

## SURFACE MOUNT

### FREEDOM TO CREATE™



**Read the following instructions before operating the luminaire.**  
Lisez les instructions suivantes avant d'utiliser le luminaire.

**EcoSense Lighting fixtures must be installed by a qualified**

**electrician.**

EcoSense Eclairage doit être installé par un électricien qualifié.

**EcoSense Lighting, Inc. is not responsible if its fixtures are not installed in accordance with all national and local safety standards.**

EcoSense Lighting, Inc n'est pas responsable si son appareils ne sont pas installés conformément à toutes les normes de sécurité nationales et locales.



MNL-000128-00 REV E



### Product Families Covered in this Guide

Hassium  
Oxygen  
Neodymium  
Nitrogen

### FIXTURE TYPES COVERED IN THIS GUIDE

Surface Mounted Side (SMS) Fixtures  
Surface Mounted Side (SMT) Fixtures  
Surface Mounted Continuous Run

### TABLE OF CONTENTS

1. Tools required
- 2A. What's in the Box A

FIXTURE	SURFACE MOUNT SIDE (SMS)	SURFACE MOUNT TOP (SMT)
Hassium	X	N/A
Oxygen	X	X
Neodymium	X	N/A
Nitrogen	X	X

- 2B. What's in the box B

FIXTURE	SURFACE MOUNT SIDE (SMS)	SURFACE MOUNT TOP (SMT)
Nitrogen	N/A	X

3. Surface Mounted Side Fixtures (ALL)
  - a. Overview and Basic Installation Steps
  - b. Power feed detail
  - c. Non-Feed Mounting Point detail
  - d. Mounting Luminaire
- 4A. Surface Mounted Top (OXYGEN only)
  - a. Overview and Basic Installation Steps
  - b. Power Feed detail
  - c. Non-feed Mounting Point detail
  - d. Mounting Luminaire
- 4B. Surface Mounted Top (NITROGEN only)
  - a. Overview and Basic Installation Steps
  - b. Power Feed detail
  - c. Non-feed Mounting Point detail
  - d. Mounting Luminaire
5. Wiring Diagrams
  - a. Integral Powered
  - b. Remote Powered
6. Continuous run joining instructions
  - a. Wiring Diagrams: Integral Powered
  - b. Wiring Diagrams Remote Powered
7. EMB & EMW Instructions

### SECTION 1.0 TOOLS REQUIRED

- #2 Phillips Screwdriver
- 1/4" hex head screwdriver or flat head screwdriver
- Pliers
- Wire Cutters
- Wire Strippers
- Hex Wrench for Continuous Run Joiner
- 1/16"
- 5/64"

### SECTION 1.0 TOOLS REQUIRED

Due to the variations of site conditions and mounting substrates, Ecosense Lighting DOES NOT typically provide all mounting/anchoring hardware required. These items are to be specified and provided by others.

### SURFACE MOUNT

#### SECTION 2A: WHAT'S IN THE BOX VERSION A (FOR FIXTURES MARKED X IN THE TABLE TO THE RIGHT)

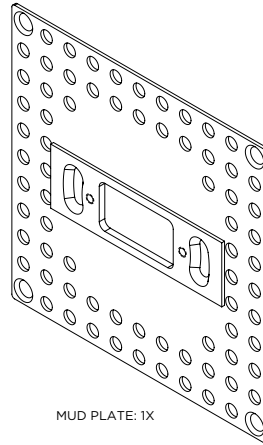
Parts Will Vary Depending on Options Chosen

FIXTURE	SURFACE MOUNT SIDE (SMS)	SURFACE MOUNT TOP (SMT)
HASSIUM	X	N/A
OXYGEN	X	X
NEODYMIUM	X	N/A
NITROGEN	X	

# A

Mud plate & Screws

POWER FEED

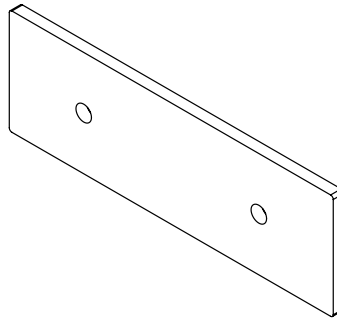


#8 SCREW: 2X

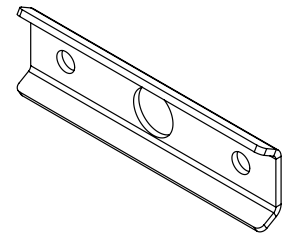
# B

Mounting Bracket, Space Plate & Screws

NON-POWERED SUSPENSION & MOUNTING PARTS



SPACER PLATE: 1X



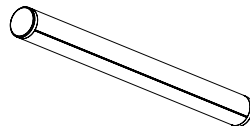
MOUNTING BRACKET: 1X

# C

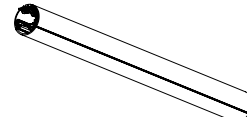
Luminaire (ships pre-assembled with Power feed cable)

1. Hassium
2. Oxygen
3. Neodymium
4. Nitrogen

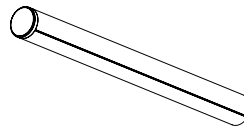
LUMINAIRE



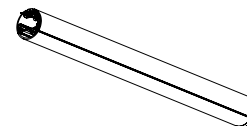
Individual



Intermediate



Start of run



End of run

# D

Remote Driver Housing (For Remote Power fixtures only)

SUPPLEMENTAL ITEMS



### SURFACE MOUNT

#### SECTION 2B: WHAT'S IN THE BOX VERSION B (FOR FIXTURES MARKED X IN THE TABLE TO THE RIGHT)

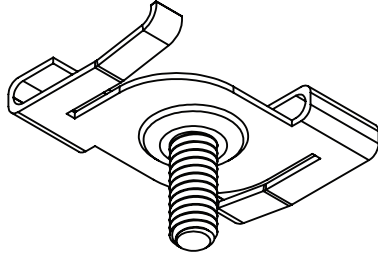
Parts Will Vary Depending on Options Chosen

FIXTURE	SURFACE MOUNT SIDE (SMS)	SURFACE MOUNT TOP (SMT)
NITROGEN	N/A	X

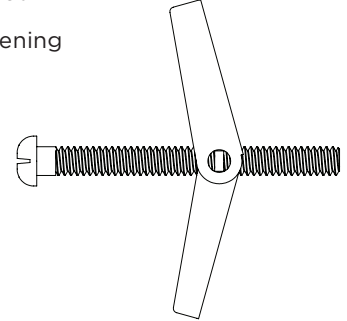
# A

NON-POWERED SUSPENSION & MOUNTING PARTS

T-Bar Clip (Optional)



Toggle Bolt  
(Only provided with 1 sized Nitrogen (N1) model. All other models utilize fastening hardware by others (not included))



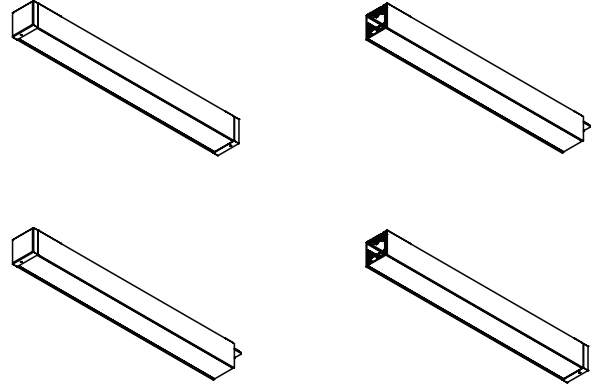
TOGGLE BOLT: 2X

# B

LUMINAIRE

Luminaire (ships pre-assembled with Power feed cable)

