnect or turn off power before attempting any installation, service or maintenance.

Warning! Shock Hazard!

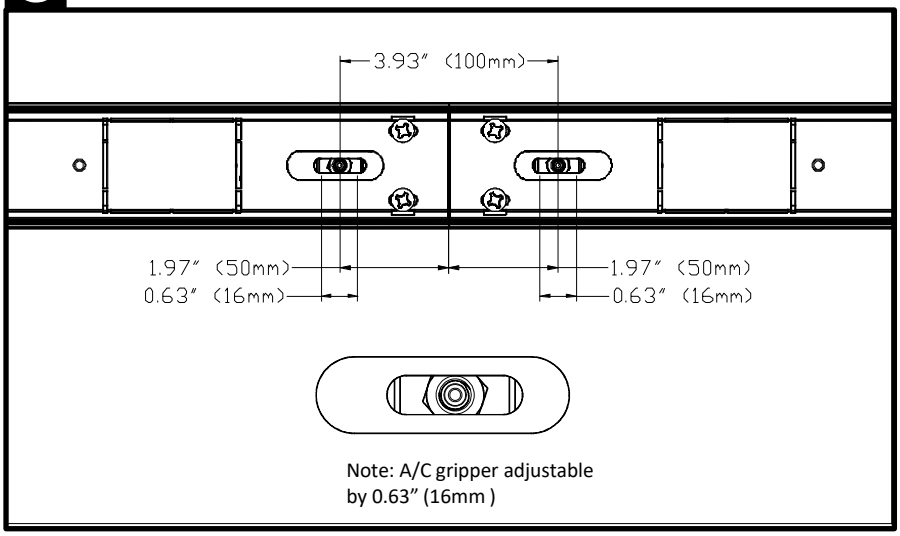
Fixture must be connected to building ground via the provided ground wire before re-connecting to mains power supply.

Power Label Location

For D/I symmetric and asymmetric fixtures, power labels can be found on light engine pans or under end louver modules.

For Direct and Surface symmetric and asymmetric fixtures, power labels can be found on upper pan.

Joiner Mounting Dimensions for Ceiling Bracket



Note: A/C gripper adjustable by 0.63" (16mm)

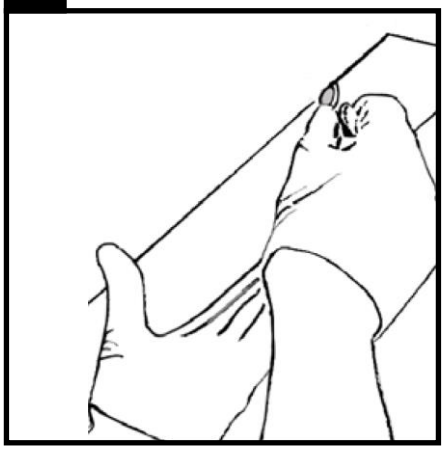
Installation Notes

Arrange boxed fixtures on floor in specified mounting locations, based on supplied layout drawings. Remove fixtures from boxes.
Install all ceiling mounting components and vertical aircraft cables using separate installation instruction for Aircraft Cable Mounting (supplied).

ATTENTION: Install in accordance with local and national building and electric codes.

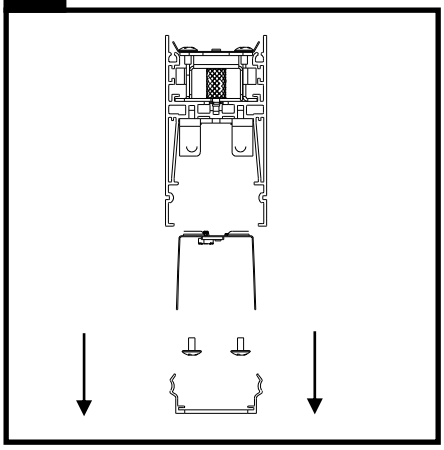
Lens Removal

1a Lens Removal



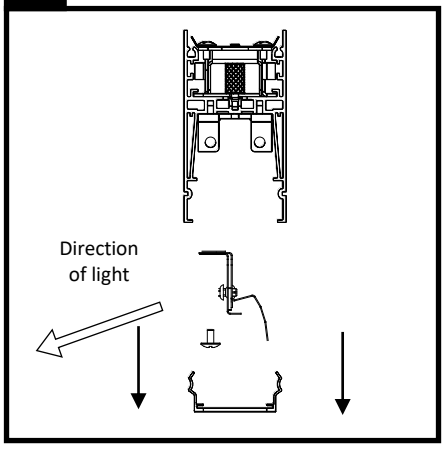
Lens Removal: To remove snap-in lens for maintenance purposes, insert a flat, smooth edged object between lens and housing (avoid screwdrivers). Twist to release pressure and remove lens.
Note: Optional Drop Lens is shipped separately.

