

# Chalice Installation & Operation Manual



# Table of Contents

Safety Instructions	Page 3
Description and Packing List	Page 4
Setup and Installation	Page 5
Features	Page 6
Operation	Page 7
DMX Mode	Page 8
· Personalities	Page 9
· Resolution	Page 10
· Stand Alone Mode	Page 11
· Fixed Color Mode	Page 12
· Master Mode	Page 13
Wiring Details	Page 14
J-Box and Ball Mount Details	Page 15
Cable Mount Details	Page 16
Pendant Chalice, 100W	Page 17
Pendant Chalice, 50W	Page 18
Recessed Chalice, 100W	Page 19
Recessed Chalice, 50W	Page 20

**SAFETY INSTRUCTIONS****INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRICAL SHOCK, OR INJURY TO PERSONS FOR SPECTRA SERIES LED LIGHTING FIXTURES.**

WARNING! - TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, FOLLOW THESE IMPORTANT SAFETY INSTRUCTIONS:

1. Turn off, unplug power, and allow fixture to cool before cleaning or servicing.
2. Ensure that fixture is properly grounded.
3. Ensure that ventilation slots are not obstructed.
4. Do not look directly at lighted LEDs.
5. Keep away from flammable materials.
6. No user serviceable parts inside. Replace entire LED assembly.
7. Do not touch the LEDs at any time. Use a soft lint free cloth to clean lens. Do not use solvents to clean. Use cloth dampened with water. Allow to dry completely before reenergizing.
8. Do not operate the unit with a missing or damaged lens.
9. Fixtures are Non-IC rated. Keep insulation a minimum of 3-inches away from the fixture.

-----**SAVE THESE INSTRUCTIONS!**-----  
**INSTRUCTIONS DE SÛRETÉ**

**LES INSTRUCTIONS AU SUJET D'UN RISQUE D'INCENDIE LE CHOC ÉLECTRIQUE, OU LA BLESSURE AUX PERSONNES POUR SS-CYC-100.**

AVERTISSEMENT! - POUR RÉDUIRE LE RISQUE D'INCENDIE, LE CHOC ÉLECTRIQUE, OU LA BLESSURE AUX PERSONNES, SUIVRE CES INSTRUCTIONS DE SÉCURITÉ IMPORTANTES:

1. Éteignez, débranchez la puissance, et permettez au montage de se refroidir avant le nettoyage ou l'entretien.
2. Assurez-vous que le montage est correctement relié à la terre.
3. Assurez-vous que des fentes de ventilation ne sont pas obstruées.
4. Ne regardez pas directement la LED allumée.
5. S'éloigner des matériaux inflammables.
6. Aucune pièces utiles d'utilisateur à l'intérieur. Remplacez la LED entière.
7. Ne touchez pas les voyants à tout moment. Utilisez un chiffon doux non pelucheux pour nettoyer la lentille. Ne pas utiliser de solvants pour nettoyer. Chiffon humidifié avec de l'eau utilisation. Laisser sécher complètement avant de redynamisation.
8. Ne pas faire fonctionner l'appareil avec un diffuseur antérieur ou une lampe.
9. Accessoires fixes sont Non-IC appréciation. Éloigner isolation minimum 3-po de l'appareil.

-----**GARDER CES INSTRUCTIONS!**-----

# CDR50 & CDR100 Recessed Chalice™ LED Series Solid State Lighting Fixture

## DESCRIPTION

The CDR50 & CDR100 Recessed Chalice LED lighting fixture is a recessed unit provided with knock-outs and terminal blocks to provide power and/or data to the fixture in recessed ceiling mount applications only. The overall construction of the fixture includes corrosion protected steel housing and allows for mounting to ceiling beams with two adjustable brackets. The fixture is supplied with a state of the art microprocessor-controlled solid-state LED light engine incorporating 3-watt Luxeon Rebel Red, Green, Blue, and PC-Amber color or White color LEDs, and on-board power supplies. The LED substrate is coupled to a highly efficient heat sink and cooling system for prolonged life of the LEDs. All components and electrical devices are UL/ETL Listed or Recognized. The fixture is Non-IC rated, so keep insulation at least 3-inches away from the fixture body.

## PACKING LIST

The CDR50 & CDR100 Recessed Chalice LED lighting fixture is shipped with the following:

- CDR50 or CDR100 fixture,
- Trim Ring with Spread Lens,
- Adjustable Mounting Hangers,
- This Installation and Instruction Manual.

## WARNING:

*ALL ELECTRICAL WIRING AND CONNECTIONS SHOULD BE PERFORMED BY A QUALIFIED ELECTRICIAN*

## SETUP AND INSTALLATION

### Unpacking

Remove the CDR50 & CDR100 Recessed Chalice lighting fixture from its shipping box. Set the unit down on a flat surface before proceeding. Remove the trim ring and lens from the fixture by squeezing the two tension springs on the trim ring and set aside.