**4. Nitrogen**



# C

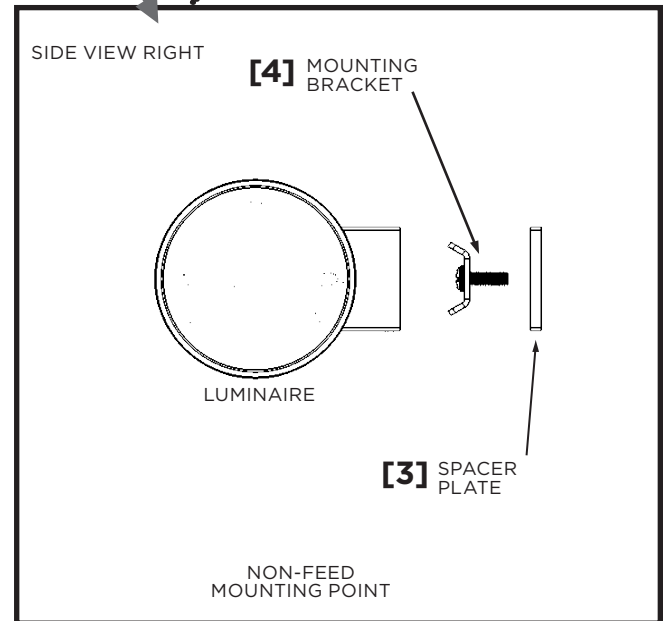
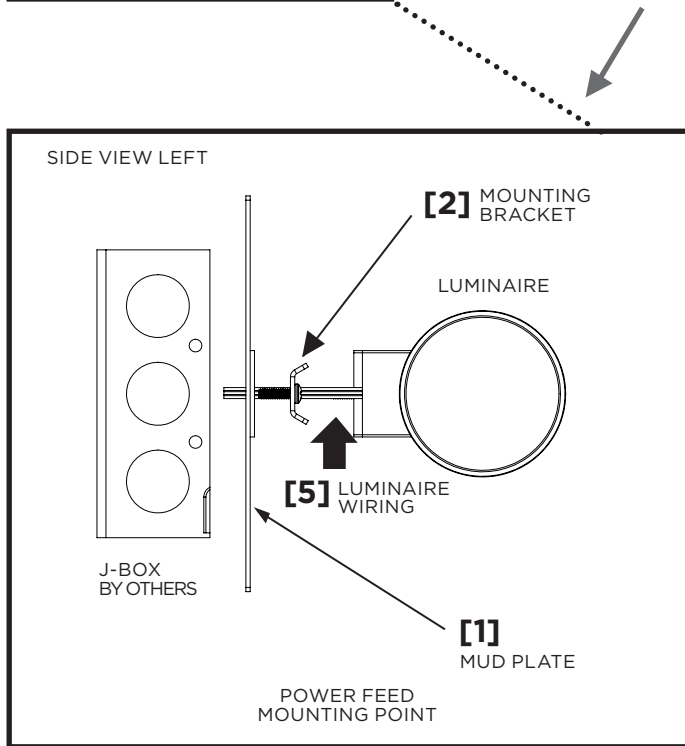
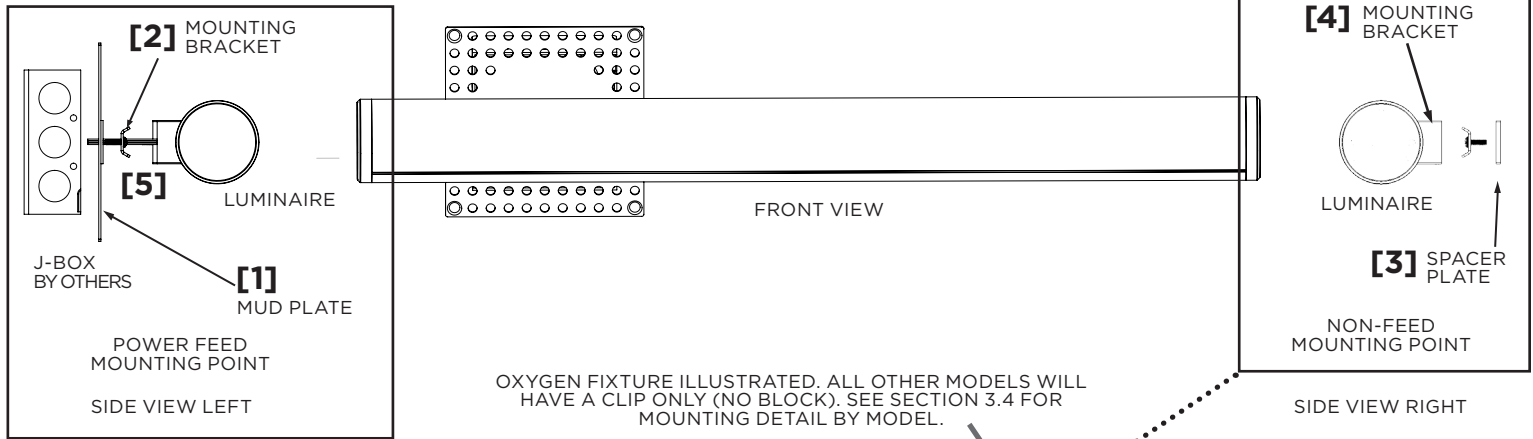
SUPPLEMENTAL ITEMS

Remote Driver Housing (For Remote Power fixtures only)



### SURFACE MOUNT

#### SECTION 3.0: SIDE SURFACE MOUNTED FIXTURES OVERVIEW



#### SECTION 3.1: SIDE SURFACE MOUNTED FIXTURES, PLAN THE INSTALLATION

##### Basic Installation Steps (detailed views & instructions in subsequent sections)

###### NOTES:

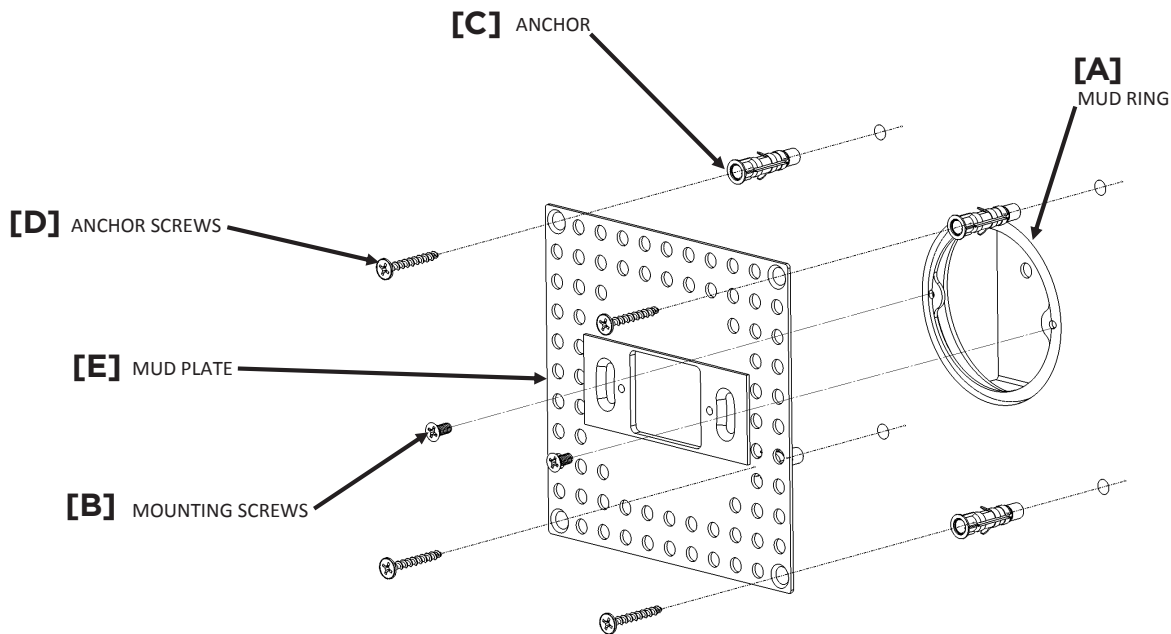
- Power Feed Cable is prewired and strain relieved to luminaire body.
- Wall mounting hardware is packed separately in the carton.

- Install mounting bracket [fig 1] and mud plate [fig 2] to bldg. at the power feed location.
- Install spacer plate [fig 3] and mounting bracket [fig 4] to bldg. at the non-feed location.
- Make electrical connection from luminaire to bldg. wiring [fig 5].
- Secure fixture onto mounting brackets.
  - For Oxygen fixtures, secure set screws in mounting block to complete attachment to mounting bracket.

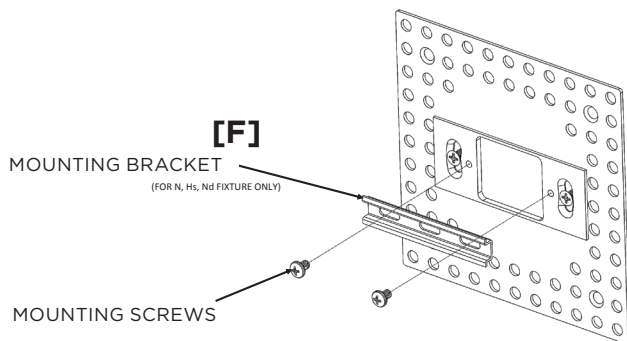
### SURFACE MOUNT

#### SECTION 3.2: SIDE SURFACE MOUNTED FIXTURES, POWER FEED MOUNTING DETAIL

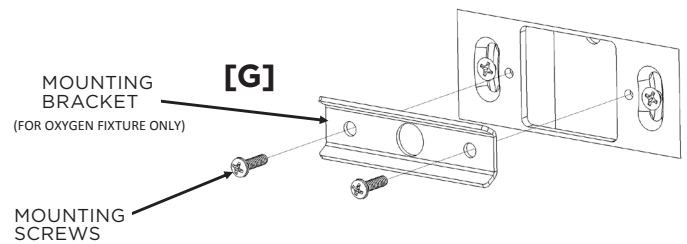
1. Install Mud Ring (by others) [A] to 4" square junction box (by others).
2. Temporarily install mud plate [E] to mud ring utilizing mounting screws.
3. Before next step, confirm mud plate is level then mark hole locations for screw anchors [C] (by others).
4. Unscrew mud plate from mud ring. Install anchors [C] (by others).
5. Screw mud plate back onto mud ring with mounting screws [B].
6. Fasten mud plate to substrate with anchor screws (by others) [D].
7. Complete mud work feathering out over the perforated metal mud plate [E].