1b Symmetric Fixture



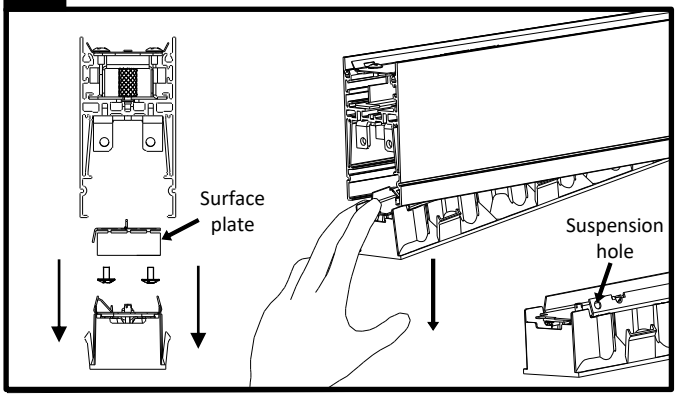
Remove lens from fixture and set aside until fixture installation is complete. Use cotton gloves to handle lenses and keep in a clean environment.
Remove the 2 screws securing the lower light engine and temporarily support light engine in position below fixture.
DO NOT ALLOW LIGHT ENGINE TO HANG FROM ELECTRICAL WIRES.
Save screws for re-installation later.

1c Asymmetric Fixture



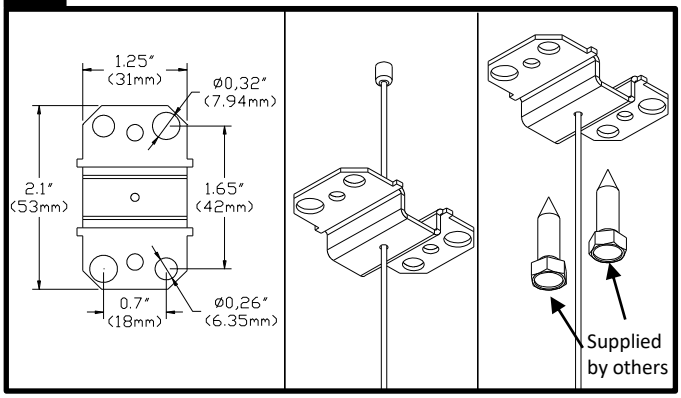
Remove lens and set aside until fixture installation is complete. Use cotton gloves to handle lenses and keep in a clean environment.
Remove the 2 screws securing the lower light engine and temporarily support light engine in position below fixture.
DO NOT ALLOW LIGHT ENGINE TO HANG FROM ELECTRICAL WIRES.
Save screws for re-installation later.

1d Fixture with Louvers



Remove one louver from end of fixture by pulling gently and temporarily suspend from available holes. Remaining louvers can be pushed to center for better access. Remove the screws securing the surface plate. For louver-lens combinations, remove both louver and lens. Use cotton gloves to handle lenses and keep in a clean environment.
DO NOT ALLOW LIGHT ENGINE TO HANG FROM ELECTRICAL WIRES.

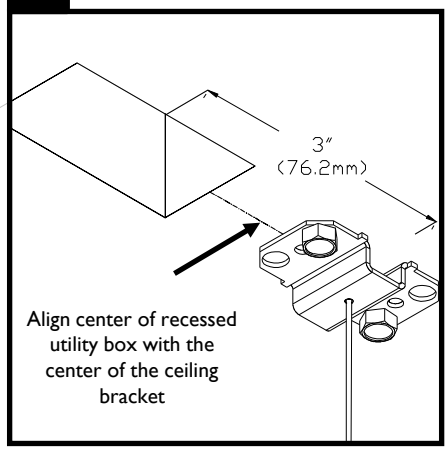
2 Ceiling Bracket Installation



Determine location of ceiling brackets. Pull aircraft cable thru the bracket. Center and install ceiling brackets to structure (studs or cross-braces) using appropriate hardware (by others).

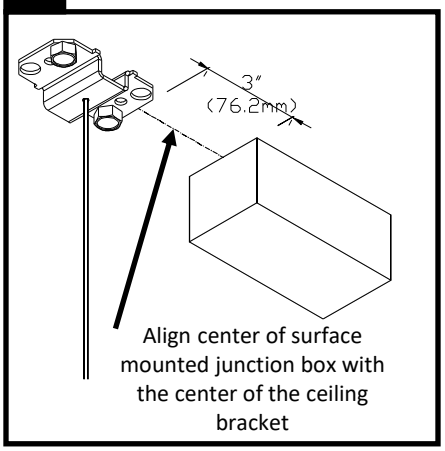
! ATTENTION: Install in accordance with local and national building and electric codes.

3 Recessed Utility Box



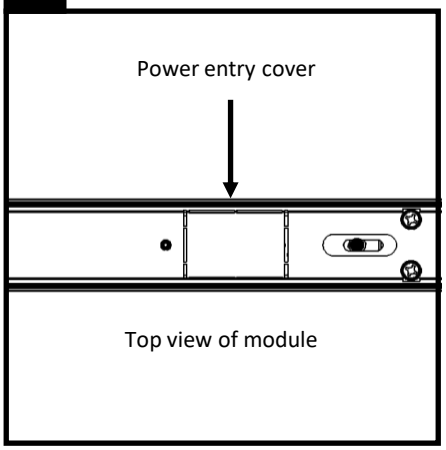
For a recessed 2"X4" utility box, align and center with ceiling brackets, and install with long edge parallel with fixture module length. Ensure utility box is positioned 3"(center to center) away from ceiling bracket.

