**System Overview**

These instructions review how to install Chopstick LED suspended fixtures. Chopstick 4ft, 6ft, & 8ft modules can be installed as individual standalone units, or they can be joined together to create continuous rows. The graphic below shows the components required to install a typical row of Chopstick LED suspended fixtures.

**Module Lengths**

Chopstick LED suspended systems come in 4ft, 6ft, & 8ft modules. Overall module lengths are shown here. Module lengths do not include endcaps.

**Endcaps**

Add two endcaps to the length of each row.

**Chopstick joint kit(s)**

- A/C mounting bracket
- Break apart joiner aligner
- #8-B x ¼" screw
- #10-24 x 9/16" bolt (x2)
- #10-24 nut (x2)
- Gasket

*Note: 1 kit required for each in-row joint.

**Chopstick end kit(s)**

- Endcap
- A/C mounting bracket
- #8-B x ¼" screw
- 11/32" self-threading nuts (x2)

*Note: 2 kits required for row (one for each end).

**Row Configurations**

The table below indicates how 4ft, 6ft, & 8ft modules can be combined to create continuous rows of various lengths.

<table>
<thead>
<tr>
<th>Nominal row length</th>
<th>4'</th>
<th>6'</th>
<th>8'</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'</td>
<td>1x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6'</td>
<td></td>
<td>1x</td>
<td></td>
</tr>
<tr>
<td>8'</td>
<td></td>
<td></td>
<td>1x</td>
</tr>
<tr>
<td>10'</td>
<td>1x</td>
<td>1x</td>
<td></td>
</tr>
<tr>
<td>12'</td>
<td>1x</td>
<td>1x</td>
<td>1x</td>
</tr>
<tr>
<td>14'</td>
<td>1x</td>
<td>1x</td>
<td>1x</td>
</tr>
<tr>
<td>16'</td>
<td></td>
<td>2x</td>
<td></td>
</tr>
<tr>
<td>18'</td>
<td>1x</td>
<td>1x</td>
<td>1x</td>
</tr>
<tr>
<td>20'</td>
<td>1x</td>
<td></td>
<td>2x</td>
</tr>
</tbody>
</table>

*Overall row lengths provided do not include endcaps. Add two endcaps to the overall length of each row.
**Installation Instructions**

**Prepare fixtures / Install ceiling mounting components**
- Arrange boxed fixtures on the floor in specified mounting locations; remove fixtures & lightguide panels from boxes.
- Install all ceiling mounting components and vertical aircraft cables using separate installation instructions for Aircraft Cable Mounting (supplied).

**NOTE:** If conditions are dusty/dirty, recommended practice is to leave fixtures in their plastic bag. Cut small holes in bag as needed to complete the following installation sequence, and then completely remove the bag from the fixture when conditions are clean.

**Install end-of-row aircraft cable brackets**
- Fold rectangular flaps in wire cover and insert the A/C mounting bracket through the top. Raise bracket until security tab is engaged.
- Attach brackets to fixture using supplied fasteners.

**Suspend and level first fixture**
- With two people, raise the first fixture to the ceiling. At each end of the module, insert aircraft cable into cable adjuster. The adjuster will automatically grip and hold the cable. **Do not force cable into adjuster.** See instructions.

**Complete electrical connections at end**
- **NON-POWER LOCATIONS:** Cap all wires and tuck into wire cavity.
- **POWER LOCATIONS:** Remove required ½” round knockout(s) in wire cover and insert supplied bushings(s). Insert power cord and apply strain relief below the wire cover to secure cord. Remove installed quick-wire connectors (if applicable) at power feed locations and complete electrical connections using wire nuts (supplied by others). Tuck wires into wire cavity.

**Install in-row mount brackets and insert joiner aligners**
- For each additional fixture in the row, at the end furthest from the existing suspended fixture, install the A/C mounting bracket as in step 2. **At the end closest to the existing suspended fixture,** insert joiner aligners into the crossplate (aligners will lock into place).