1. Install Mounting Bracket [F] to mud plate using mounting screws.



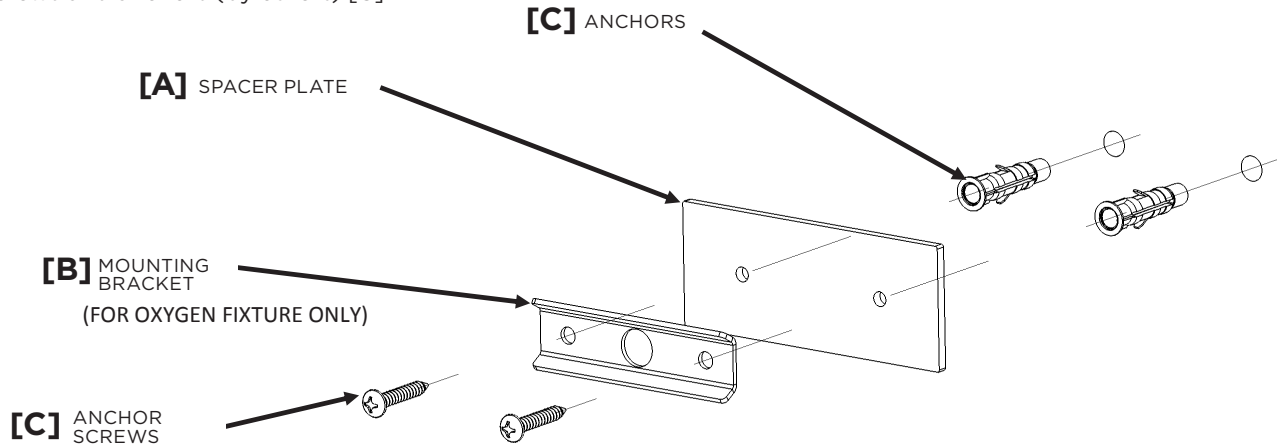
1. NOTE: Oxygen fixture mounting bracket [G] is separate and unique from mounting bracket for other fixtures.



### SURFACE MOUNT

#### SECTION 3.3 SIDE SURFACE MOUNTED FIXTURES, NON-FEED MOUNTING DETAIL

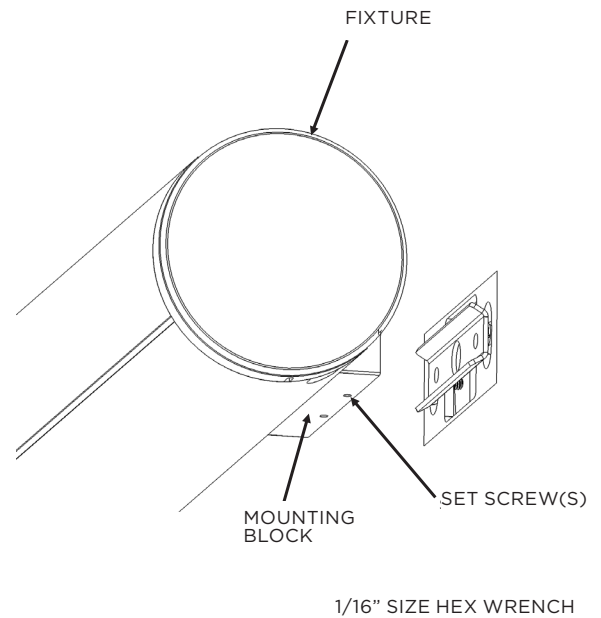
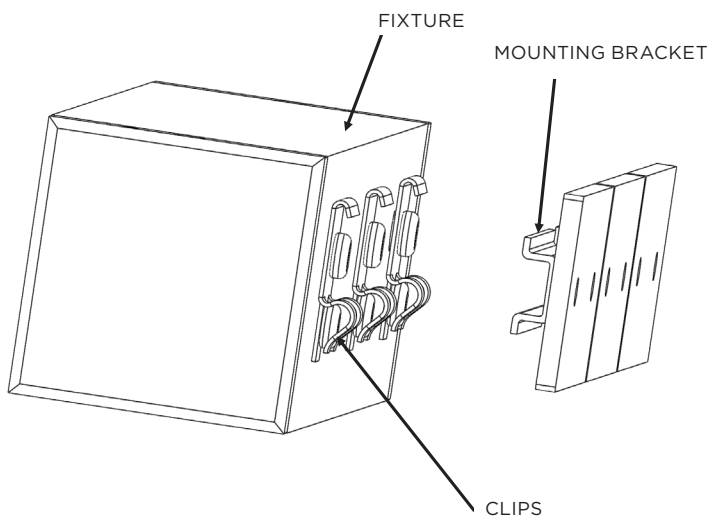
1. Fasten spacer plate [A] & mounting bracket [B] to substrate with anchor screws and anchors (by others) [C].



#### SECTION 3.4: SIDE SURFACE MOUNTED FIXTURES, MOUNTING LUMINAIRE

Install fixture by snapping the clips onto mounting bracket.

1. For Oxygen fixtures only, secure set screws in mounting block to complete attachment to mounting bracket.

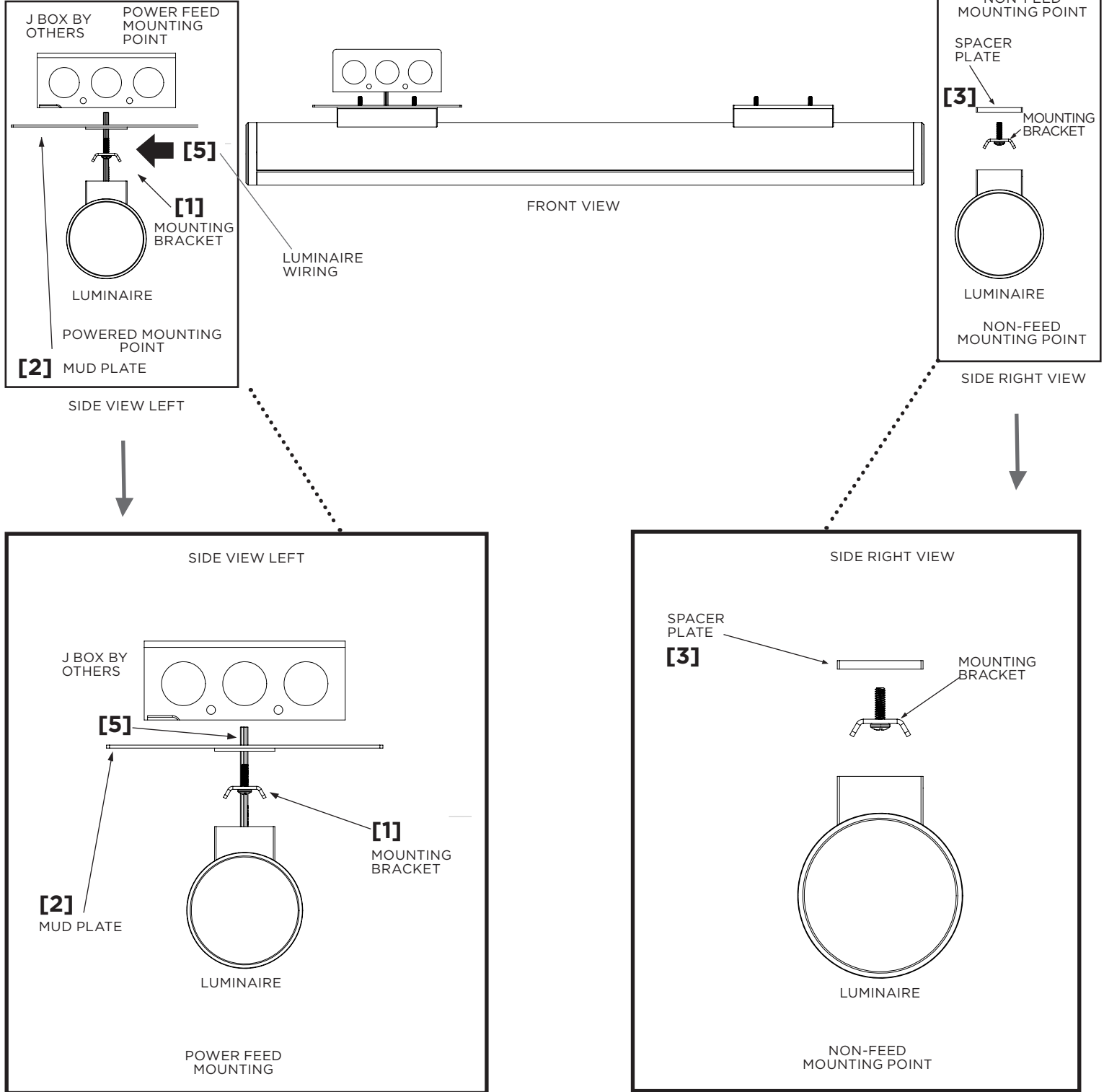


Hassium, Neodymium, & Nitrogen Fixtures

Oxygen Fixtures

### SURFACE MOUNT

#### SECTION 4.0A: TOP SURFACE MOUNTED FIXTURES OVERVIEW (OXYGEN MODEL ONLY)



### SURFACE MOUNT

#### SECTION 4A.1: SURFACE MOUNTED TOP FIXTURES, PLAN THE INSTALLATION

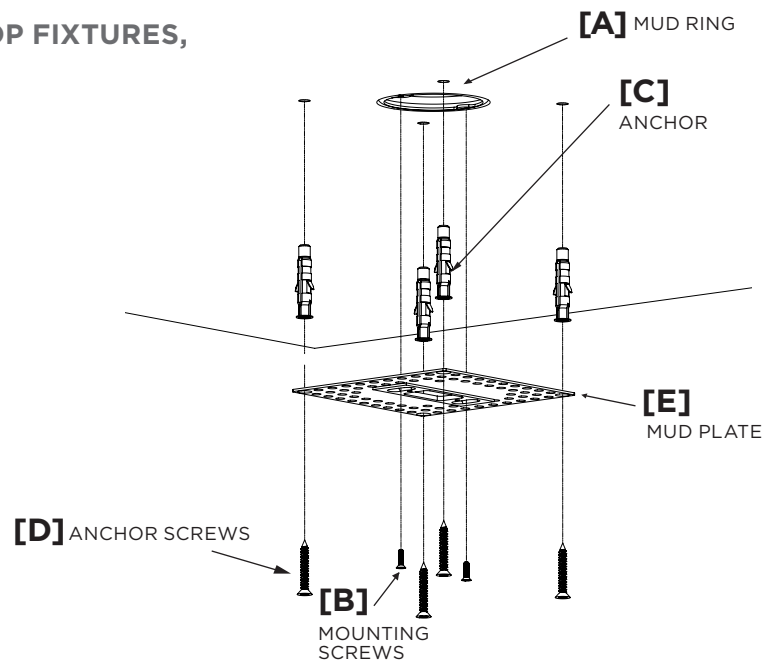
##### Basic Installation Steps (detailed views & instructions in subsequent sections)