4 Surface Junction Box



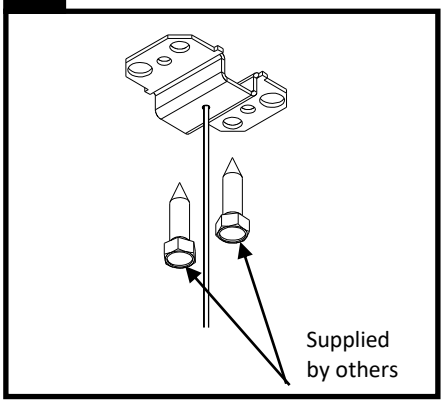
For a surface mounted junction box, install junction box as required. For a cleaner install and better alignment with installed fixture modules, center junction box and conduit exit with center line of ceiling brackets. Junction box is required to be 3" (minimum) away from mounting bracket.

5 Recessed Power Feed Location



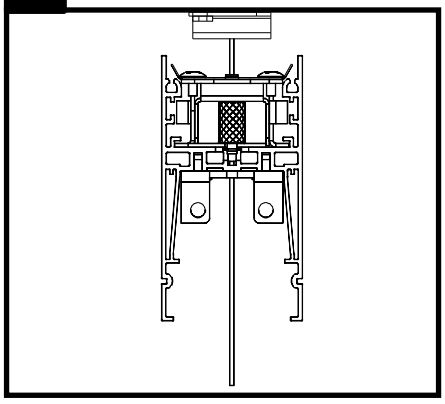
Determine fixture power feed method and location. For a recessed utility box installation, break off power cover tabs using a flat screwdriver at required end only. Power entry location available only on one side on module lengths 2',2.5'3' and 3.5'.

6 Fixture suspension



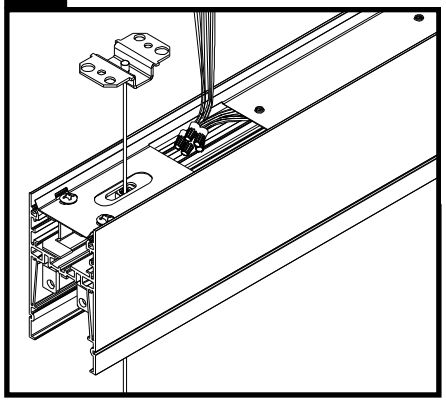
Determine location of ceiling brackets. Use table on page 1 for exact dimensions. Center and install ceiling brackets to structure (studs or cross-braces) using appropriate hardware (by others).

7 Fixture Installation



Insert aircraft cable into the gripper. Repeat on the other end of the fixture. Raise module 1 towards ceiling, suspending both ends a few inches below ceiling level.

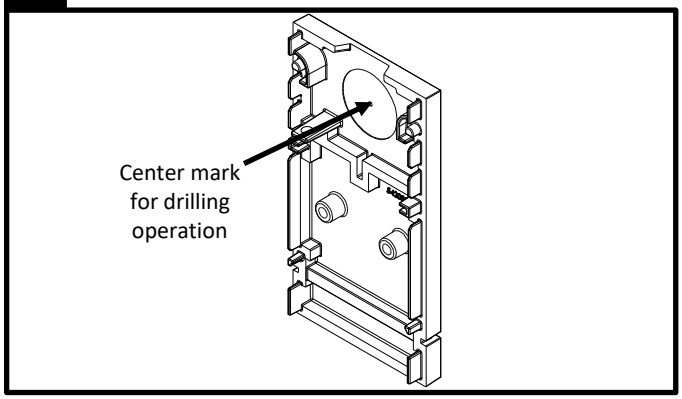
8 Recessed Power Connection



While supporting the module in the air complete power entry wiring connections. Ensure all connections are secure and all wires are neatly tucked inside fixture wiring cavity.

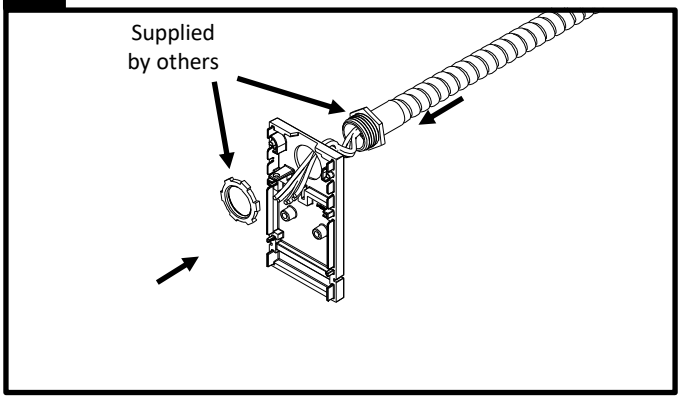
! ATTENTION: Install in accordance with local and national building and electric codes.

9a Surface Power Feed Preparation



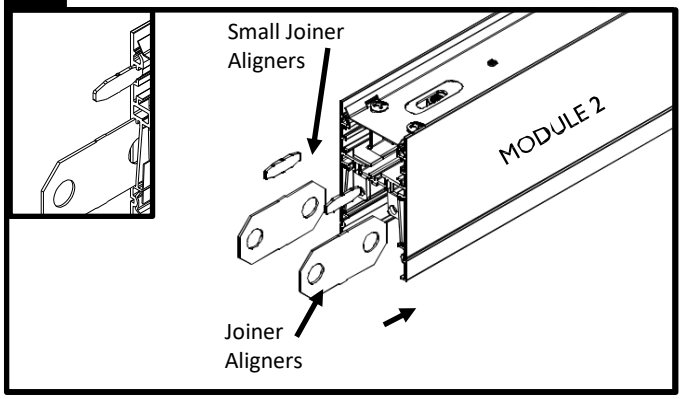
For surface junction box installation, power feed to fixture module is done through the endcap. Use masking tape on all outside surfaces. Align with center mark as shown and drill a 7/8” diameter hole.