### Lamping and Re-lamping

The CDR50 & CDR100 Recessed Chalice lighting fixture is provided with an integral 50W and 100W LED light engine respectively. Under normal operating conditions, the LED light engine should have a rated life expectancy of over 50,000 hours. There are no user serviceable parts inside. The entire LED assembly will need to be changed.

### Mounting the fixture

The CDR50 & CDR100 are designed for ceiling mount only and away from insulation. Install two mounting brackets onto either side of the fixture, but removing the ¼-20 screw and mounting the two brackets to the hole in the fixture side. Cut out an appropriate size 6" diameter hole for the CDR50 or an 8" diameter hole for the CDR100. Install the fixture from the top of the ceiling onto the hole cutout making sure to align the center of the LED light engine to the center of the hole. Hold the main fixture body in place and secure each end of the two mounting brackets to adjacent beams. Secure the four ends of the brackets in place to a beam using either drywall or wood screws. Note: Use the beams to support the fixture, not the surface of the ceiling.

### Connecting power and/or data to the fixture

Wiring should be done by a qualified electrician. AC high power and DC low voltage DMX512 data can be brought to the fixture through any of the many knock-outs provided. Make sure the fixture is wired to a properly grounded circuit breaker. For DMX512, connect COM, Data+ and Data- as marked inside the fixture.

### Focusing the fixture

Install the trim ring with the lens back onto the fixture by squeezing the two torsion springs into the two slots provided on the fixture from the bottom. To change lenses in the CDR50, pull the two tabs holding the lens down up and away with a needle nose pliers. Put them back in place when the new lens is installed. For the CDR100, simply slide the lens retaining pins, clips, or tabs out of the way and back in place onto the new lens.

### Cleaning the fixture

Routine cleaning of the CDR50 & CDR100 Recessed Chalice lighting fixture will provide years of prolonged use. Use compressed air to blow off any dust and dirt from the lens, reflector, electronics and heat sink. For the lens, use a soft lint-free cloth dampened with water to clean the lens of dust and dirt. Dry off completely with compressed air or a dry lint-free cloth.

### ETL FILE LISTING

The CDR50 & CDR100 Recessed Chalice lighting fixture is ETL and c-ETL listed under Altman File 9700680 for UL1598 and UL8750 for Luminaires.

## Features

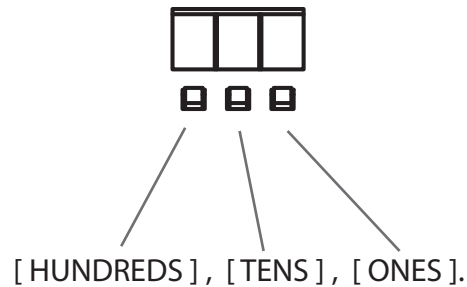
The Chalice SERIES LED lighting fixtures are the first of its kind in the Theatrical and Architectural Lighting Industry offered by Altman Lighting.

- Available in 3,000K White, 3,000K-6,000K tunable white, RGBA, RGBW or custom color combinations.
- Compatible with DMX512 and RDM protocols.
- 8/16 bit DMX512 control for smoother dimming.
- Patented optical system utilizing Homogenized Pixelation™ lens - provides smooth, even illumination and reduces pixelization from projected view.
- On board power supply, microprocessor controller, and current drivers.
- Feed thru DMX/RDM data with a maximum total run of 1000 feet.
- High-frequency PWM for quiet operation with no audible noise.
- Wiring of AC power and DMX data through screw terminal blocks
- Push button addressing.
- Stand-Alone Pre-programmed modes.
- Keypad Lock functions to prevent accidental Re-Programming.
- Efficient cooling system offering Silent Operation with No Fans.
- Convenient access to LED light engine and electronics for maintenance and repair.

**WARNING: ALL ELECTRICAL WIRING AND CONNECTIONS SHOULD BE PERFORMED BY A QUALIFIED ELECTRICIAN**

## OPERATION

There are 3 buttons below the 3 digit LED display on the side of the unit. The buttons are : (From left to right)



All settings for Modes, DMX address, Personalities, etc., can be made by using the three buttons on the back of the unit while power is on.

*(Note: Display goes out after no activity for approx 4 sec. Touch any button once to bring it back on.)*

There are 3 main operating Modes: **DMX**, **Fixed Color**, and **Locked**.

## DMX Mode:

DMX Mode is used for Setting DMX address, Personalities, and Stand-alone Effects. This is the default mode for a new unit. (Also see Fixed Color Mode section on page 9.)

To Switch to DMX Mode from Fixed Color Mode (or vice versa) :

Wait a few seconds until the display goes blank,

- press and hold the [ ONES ] button
- press and hold the [ TENS ] button
- release the [ ONES ] button
- release the [ TENS ] button.

## DMX ADDRESS

To set, press the buttons repeatedly (or hold) to count up until the desired DMX address (1-512), appears on the display. Wait a few seconds, the display will blink once quickly, and the address is set live and retained in memory, even if you remove power.

(RDM addressing sent from a remote unit will overwrite local DMX setting.)