NOTES:

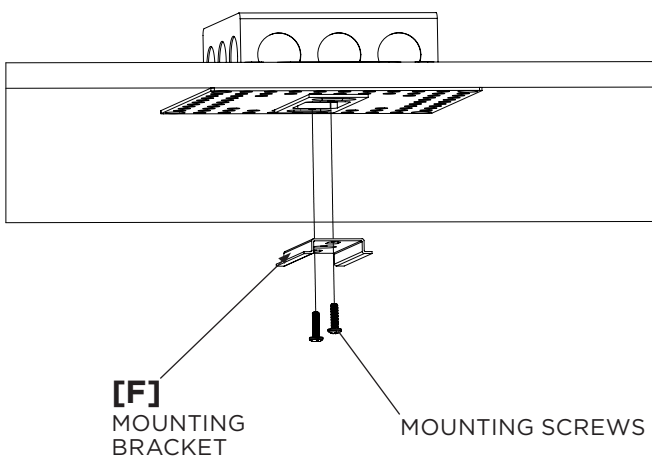
- a. Power Feed Cable is prewired, and strain relieved to luminaire body.
- b. Ceiling mounting hardware is packed separately in the carton.
  1. Install mounting bracket [fig 1] and mud plate [fig 2] to bldg. at the power feed location.
  2. Install spacer plate [fig 3] and mounting bracket [fig 4] to bldg. at the non feed location.
  3. Make electrical connections from luminaire to bldg. wiring [fig 5]
  4. Secure fixture onto mounting brackets.
    1. For Oxygen fixtures, secure set screws in mounting block to complete attachment to mounting plate.

#### SECTION 4A.2: TOP SURFACE MOUNTED TOP FIXTURES, POWER FEED MOUNTING DETAIL

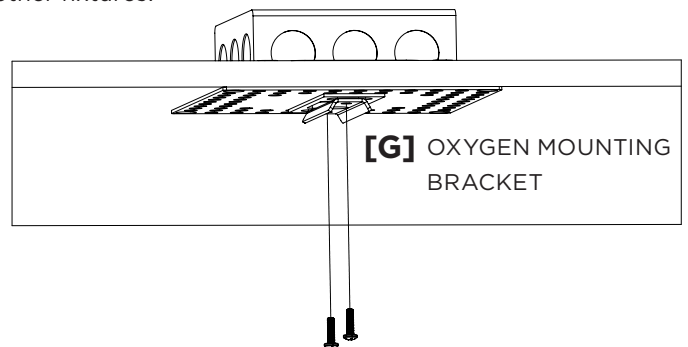
1. Install Mud Ring (by others) [A] to 4" square junction box (by others).
2. Temporarily install mud plate [E] to mud ring utilizing mounting screws.
3. Before next step, confirm mud plate is rotated as desired, then mark hole locations for screw anchors [C].
4. Unscrew mud plate from mud ring. Install anchors (by others).
5. Screw mud plate back onto mud ring with mounting screws [B].
6. Fasten mud plate to substrate with anchor screws (by others) [D].
7. Complete mud work feathering out over the perforated metal mud plate [E].