9b Surface Power Feed Connection



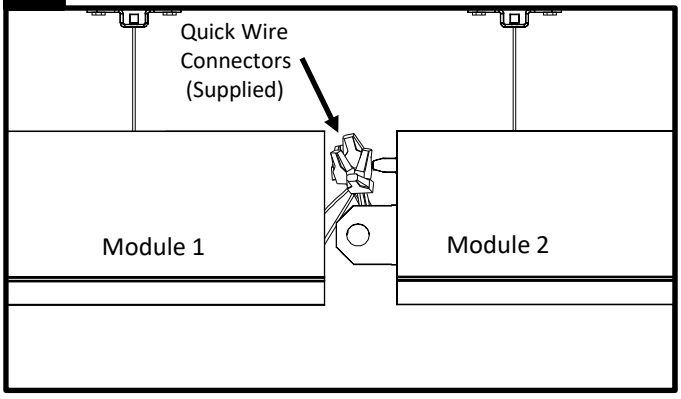
Prepare power feed by installing the conduit and the connectors (by others) to the drilled endcap. Refer to steps 16 for power connections and endcap installation.

10 Fixture Joining



With module 2 on the ground, tap small joiner aligners inside top chase. Ensure small joiner aligners are inserted more than halfway inside fixture housing. Insert large joiner aligners inside lower chase as shown.

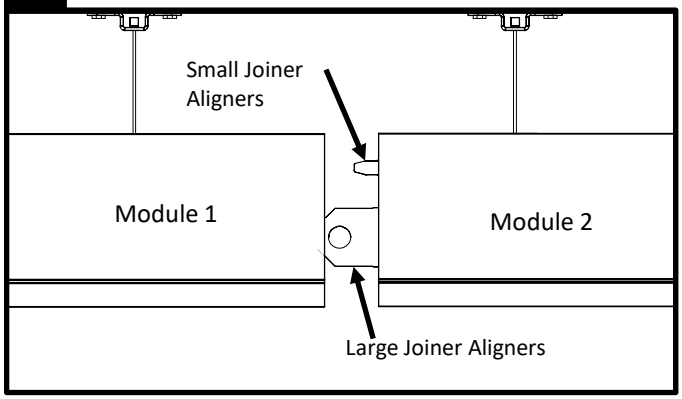
11 Surface Power Feed Connection



Suspend Module 2. Refer to step 7. With module 2 supported complete wiring connection using provided quick wire connectors. Note: Do not fully raise modules at the moment.

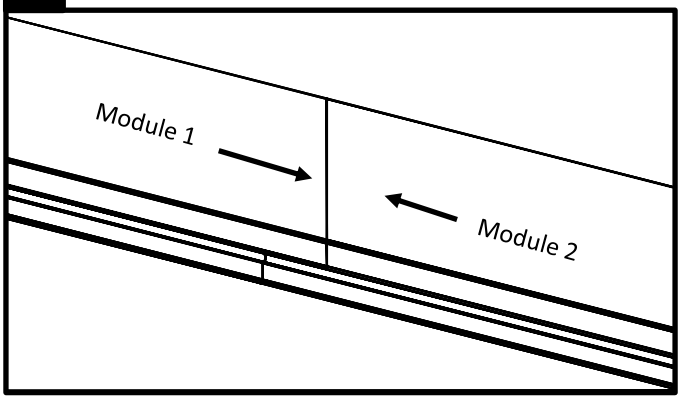
! ATTENTION: Install in accordance with local and national building and electric codes.

12 Fixture Joining



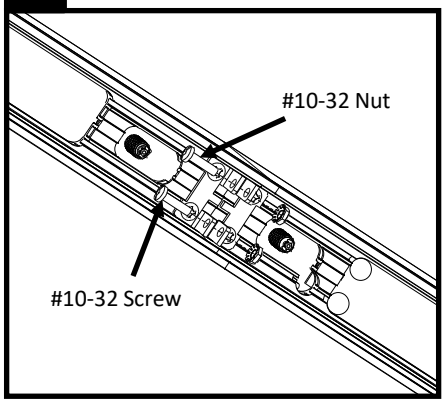
Bring module 1 and 2 together. Engage joiner aligners in module 2 with housing of module 1.

13 Fixture Joining



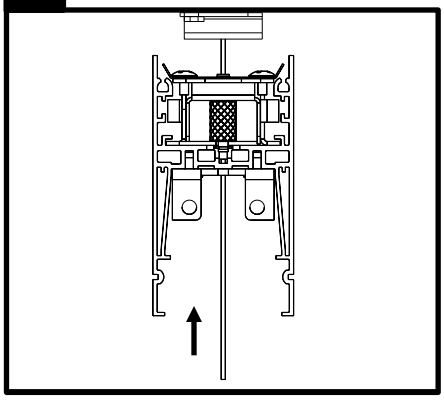
Ensure all connections are secure and all wires are neatly tucked inside fixture wiring cavity. Slide fixture modules together gently.