## PERSONALITIES:

There are 8 different personalities.

Each personality is made up of 3 settings: RESOLUTION (8 Bit /16 Bit), MASTER (On /Off), and SMOOTHING (On/Off) which are explained in greater detail below.

The current active Personality # is displayed for about 1 second during power up. The format is Pxx where xx is replaced by the active personality #01-08.

To set the desired Personality, you must be in DMX mode (not Fixed Color mode).

To select the personality:

- Press the buttons until the desired personality address (601-608) appears in the display (see list below).
- Wait a few seconds, and a confirmation display will appear that shows a question mark? on the left, followed by the personality #. This gives you an opportunity to either accept or reject the new setting.
- To **accept** the new personality, press the [ ONES ] button.
- To **reject** the new personality, press the [HUNDREDS] button (below the ? ).

Once the new personality is accepted, it is entered into memory and retained even if power is disconnected. Once personality is either accepted or rejected, the display will go back to the current DMX address. The default personality for a new unit is #02.

**EXAMPLE:** Let's say that we want to select personality #05. We enter 605 on the display. After a few seconds the display will show ?05 . Since we want this, we press the [ONES] button (below the 5 ), and that enters personality #05 into memory.



## PERSONALITY ADDRESS SETTINGS LIST

### 601-608: 4-COLOR CHANNELS:

<b>601</b>	Personality #01 Uses 4 DMX Channels	8 bit Channel order is RGBA	Master OFF	Smoothing OFF
<b>602</b>	Personality #02 Uses 4 DMX Channels	8 bit Channel order is RGBA	Master OFF	Smoothing ON
<b>603</b>	Personality #03 Uses 5 DMX Channels	8 bit Channel order is RGBAM	Master ON	Smoothing OFF
<b>604</b>	Personality #04 Uses 5 DMX Channels	8 bit Channels order is RGBAM	Master ON	Smoothing ON
<b>605</b>	Personality #05 Uses 8 DMX Channels	16 bit Channel order is RrGgBbAa	Master OFF	Smoothing OFF
<b>606</b>	Personality #06 Uses 8 DMX Channels	16 bit Channel order is RrGgBbAa	Master OFF	Smoothing ON
<b>607</b>	Personality #07 Uses 10 DMX Channels	16 bit Channel order is RrGgBbAaMm	Master ON	Smoothing OFF
<b>608</b>	Personality #08 Uses 10 DMX Channels	16 bit Channel order is RrGgBbAaMm	Master ON	Smoothing ON

### 609-612: 1-COLOR CHANNELS

<b>609</b>	Personality #09 Uses 1 DMX Channel	8 bit	Smoothing OFF
<b>610</b>	Personality #10 Uses 1 DMX Channel	8 bit	Smoothing ON
<b>611</b>	Personality #11 Uses 2 DMX Channels	16 bit	Smoothing OFF
<b>612</b>	Personality #12 Uses 2 DMX Channels	16 bit	Smoothing ON

**RESOLUTION** is selectable as either:

**8 Bit** (one DMX channel per color) this is normal resolution,  
or

**16 Bit** (two DMX channels per color) Coarse+Fine high resolution similar to moving lights.

If unit is in 8 Bit mode, and the unit is set to DMX Channel 001, then the DMX channels would be:

CH1	Red
CH2	Green
CH3	Blue
CH4	Amber*

If unit is in 16 Bit Mode, and the unit was set to DMX Channel 001, then the DMX channels would be:

CH1	Red Coarse	CH2	Red Fine
CH3	Green Coarse	CH4	Green Fine
CH5	Blue Coarse	CH6	Blue Fine
CH7	Amber* Coarse	CH8	Amber* Fine

Master Channel is selectable as **ON** or **OFF** and provides a Master fade channel that dims all 4 colors proportionally at the same time in order to maintain the color .

If you are in 8 Bit mode and the unit is set to DMX Channel 001, then the DMX channels would be:

CH1	Red
CH2	Green
CH3	Blue
CH4	Amber*
CH5	Master

If you are in 16 Bit mode and the unit is set to DMX Channel 001, then the DMX channels would be:

CH1	Red Coarse	CH2	Red Fine
CH3	Green Coarse	CH4	Green Fine
CH5	Blue Coarse	CH6	Blue Fine
CH7	Amber* Coarse	CH8	Amber* Fine
CH9	Master Coarse	Ch10	Master Fine

**SMOOTHING** is selectable as **ON** or **OFF** and provides a smooth transition ramp from one level to another in a similar way to how an incandescent lamp behaves. This helps to eliminate the "steppiness" associated with LED fixtures that is caused by the instantaneous response of LEDs.

*\*Amber if RGBA, or White if RGBW*

**STAND-ALONE MODE** (does not require a control console):

**Note:** Must be in DMX Mode (see page 6). If Master Mode (see page 10) is on, stand-alone effects from a single unit will control other units connected via DMX cable to all synchronize. Set other units to DMX channel 001.

(Do not use the Stand-Alone Effects while connected to a control console or a conflict may result.)