1. Install Mounting Bracket [F] to mud plate using mounting screws.



1. NOTE: Oxygen fixture mounting bracket [G] is separate and unique from mounting bracket for other fixtures.

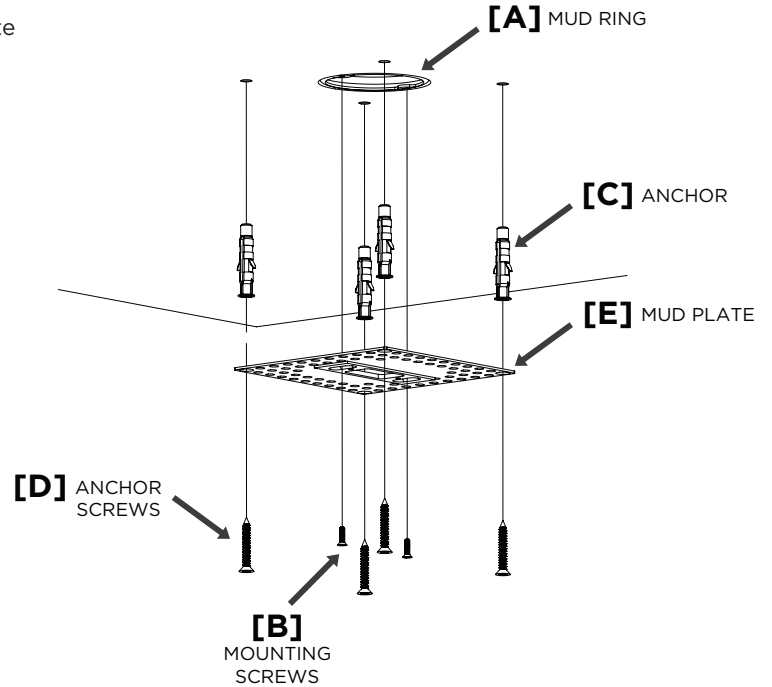




### SURFACE MOUNT

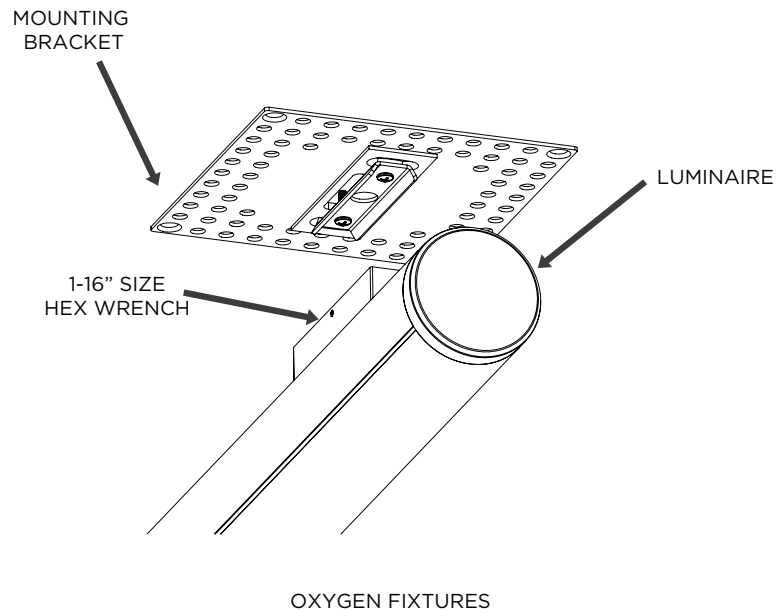
#### SECTION 4A.3: TOP SURFACE MOUNTED TOP FIXTURES, NON-FEED MOUNTING DETAIL

1. Fasten spacer plate [A] & mounting bracket [B] to substrate with anchor screws and anchors (by others) [C].



#### SECTION 4A.4: SURFACE MOUNTED TOP FIXTURES, MOUNTING LUMINAIRE

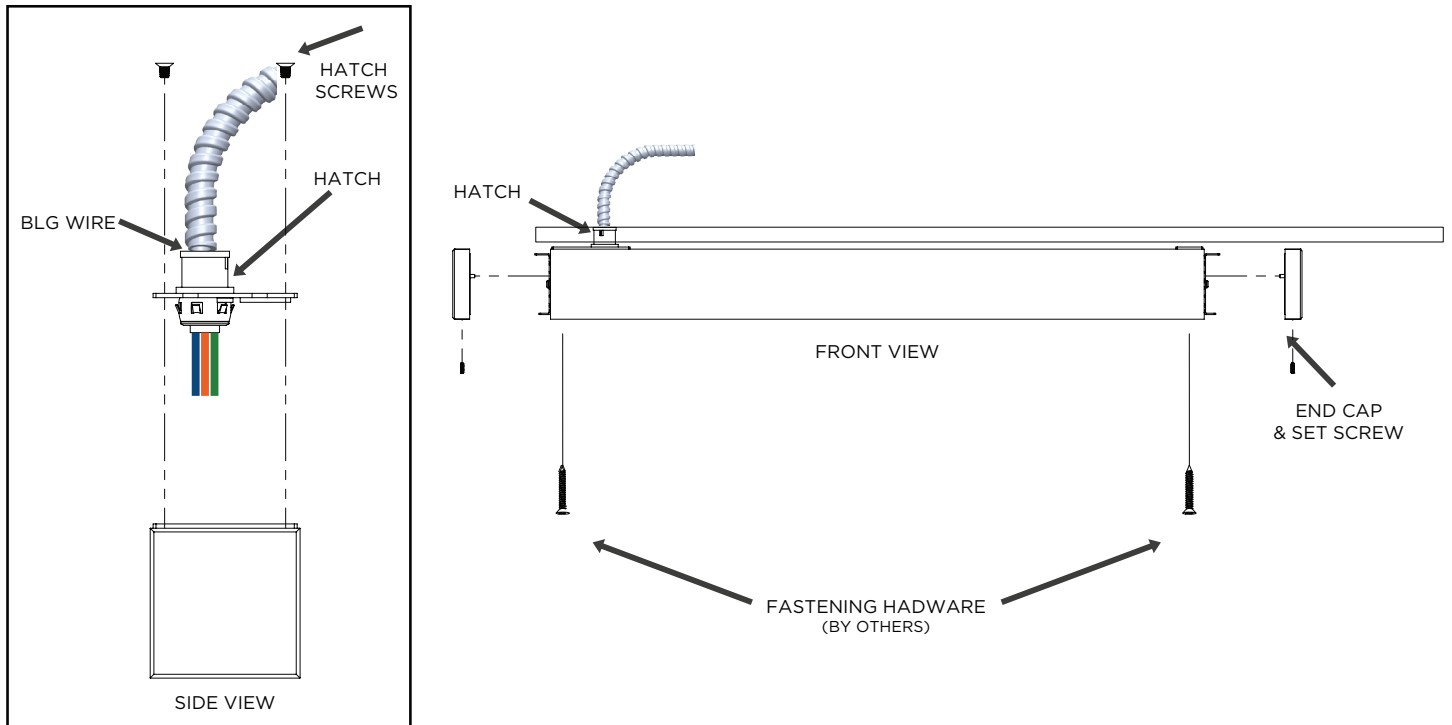
1. For Oxygen fixtures only, secure set screws in mounting block to complete attachment to mounting plate.



OXYGEN FIXTURES

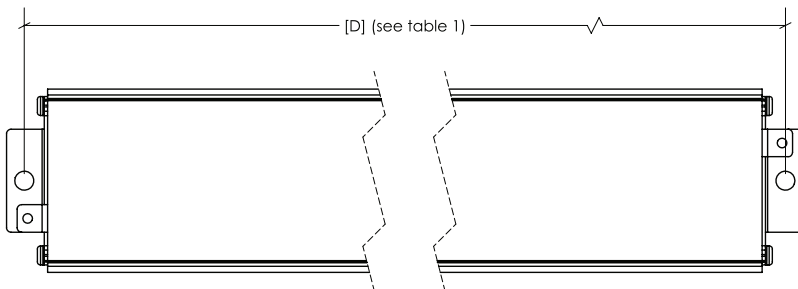
### SURFACE MOUNT

#### SECTION 4.0B: TOP SURFACE MOUNTED FIXTURES OVERVIEW NITROGEN



#### SECTION 4B.1: SURFACE MOUNTED TOP FIXTURES, PLAN THE INSTALLATION

1. Determine fixture mounting location and predrill mounting holes (see mounting spacings in Table 1).
2. Remove wiring hatch from fixture by unscrewing the 4 screws
3. With the hatch separated from the fixture body, sleeve the bldg. power feed wires through hole in hatch.
4. Remove the magnetic end caps from the end cap brackets, by loosening set screws and pulling end cap from fixture body.
5. Raise fixture towards ceiling and make electrical connections from luminaire to bldg. wiring
6. Reattach hatch to fixture with the 4 screws provided.
7. Secure fixture onto the ceiling, through the mounting holes in the end cap brackets & using appropriate hardware (by others)
8. Reattach end caps and fasten set screws



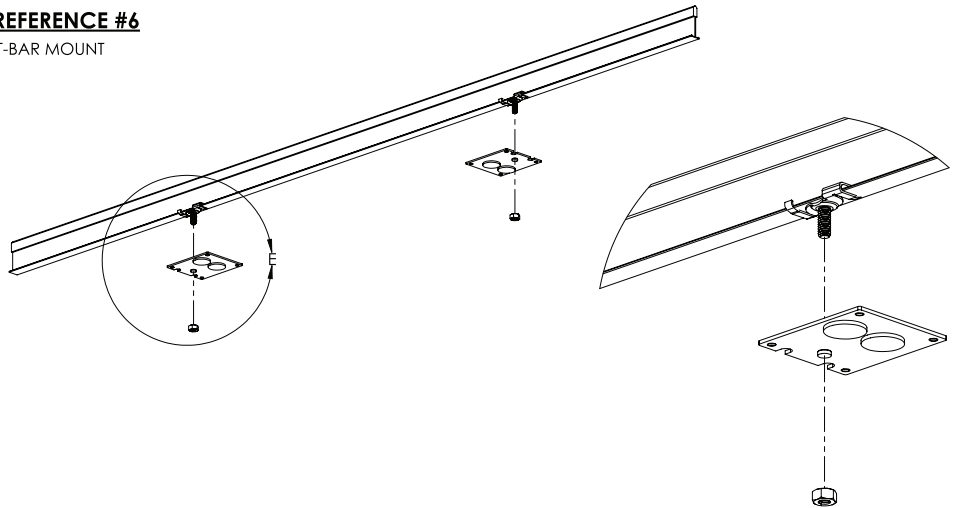
Nominal Fixture Length	N1-SMTD	N2-SMTD, N3-SMTD
1ft	12.92	12.91
2ft	24.92	24.91
3ft	36.92	36.91
4ft	48.92	48.91
5ft	60.92	60.91
6ft	72.92	72.91
7ft	84.92	84.91
8ft	96.92	96.91

### SURFACE MOUNT

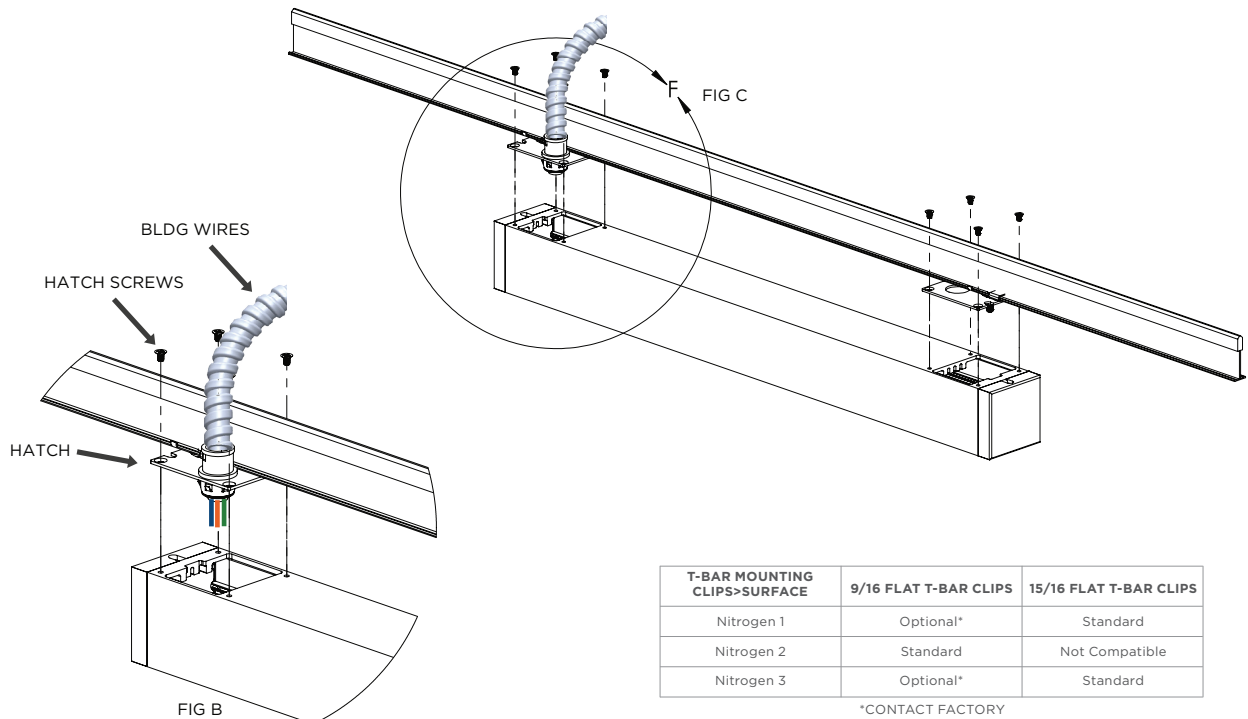
#### SECTION 4B.2: SURFACE MOUNTED TOP NITROGEN, TBAR MOUNTING CLIPS

1. Determine fixture mounting location and remove ceiling tiles to accommodate above grid access.
2. Remove wiring hatches from fixture body by unscrewing the 4 screws securing each hatch.
3. Remove the TBAR clips from the wiring hatches
4. Install the TBAR clips to the ceiling grid
5. With the hatches separated from the fixture body, mate the hatches to the TBAR clips utilizing the stud and nut on the TBAR clip (fig a).
6. With the hatches still separated from the fixture body, sleeve the bldg. power feed wires through hole in the power feed hatch. (fig b).
7. Raise fixture towards ceiling and make electrical connections from luminaire to bldg. wiring.
8. Reattach hatch to fixture with the 4 screws provided, in order to complete securement of the fixture to the T-grid member (fig c).