14 Fixture Joining



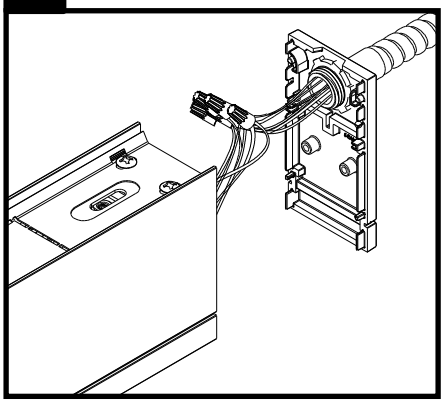
Secure fixture modules together using the two #10-32 machine screws and the two #10-32 nuts supplied. Tighten until joint seam is tight.
Note: Do not overtighten.

15 Fixture Installation



Raise the row of modules to ceiling simultaneously. Tighten join again if required. Now the whole row is secured. Push excess aircraft cable through the opening.
IMPORTANT: Do not trim aircraft cable.

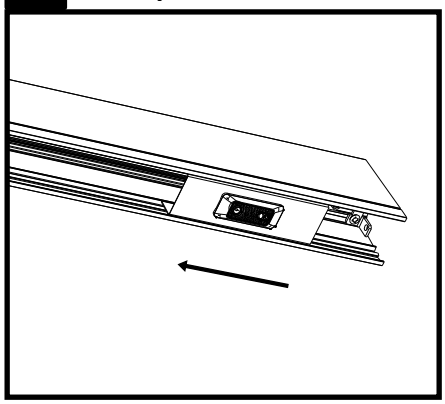
16 Surface power feed



For surface mounted junction box, connect conduit and required connectors (by others) to drilled endcap. Refer to 9a & 9b.

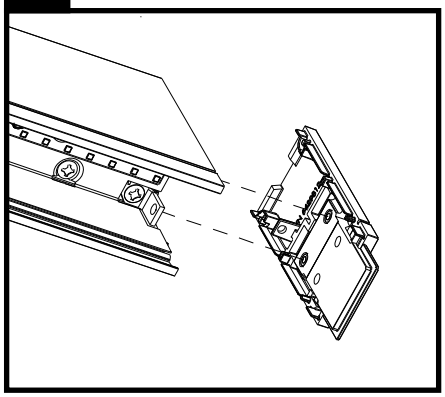
! ATTENTION: Install in accordance with local and national building and electric codes.

17a Endcap with Sensor



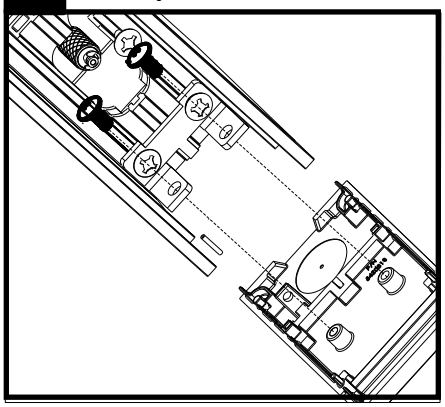
Before installing the endcap, slide the sensor towards the center of the fixture to gain access. Proceed with endcap installation, step 18.

17b Drop Lens Endcap Installation



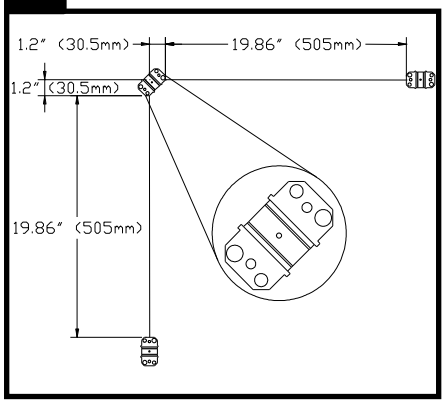
Place drop lens endcap as shown over the emboss of endcap and proceed with endcap Installation of endcap, step 18.

18 Endcap Installation



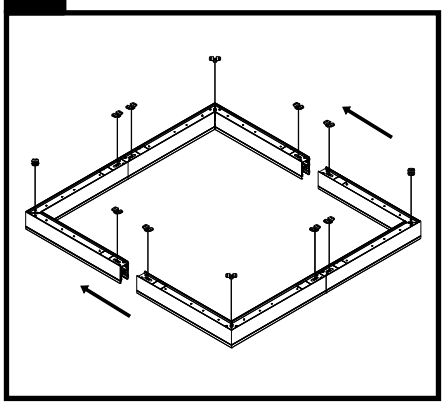
Slide endcap onto end of fixture module and secure from below using two #8-32 X 3/18" screws. Tighten screws until endcap seam is tight. Note: Do not overtighten.

19 Corner, Bracket Installation



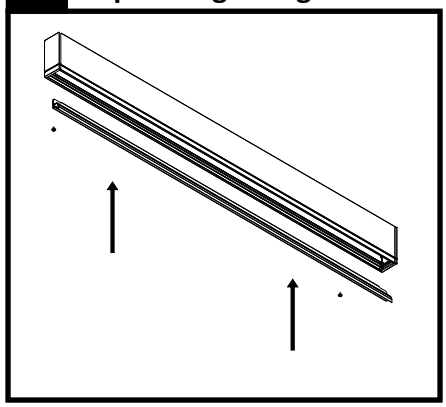
If a corner is required, it is recommended the corner module be installed first. Position of brackets are critical for installation. Place as dimensioned above.

20 Closed Pattern Installation



If installing a square or rectangular closed pattern, it is recommended to install opposite U-shaped fixture/corner patterns first and complete the installation by bringing U-shaped sections together as shown.