**Color Fades (700-799):**

**700 - 709** R»A»G»B fade      700 = faster - 709 = slower

**740 - 749** B»G»A»R fade      740 = faster - 749 = slower

**780 - 789** R»A»G»B»W fade      780 = faster - 789 = slower

**790 - 799** W»B»G»A»R fade      790 = faster - 799 = slower

**Strobes (800-879):**

**800 - 809** WHITE STROBE      800 = faster - 809 = slower

**810 - 819** RED STROBE      810 = faster - 819 = slower

**820 - 829** AMBER STROBE      820 = faster - 829 = slower

**830 - 839** GREEN STROBE      830 = faster - 839 = slower

**840 - 849** BLUE STROBE      840 = faster - 849 = slower

**850 - 858** R-A-G-B RAINBOW STROBE      850 = faster - 859 = slower

**870 - 879** B-G-A-R RAINBOW STROBE      870 = faster - 879 = slower

## FIXED COLOR MODE:

This is a special mode that allows you to manually select colors for a single unit using the 3 keys. (Also see **DMX Mode** on page 6.)

To enter Fixed **Color Mode** (or exit to **DMX Mode**) :

Wait a few seconds until the display goes blank,

1. press and hold the [ ONES ] button
2. press and hold the [ TENS ] button
3. release the [ ONES ] button
4. release the [ TENS ] button

While in **Fixed Color Mode**, the hundreds button cycles through 'r', 'G', 'b', and 'A' colors . The tens and ones digits select 0-99 values. Level 99 is that channel at full.

## Locked Mode:

To Lock (or unlock) the buttons:

Wait a few seconds until the display goes blank,

1. press and hold the [ ONES ] button
2. press and hold the [ HUNDREDS ] button
3. release the [ ONES ] button
4. release the [ HUNDREDS ] button.

Display will show **L O C** for a moment and then blink. Buttons will have no effect until they are unlocked.

## MASTER MODE ( Different than the Master Channel described on page 7.)

**Master Mode only works while in STAND-ALONE EFFECTS MODE** (see page 8). It causes the unit that is set to Master Mode to behave like a console and Transmit 4-channel (RGBA) 8-bit DMX set on address 001, reflecting its present light output.

**Note:** Only the first unit that is going to serve as the MASTER fixture should be set to Stand-alone Effects mode with Master Mode on. Stand-alone Effects Mode with Master Mode on should also not be used while units are connected to a DMX console. All fixtures following the Master fixture should be set with the Master Mode OFF, for Normal Operation.

### To Turn on **MASTER MODE**:

1. Place fixture in Stand-alone Mode (see page 8)
2. Wait a few seconds until the display goes blank
3. Press and hold the [ HUNDREDS ] button
4. Press and hold the [ ONES ] button
5. Release the [ HUNDREDS ] button
6. Release the [ ONES ] button
7. Display will show **01** for a moment to indicate new setting and then blink.
8. Address remaining fixtures connected to the MASTER fixture to DMX address 001

### To Turn off the **MASTER MODE**:

Wait a few seconds until the display goes blank  
Press and hold the [ HUNDREDS ] button  
Press and hold the [ ONES ] button  
Release the [ HUNDREDS ] button  
Release the [ ONES ] button  
Display will show **0FF** for a moment to indicate new setting and then blink.

## Single DMX Cable:

Cat-5 Cable pinout for RJ45 connector:

DATA 1 is used for DMX IN (+,-,Common)

DATA 2 IS USED FOR DMX OUT (+,-,Common)