**REFERENCE #6**  
T-BAR MOUNT



DETAIL E  
SCALE 1 : 2



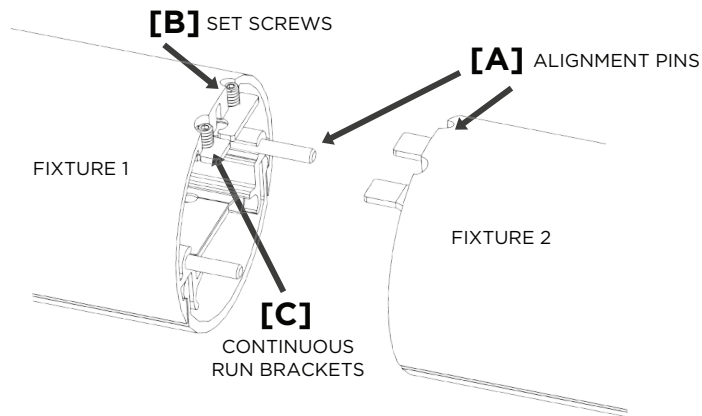
T-BAR MOUNTING CLIPS>SURFACE	9/16 FLAT T-BAR CLIPS	15/16 FLAT T-BAR CLIPS
Nitrogen 1	Optional*	Standard
Nitrogen 2	Standard	Not Compatible
Nitrogen 3	Optional*	Standard

\*CONTACT FACTORY

### SURFACE MOUNT

#### SECTION 5.1: JOINING CONTINUOUS RUNS - SIDE MOUNTED (WALL)

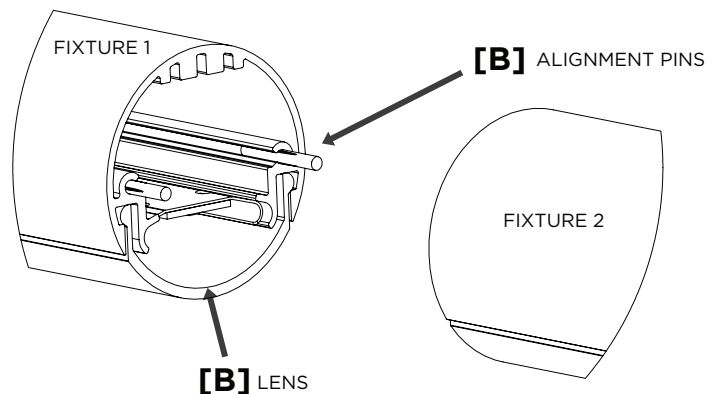
1. Make electrical connections between fixtures.
2. Slide fixture 2 onto alignment pins [A] located on previously installed fixture 1.
3. Tighten two set screws [B] from top of fixture through clearance holes.



HEX WRENCH SIZES:  
- 1/16"  
- 5/64"

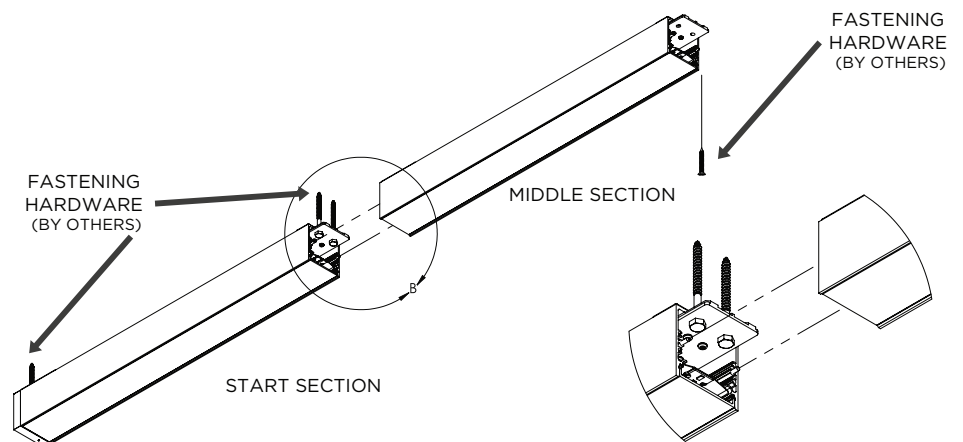
#### SECTION 5.2: JOINING CONTINUOUS RUNS - TOP MOUNTED (CEILING), **OXYGEN FIXTURES ONLY**

1. Make electrical connections between fixtures.
2. Slide fixture 2 onto alignment pins [B] located on previously installed fixture 1.



#### SECTION 5.3: SURFACE MOUNTED TOP NITROGEN, CONTINUOUS RUN SECTION JOINING

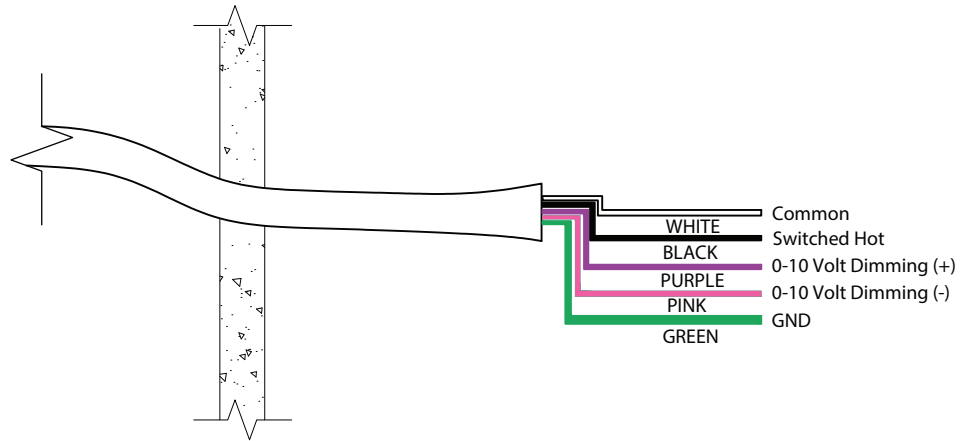
1. Install the START section as described in previous section 4B and 4B.1
2. Raise the 2nd section (AKA: MIDDLE section) up to the ceiling and slide the middle section into the start section.
3. Secure the 2nd section onto the ceiling, through the mounting holes in the end bracket & using appropriate hardware (by others).
4. Continue until the end section is installed. For the end section, reattach end cap and fasten set screw to complete.



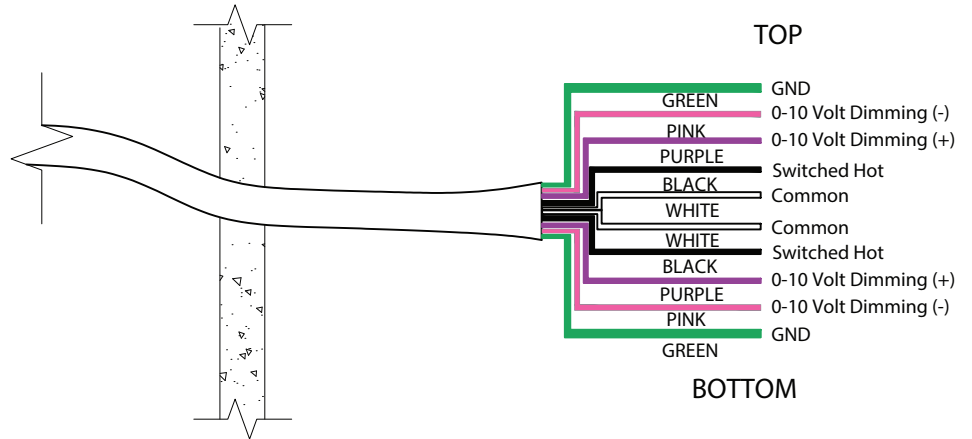
### SURFACE MOUNT

#### SECTION 6A: INTEGRAL FIXTURE WIRING DIAGRAM

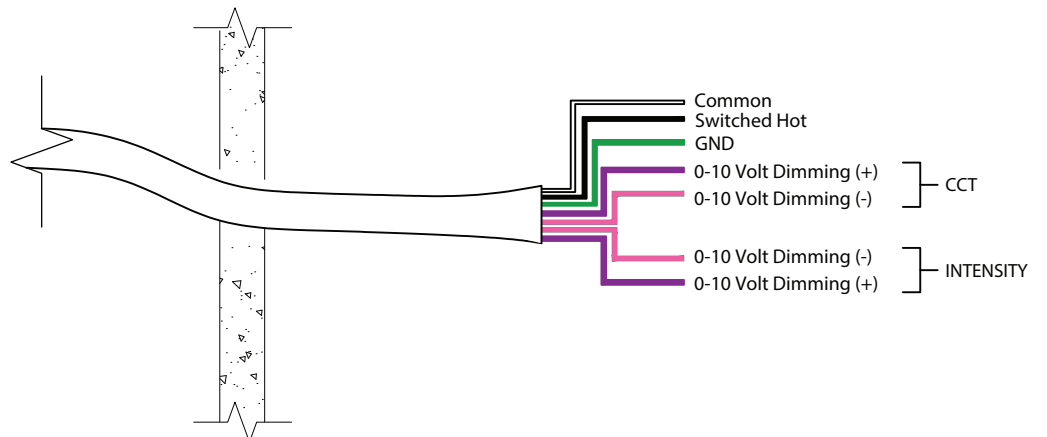
STANDARD WIRING: STATIC WHITE & WARM DIM WIRING