**Suspend and join additional fixtures to create row**
- With two people, raise second fixture to ceiling. At joint, insert joiner aligners through black **GASKET** and into suspended fixture. At other end of joining fixture, insert aircraft cable through adjuster.

**Complete electrical connections at joints**
- **NON-POWER LOCATIONS:** Use supplied quick-wire connectors. Tuck wires into wire cavity.
- **POWER LOCATIONS:** Remove installed quick-wire connectors and complete electrical connections using wire nuts (supplied by others). Tuck wires into wiring cavity.

**ATTENTION:** Install in accordance with national and local building and electrical codes.
8 Secure joint(s)

BOLT  NUT

SLIDE MODULES TOGETHER: Secure joint from above using supplied bolts & nuts.

9 Install endcaps

ENDCAP  NUT

Attach endcap to first and last module in each row using supplied hardware. 11/32” NUT DRIVER OR WRENCH REQUIRED.

IMPORTANT: Do not over-tighten endcap hardware. Tighten by hand. When nut is flush with cross-plate, turn additional 1/8 – 1/4 turn.

10 Install lightguide

SHINY SIDE DOWN

PEEL OFF PROTECTIVE FILM FROM BOTH SIDES OF LIGHTGUIDE PANEL

IMPORTANT: INSTALL LIGHTGUIDE PANEL SHINY SIDE DOWN

Locate one edge of the lightguide panel against LED’s as shown. Using both hands, squeeze together housing and lightguide panel edge with thumb and fingers. Continuing to squeeze, quickly rotate lightguide into place. Ensure lightguide is installed correctly.

A Aircraft cable adjustment

IMPORTANT: Do not force cable into adjuster. To insert cable into adjuster, follow the steps below.

1. CUT

If required, cut cable ends cleanly prior to inserting into adjuster. Recommended cutters: K.K. Porter cable cutter cat No. 0690TN or Klein all-purpose shears cat No. 1104.

2. INSERT

Carefully insert cable into tapered end. If cable does not insert easily or becomes jammed, use the release tool to remove cable. Trim cable end again and repeat process. DO NOT BEND CABLE BELOW BOTTOM OF ADJUSTER.

3. TEST

Once Cable is inserted, apply a 25lb point load to each mount bracket to ensure all connections are secure.

B Level horizontally

LEVEL HORIZONTALLY: Loosen fastener on bottom of adjuster and level as required. Tighten fastener once fixture is in place.

C Level vertically

LEVEL VERTICALLY: Support fixture from below and use supplied aircraft cable release tool to make fine height adjustments.

NOTE: Ensure fixture is level end-to-end. Support fixture from below and use supplied aircraft cable release tool to make fine height adjustments.

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 interference 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.

ATTENTION: Install in accordance with national and local building and electrical codes.
**Sensor in Rows**

**Single Sensor Controlling Whole Row**
1. Purple & brown (or purple & grey/pink) control wires **MUST** be connected between fixtures.
   - A maximum of 8 drivers can be wired to 8 sensors; confirm fixture driver count with factory.

**Multiple Sensors Controlling Separates Zones in a Row**
2. Purple & brown (or purple & grey/pink) control wires **MUST NOT** be connected between zones.
   - 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, sensor should be placed a minimum distance of 8ft apart.
- Wireless sensor should be placed no further than 40ft apart for good wireless signal connection.

**Important Consideration When Using Sensor in a Row**
- For fixtures with wireless sensors (CS, SB or RA options): **DO NOT** connect fixture purple and 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 sensors may be used, note the same wiring rules will apply.

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**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.

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 $\geq$ 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 $0.72 \times H$ 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.

The detection area for the movement sensor can be roughly divided into two parts;
- Minor movements (person moving $\leq$ 3ft/s or 0.9m/s).
- Major movements (person moving $\geq$ 3ft/s or 0.9m/s).

Photosensor spatial response