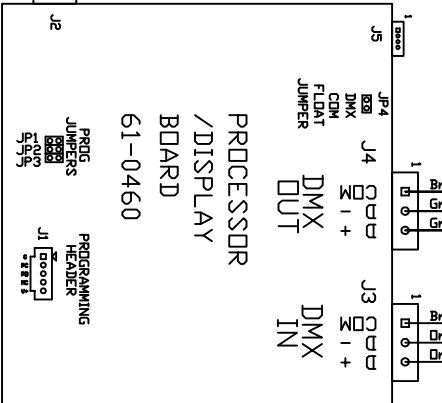
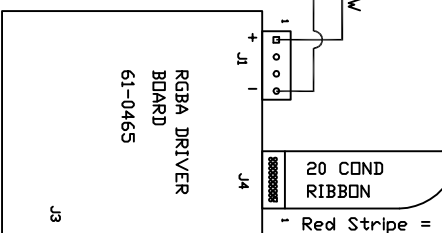
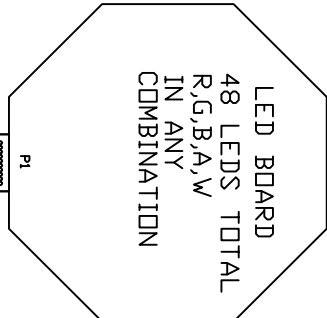
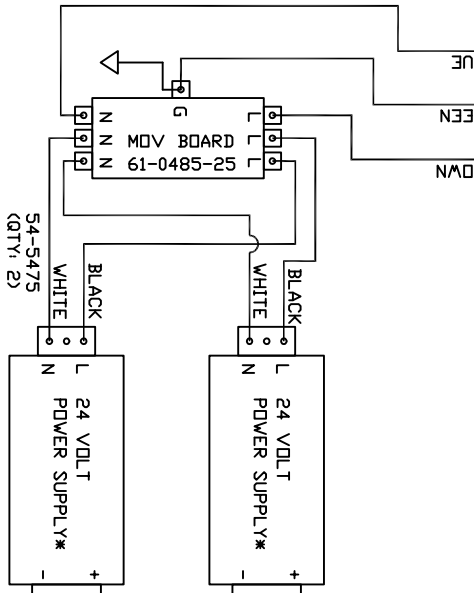
White/Orange	> DATA 1+	>RJ45 Pin 1 (part of DMX IN)
Orange	> DATA 1-	>RJ45 Pin 2 (part of DMX IN)
White/Green	> DATA 2+	>RJ45 Pin 3 (part of DMX OUT)
Green	> DATA 2-	>RJ45 Pin 6 (part of DMX OUT)
Blue	> N/C	>RJ45 Pin 4
White/Blue	> N/C	>RJ45 Pin 5
White/Brown	> DATA 1 COMMON	>RJ45 Pin 7 (part of DMX IN)
Brown	> DATA 2 COMMON	>RJ45 Pin 8 (part of DMX OUT)

100-240 VAC  
50/60 Hz  
SUPPLY

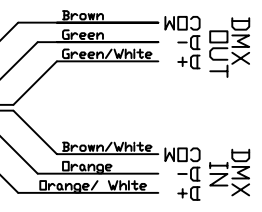
NGL  
BROWN  
GREEN  
BLUE

18/3 SVT CABLE

\* POWER SUPPLY :  
100-240 VAC INPUT:  
MEANWELL#: RPS-60-24  
LAMBDA#: ZPS-60-24  
100-277 VAC INPUT:  
MEANWELL#: ULP-150-48



CAT5 CABLE



ALTMAN 100 WATT LED Chalice Pendant DMX  
WIRING DIAGRAM  
Revised: 2013-10-07 By: JTR  
NOT TO SCALE

LINE VOLTAGE  
50/60 HZ  
SUPPLY

NGL

BROWN  
GREEN  
BLUE

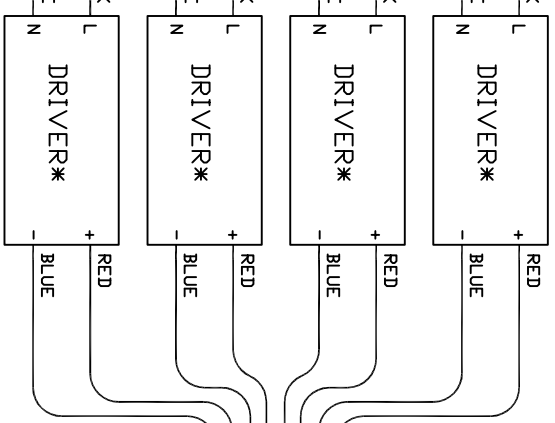
18/3  
S/T CABLE  
S1-WN1420-BK  
S1-WN1420-WHT

BROWN (L)

GREEN  
BLUE (N)

Chassis  
Ground

S1-WN1320-BK

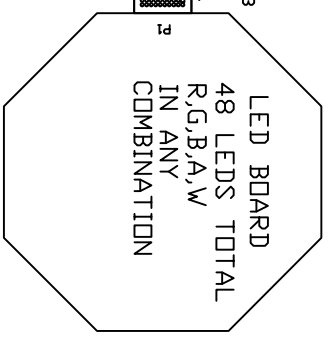


\* DRIVER:  
120 VAC INPUT Mains Dimmable: LIGHTTECH # LED-26-500-120-D  
120-277 VAC INPUT Non-Dim: LIGHTTECH # LED-36 CC 700 PU

S1-TBWECU-30202  
(Qty: 4)