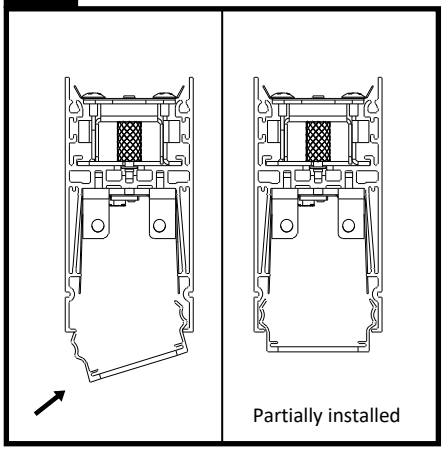
21 Replace Light Engine



Reinstall the lower led pans with the screws provided. Ensure direction of light is as shown on layout drawings.

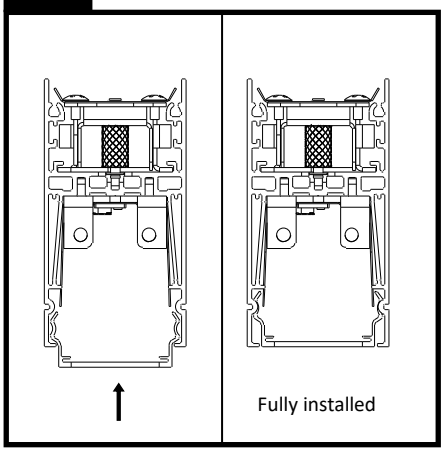
! ATTENTION: Install in accordance with local and national building and electric codes.

22a Fixture Lens Installation



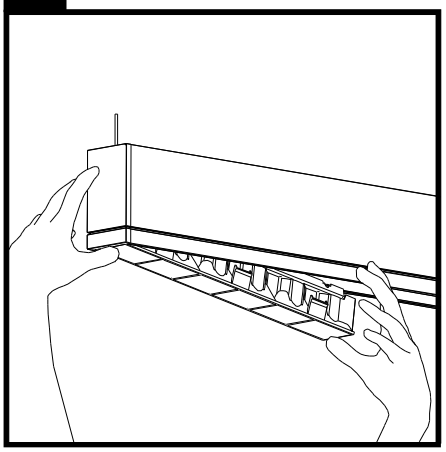
Install lenses removed in step 1.
Installation Tip: For easier installation, start at a housing end or a joint by placing lens at an angle and squeezing in slightly from the other side to guide inside housing.

22b Fixture Lens Installation

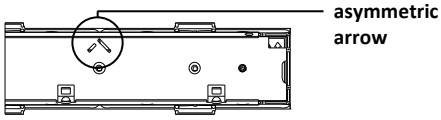


Once lens is positioned inside housing, starting on one end or joint, push upwards gently and work outward to complete the run.
Note: Flush lens and drop lens are installed the same way. Flush lens is shown for reference.

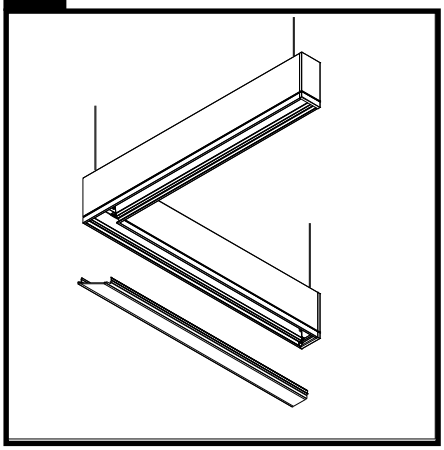
23 Louver Installation



Reinstall surface plates with the screws provided and follow with louvers. Start on one end of the louver pressing gently on side tabs. **IMPORTANT:** For asymmetric louver fixtures, orientate the arrows on the louver pan to point at the label on the outside of the housing.

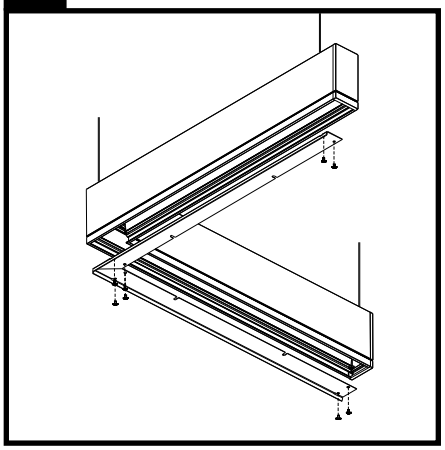


24 Corner Lens Installation



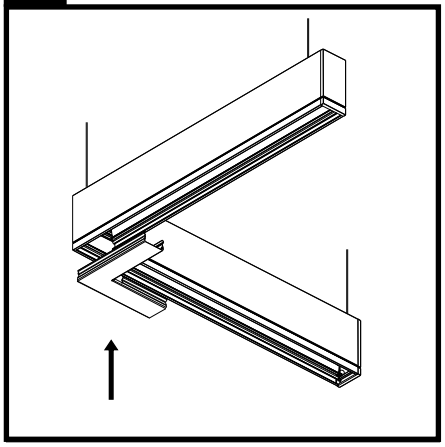
Installation Tip: For easier installation of corner lenses, start at the corner and work outward to complete the run. Follow step 22.

25 Corner Louver Installation



Reinstall the surface corner plates with the screws provided.