#### DUAL CIRCUIT WIRING



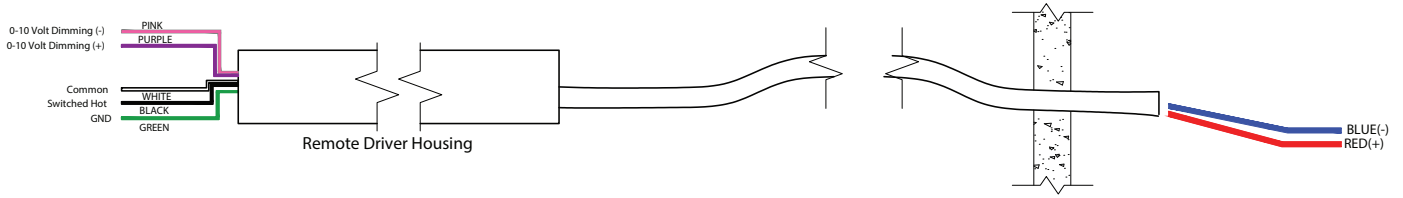
#### TUNABLE WHITE WIRING



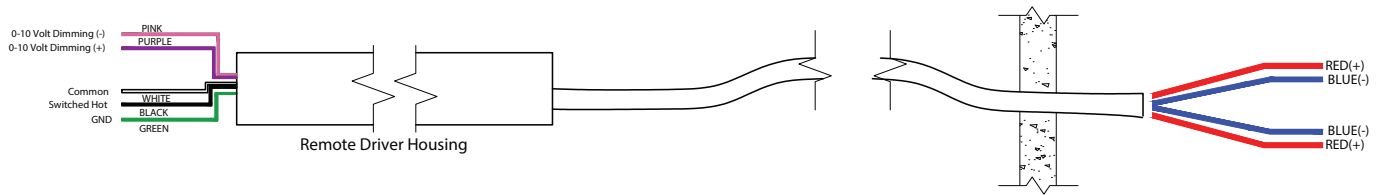
## SURFACE MOUNT

### SECTION 6B: REMOTE POWERED FIXTURES: WIRING DIAGRAM

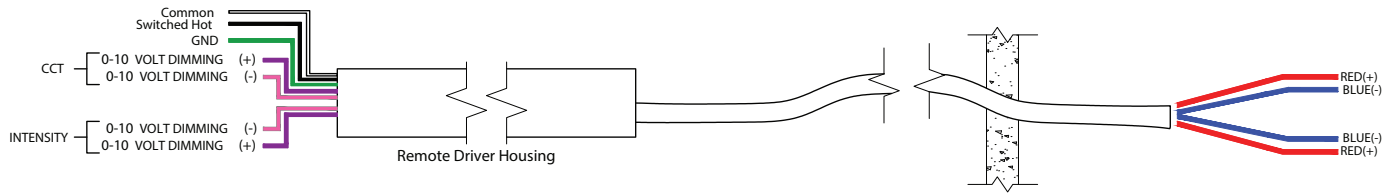
#### STANDARD WIRING: STATIC WHITE WIRING