20 COND  
RIBBON

S4-82283020



S2-875682093

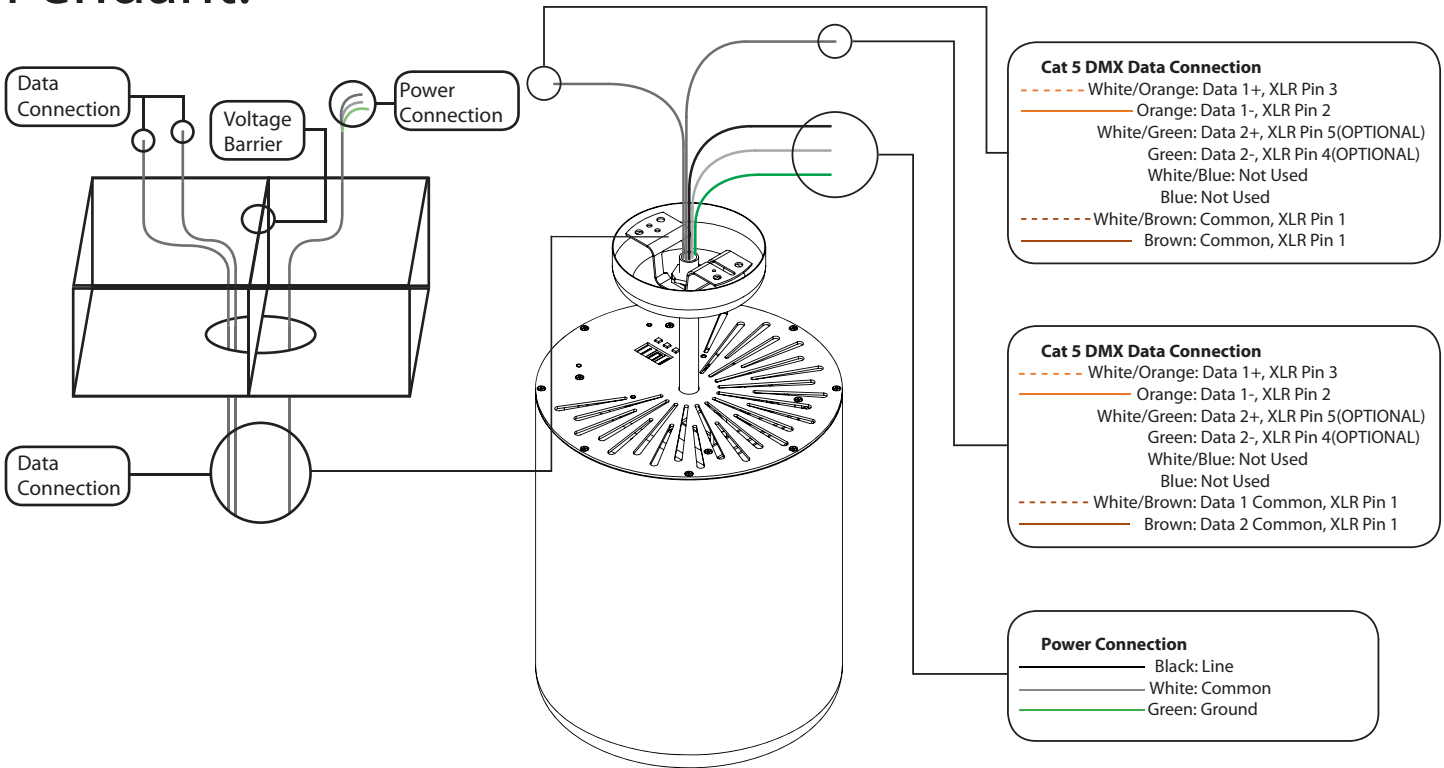
NDT TD SCALE

ALTMAN 100 WATT LED Chalice Pendant Mains Dim/Line voltage  
WIRING DIAGRAM  
Revised: 2013-10-07 By: JTR