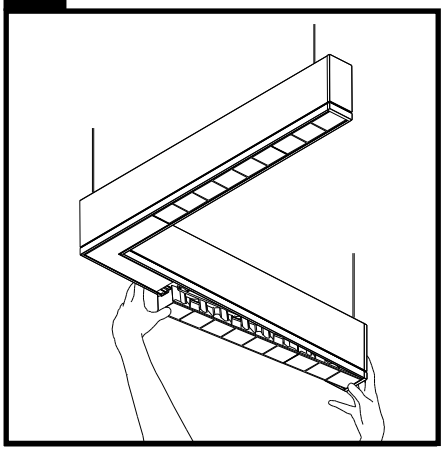
26 Corner Louver Installation



Install filler plate before installing louvers. Tip: For easier installation, start by squeezing filler plate in slightly from both sides and guiding inside housing.

! ATTENTION: Install in accordance with local and national building and electric codes.

27 Corner Louver Installation



Installation Tip: For easier installation, start on one end of the louver pressing gently on side tabs.

28 Finishing

- Ensure all fixtures are level and in line with each other.
- Check that all joint or endcap screws are installed, and all seams are tight.
- Install LED Pan.
- Power fixtures on and check all modules light up.
- Install lenses.

! **ATTENTION: Install in accordance with local and national building and electric codes.**

PRF/PRA Interact Pro Foundation/Advance Install & Setup

*not for Enterprise or Signify Commissioned projects

To configure a lighting system with Interact sensors or RF nodes;

- Ensure the luminaires are installed and powered on.
- Download the Interact Pro app from either Apple's App Store (for iOS) or Google's Play Store.

- Register by tapping **Request access** on the login screen in the app.
- **Click** or **scan** the QR codes below to view instructions for setup.

Interact Pro Foundation Quick Start Guide

Interact Pro Advanced Quick Start Guide

Interact Pro Documentation

Interact Pro Setup Video

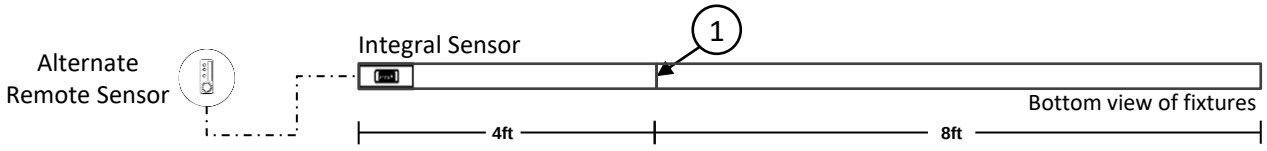
Contact Us 1-800-555-0050

! **ATTENTION: Install in accordance with local and national building and electric codes.**

Sensors in Rows

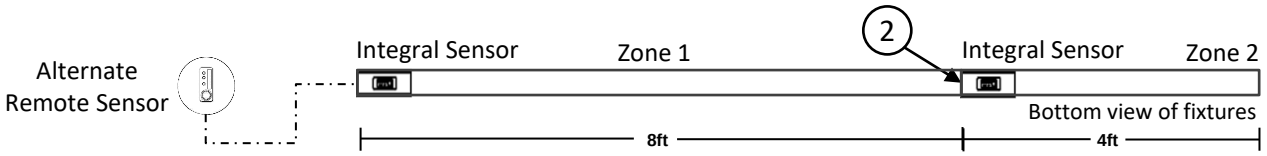
Single Sensor Controlling Whole Row

1. Purple & brown (or purple & grey/pink) control wires **MUST** be connected between fixtures.
   Note:
   - A maximum of 8 drivers can be wired to one sensor; confirm fixture driver count with factory.



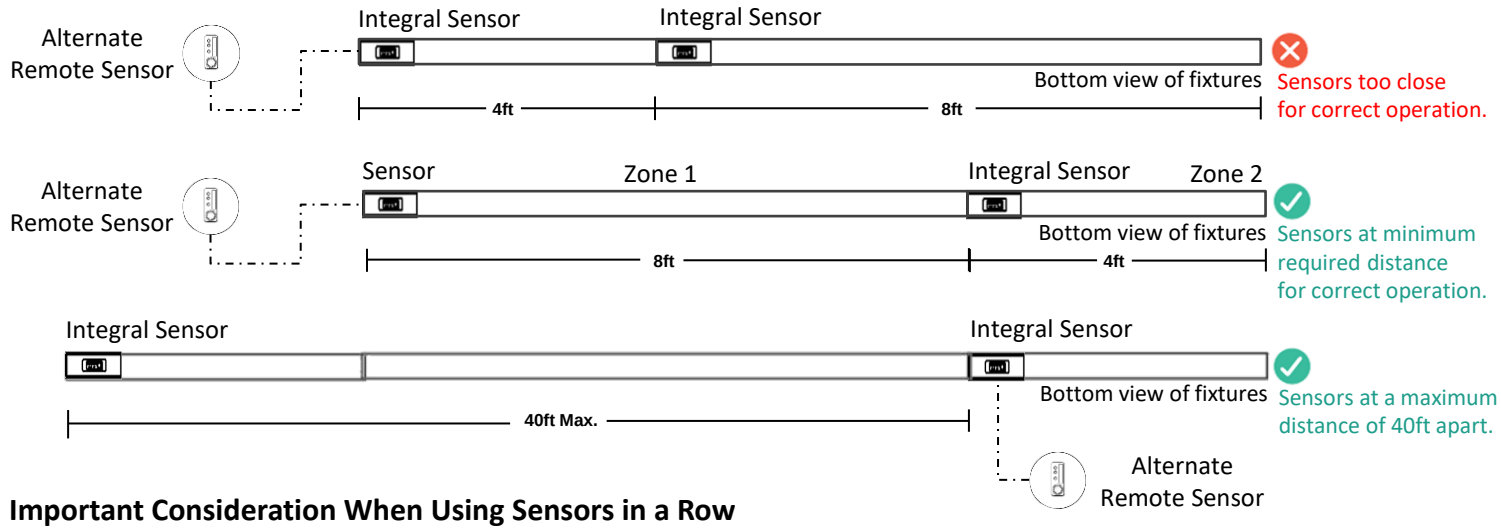
Multiple Sensors Controlling Separate Zones in a Row