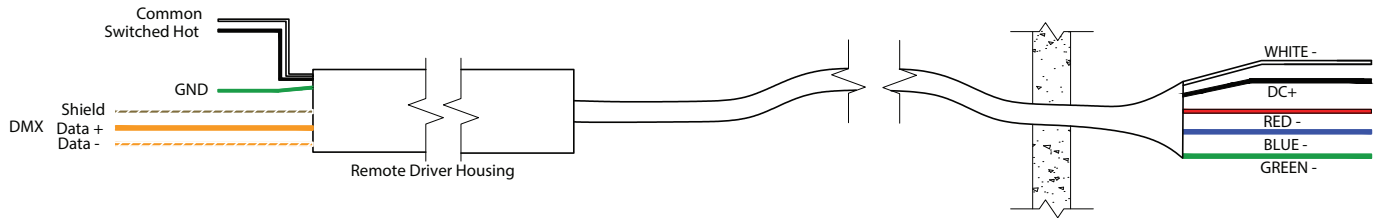
#### WARM DIM WIRING



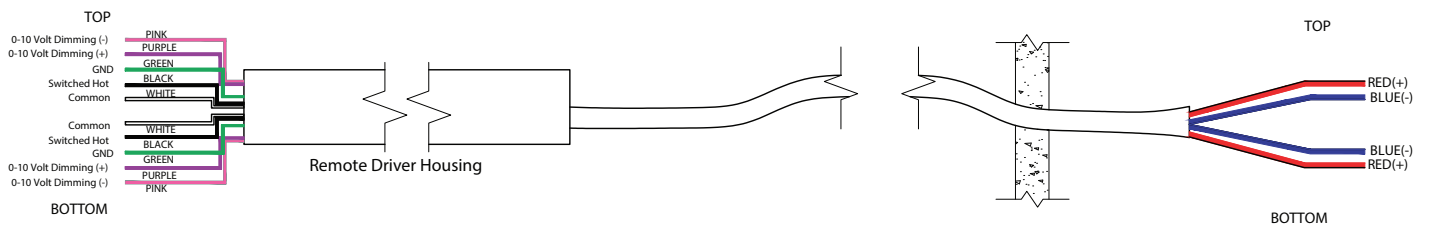
#### TUNABLE WHITE WIRING



#### RGBW WIRING



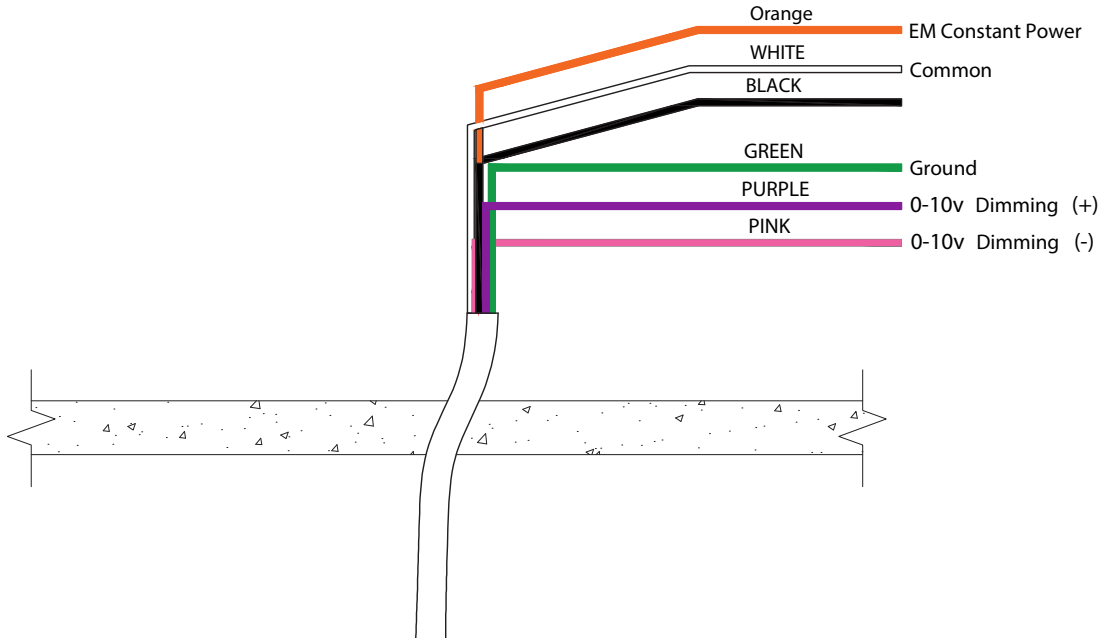
#### DUAL CIRCUIT WIRING



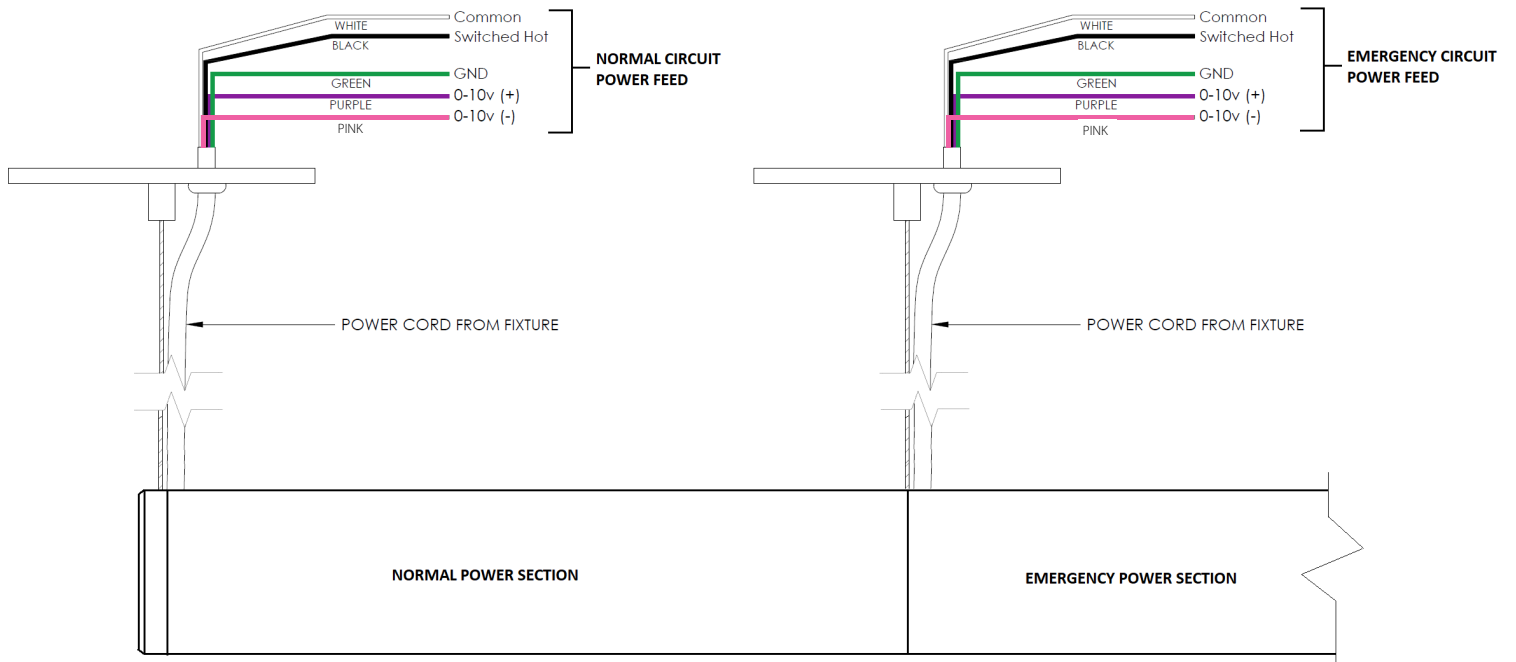
## SURFACE MOUNT

### SECTION 7.0: EMB OPTION

#### INTEGRAL POWERED FIXTURE EMB WIRING



### SECTION 7.1: EMW OPTION



## SURFACE MOUNT

## INSTALLATION CONSIDERATIONS

Remarques Concernant L'installation

## MIN 90C SUPPLY CONDUCTORS

LES FILS D'ALIMENTATION 90C MIN

Surface Mount Remote Power Unit with Surface Mount Luminaire / Unité d'alimentation à distance suspendue avec luminaire suspendu par le montage en surface

ELECTRICAL RATINGS / CARACTÉRISTIQUES ÉLECTRIQUES

120-277VAC, 50/60 Hz, MAX 0.22-0.10A, MAX 26W NOMINAL PER FOOT OF LUMINAIRE HOUSING LENGTH / PUISSANCE NOMINALE PAR PIED DE LA LONGUEUR DU BOÎTIER DU LUMINAIRE

347V, 50/60Hz, MAX 26W NOMINAL PER FOOT OF LUMINAIRE HOUSING LENGTH / PUISSANCE NOMINALE PAR PIED DE LA LONGUEUR DU BOÎTIER DU LUMINAIRE

347-480V, 50/60Hz, MAX 0.07 - 0.05A, MAX 36W NOMINAL PER FOOT OF LUMINAIRE HOUSING LENGTH / PUISSANCE NOMINALE PAR PIED DE LA LONGUEUR DU BOÎTIER DU LUMINAIRE

When shipped separately, surface mounted luminaire rated max nominal 600 mA/ft total or max nominal 24W/ft constant current or max nominal 24 Vdc constant voltage as applicable based on LED array type provided. / Lorsqu'il est expédié séparément, le luminaire monté en surface a une valeur nominale maximale de 600 mA/pied au total ou un courant constant de fréquence nominale maximale de 24 W/pied ou une tension constante nominale maximale de 24 Vcc, selon le cas et la LED et en fonction du type de tableau fourni.

Surface Mount Integral Driver With Surface Mount Luminaire / Boîtier intégral suspendu par un câble avec luminaire suspendu par le montage en surface

OPERATING VOLTAGE / Tension de Fonctionnement

120-277V, 50/60Hz, MAX 0.22-1.10A NOMINAL PER FOOT OF LUMINAIRE / PUISSANCE NOMINALE PAR PIED DE LA LONGUEUR DU BOÎTIER DU LUMINAIRE  
77°F (25°C)

Refer to electrical rating marked on the luminaire. / Reportez-vous aux caractéristiques électriques indiquées sur le luminaire.

**Caution, risk of electric shock.**

Attention : risque de choc électrique.

- **Read and understand the installation instructions before attempting to install or use the fixture.**  
Lire et comprendre les instructions d'installation avant de tenter d'installer ou d'utiliser l'appareil.
- **Only use fixtures with voltage for which it is rated. Do not exceed the specified voltage and current input.**  
N'utiliser que des appareils avec une tension pour laquelle il est classé. Ne pas dépasser la tension indiquée et la puissance absorbée.
- **Do not use fixture if the housing, lens, or power cable are damaged.**  
Ne pas utiliser cet appareil si le boîtier, l'objectif ou câble d'alimentation sont endommagés
- **Ensure that main power supply is off before installing or wiring a fixture.**  
Assurez-vous que l'alimentation principale est coupée avant l'installation ou le câblage d'un appareil.
- **Hazardous live parts shall not be accessible after installation, and it is the installer's responsibility to ensure that the installation/connections are in compliance with national and local electrical codes and regulations.**  
Les parties actives dangereuses ne doit pas être accessible après installation, et c'est la responsabilité de l'installateur de s'assurer que l'installation / connexions sont conformes aux codes nationaux et locaux électriques et les règlements
- **The wire connection method shall be determined by local electrical codes and regulations, typically using either wire nuts or screw terminal blocks.**  
La méthode de connexion de fil doit être déterminé par les codes électriques locaux et des règlements, typiquement en utilisant soit les serre-fils ou borniers à vis.
- **Possibly hazardous optical radiation emitted from this product.**  
Peut-être dangereux rayonnement optique émis par ce produit.
- **Polycarbonate Chemical Warning: Please contact an EcoSense sales representative for a complete list of chemicals that can cause damage to polycarbonate lenses and silicone gaskets. EcoSense must not be held responsible for damage to, or failure of, fixtures where any of these, or chemicals of similar nature and makeup, are applied intentionally or inadvertently to EcoSense's fixtures.**  
Polycarbonate Chimique Avertissement: S'il vous plaît communiquer avec un représentant des ventes pour EcoSense une liste complète des produits chimiques qui peuvent causer des dommages aux verres en polycarbonate et joints en silicone. EcoSense ne doit pas être tenu responsable des dommages ou de l'échec de les appareils où l'une de ces, ou de produits chimiques de même nature, sont appliqués intentionnellement ou par inadvertance aux appareils de EcoSense.
- **Earth leakage Statement: Please contact an EcoSense factory representative for full information on the earth leakage properties of fixtures when installed according to all local electrical codes and proper installation techniques.**  
Déclaration de fuite à la terre: S'il vous plaît contacter un représentant de l'usine EcoSense pour obtenir des informations complètes sur les propriétés fuite à la terre d'appareils EcoSpec lorsqu'il est installé conformément à tous les codes électriques locaux et les techniques d'installation appropriées.
- **EcoSense Inrush Current Statement: Please contact an EcoSense Lighting sales representative for a complete list of Inrush Current Peak (A) at specific product Voltage, and Inrush Current Duration/Width (ms), for each EcoSense product.**  
S'il vous plaît contacter un représentant commercial d'éclairage EcoSense pour obtenir une liste complète de Courant d'appel crête Courant d'appel (A) , et Courant d'appel Durée / Largeur (ms), pour chaque produit EcoSense.
- **The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.**  
La source de lumière contenue dans ce luminaire doit être remplacée par le fabricant, un fournisseur de services ou une personne qualifiée pour des situations similaires.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

The light source of this luminaire is not replaceable; when the light source reaches its end of life the whole luminaire shall be replaced. / La source lumineuse de ce luminaire n'est pas remplaçable ; lorsque la source lumineuse atteint sa fin de vie, le luminaire entier doit être remplacé.

The external flexible cable of this luminaire cannot be replaced; if the cord is damaged, the luminaire shall be destroyed. / Le câble flexible externe de ce luminaire ne peut pas être remplacé ; si le câble est endommagé, le luminaire doit être détruit.

The light source of this luminaire is not replaceable; when the light source reaches its end of life the whole luminaire shall be replaced. / La source lumineuse de ce luminaire n'est pas remplaçable ; lorsque la source lumineuse atteint sa fin de vie, le luminaire entier doit être remplacé.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: / Si cet appareil produit des interférences portant atteinte à la réception d'ondes radio ou télévisuelles, ce qui peut être déterminé en l'éteignant et en le rallumant, l'utilisateur peut tenter de corriger ces interférences en prenant une ou plusieurs des mesures suivantes :

Reorient or relocate the receiving antenna. / Réorienter ou déplacer l'antenne de réception.

Increase the separation between the equipment and receiver. / Augmenter la distance entre l'équipement et le récepteur.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. / Brancher l'équipement dans une prise d'alimentation sur un circuit différent du circuit sur lequel le récepteur est branché.



### SURFACE MOUNT

Consult the dealer or experienced radio/TV technician for help. / Contacter le revendeur ou un technicien qualifié en radio/télévision pour toute assistance.

Modifications: / Modifications :

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. / Les changements ou modifications non approuvés expressément par la partie responsable de la conformité peuvent priver l'utilisateur de son droit d'usage de l'équipement.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. / Cet appareil génère, utilise et peut émettre de l'énergie radiofréquence et, s'il n'est pas installé et utilisé selon les instructions, il peut causer des interférences nuisibles aux communications radio. Cependant, rien ne garantit l'absence d'interférences dans une installation particulière.