2. Purple & brown (or purple & grey/pink) control wires **MUST NOT** be connected between zones.
   Notes:
   - A maximum of 8 drivers can be wired to one sensor; confirm fixture driver count with factory.
   - Only one sensor is allowed on a wired zone. (Sensors can be paired together wirelessly via a mobile app).



Sensor Spacing

- For correct operation, sensors should be placed a minimum distance of 8ft apart.
- Wireless sensors should be placed no further than 40ft apart for good wireless signal connection.



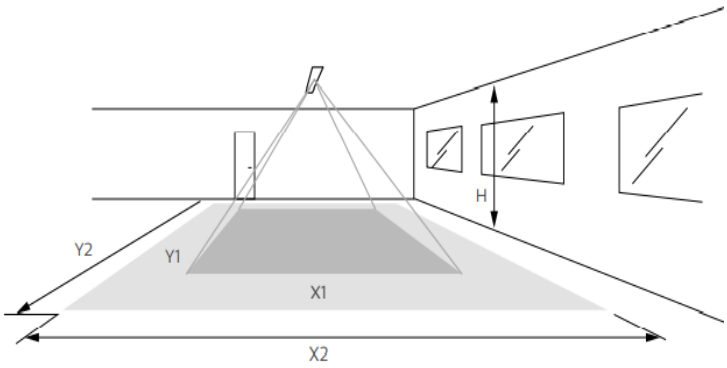
Important Consideration When Using Sensors in a Row

- For fixtures with wireless sensors (CS, SB or RA options):
  DO NOT connect fixture purple & brown (or purple & grey/pink) control wires to an external dimming switch. Fixture mains wiring should not be connected to a circuit with an external on/off switch.
- For best aesthetic condition, place sensors at ends of row only so as not to break the continuous lens.
- For better occupancy coverage in longer rows, sensors may be placed mid run, but keep in mind this will break the continuous lens into discrete sections. Alternatively, remote sensor may be used, note the same wiring rules will apply.

! ATTENTION: Install in accordance with national and local building and electrical codes.

Occupancy Sensor Coverage:

Note: Longer dimension of detection area (Y1, Y2) is parallel to longer dimension of the luminaire.



Height	Minor movement		Major movement	
h	X1	Y1	X2	Y2
2.4 m (7.9 ft)	1.9 m (6.2 ft)	2.9 m (9.5 ft)	2.9 m (9.5 ft)	4.3 m (14.1 ft)
3 m (9.8 ft)	2.4 m (7.9 ft)	3.6 m (11.8 ft)	3.6 m (11.8 ft)	5.4 m (17.7 ft)

The detection area for the movement sensor can be roughly divided into two parts:

- Minor movement (person moving ≤3ft/s or 0.9m/s).
- Major movement (person moving ≥3ft/s or 0.9m/s).

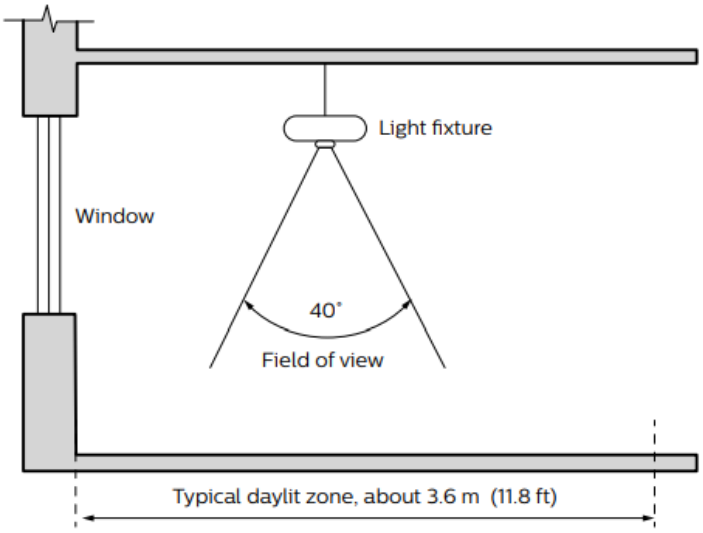
Daylight sensor

The light sensor measures the total amount of light in a circular field of approximately 80% of the PIR detection area. The following aspects should be observed during installation:

- Minimum distance from the window ≥2ft (0.6m).
- Prevent light reflections from outside entering the sensor (for example sunlight reflection on a car hood) as this will lead to incorrect light regulation.

As a guideline the formula 0.72 x H can be used to calculate the minimum distance between the window and sensor whereby H is the height from the bottom of the window to the sensor.

Photosensor spatial response



! ATTENTION: Install in accordance with local and national building and electric codes.

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