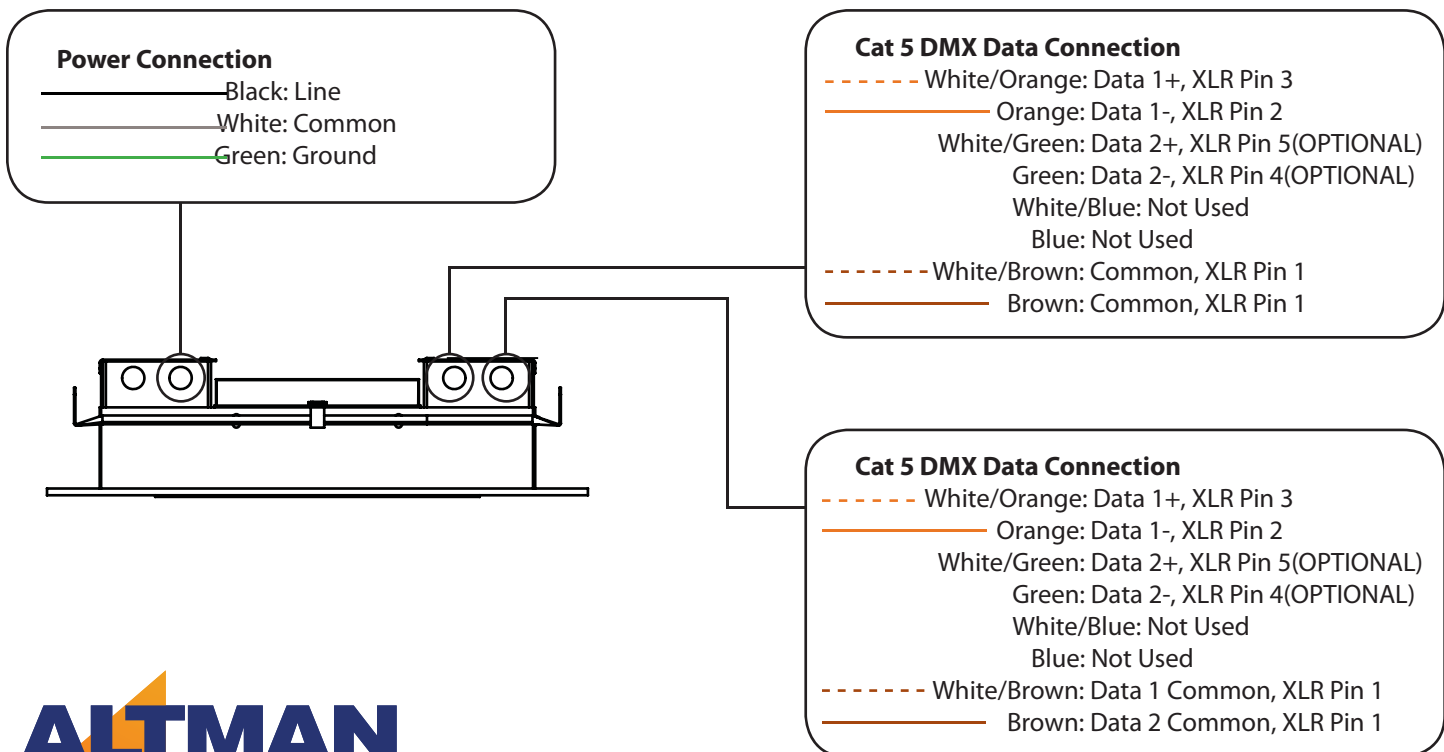


# WIRING DETAILS:

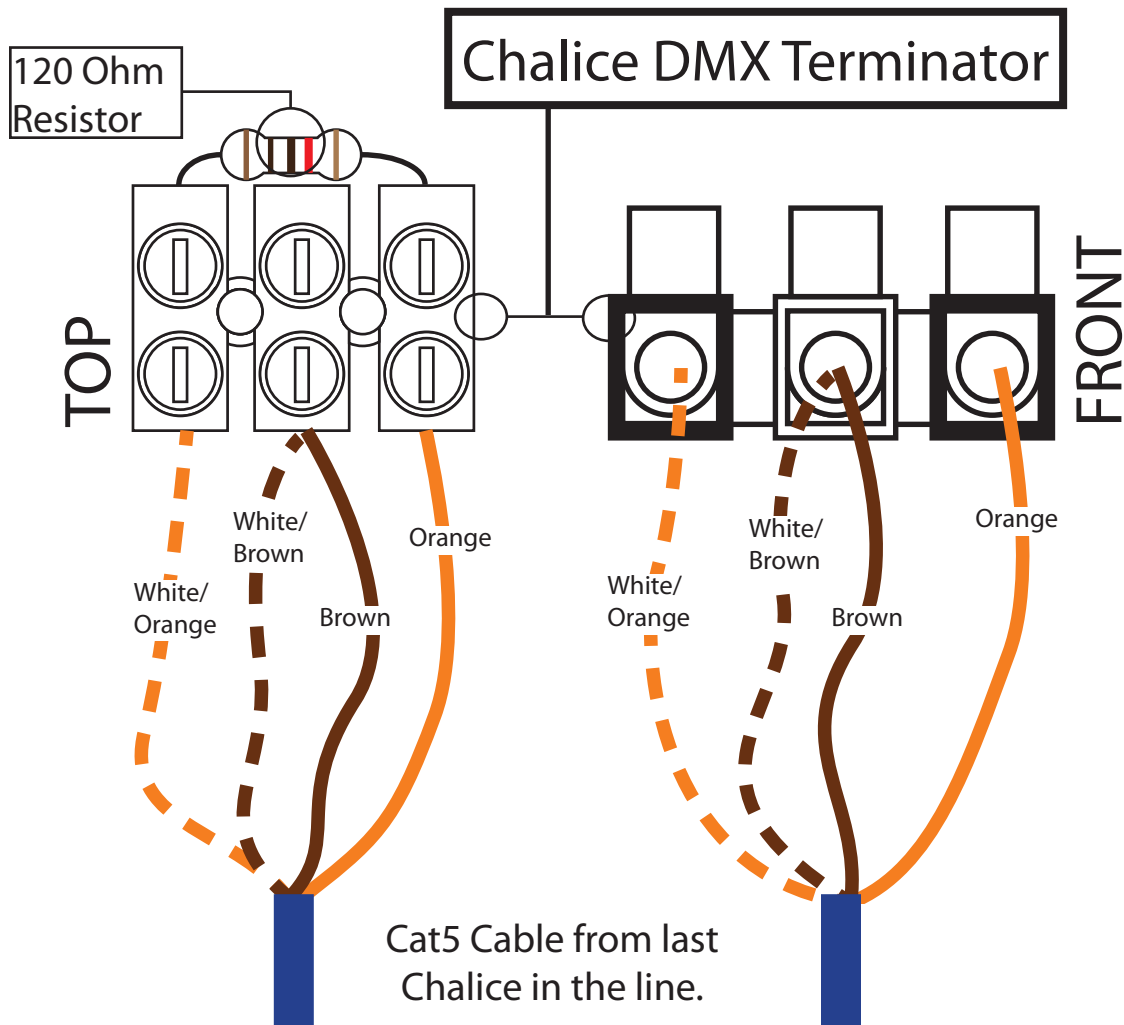
## Pendant:



## Recessed:

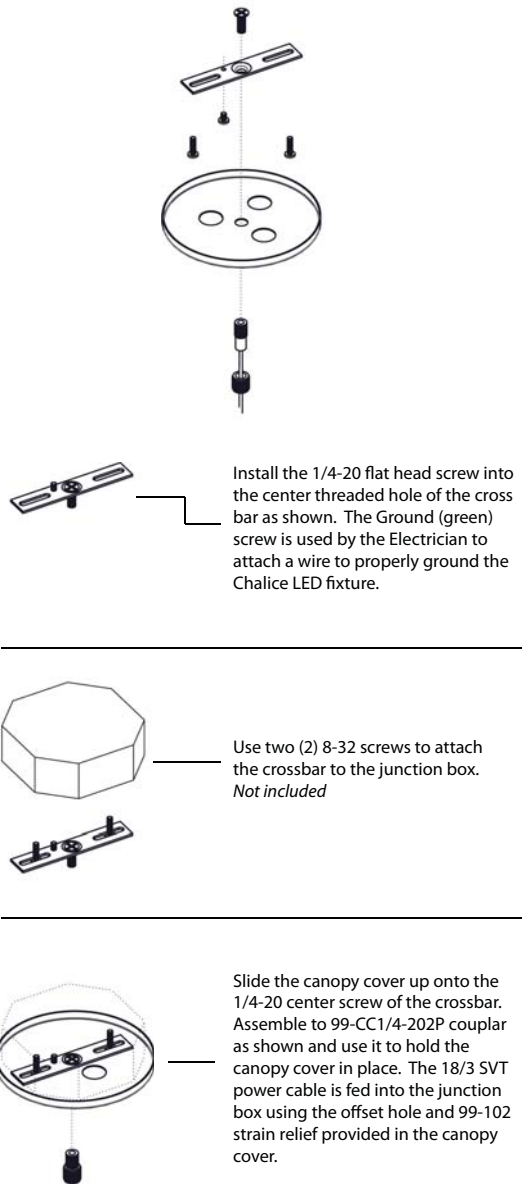


# Chalice DMX Terminator Wiring

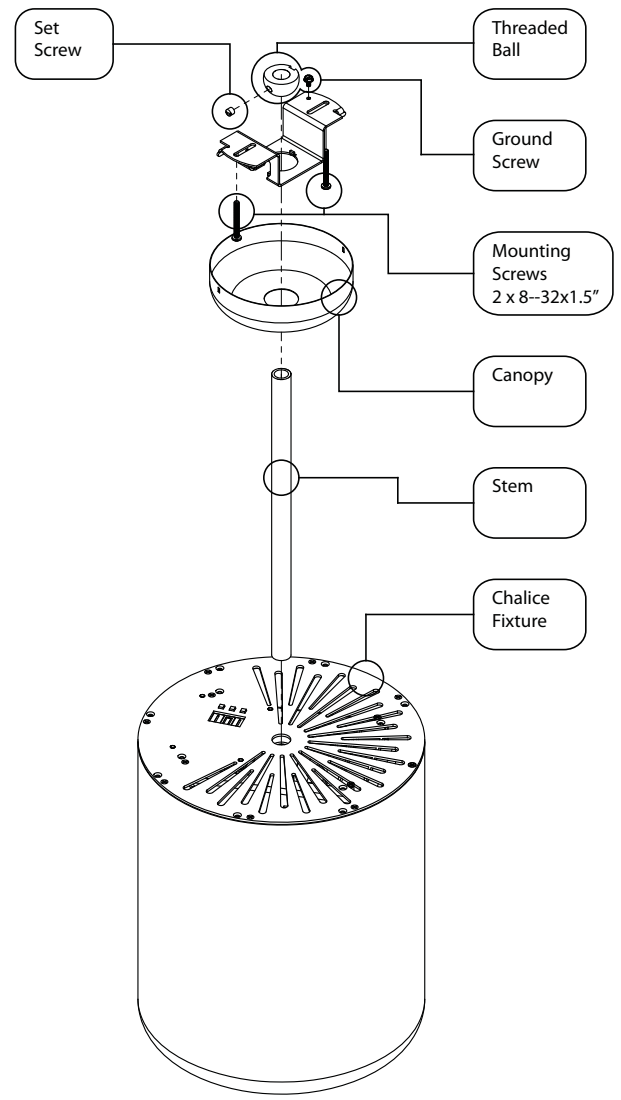


DMX termination for Chalice should be installed on the DMX Cat5 cable bare end on the last fixture in the communication line.

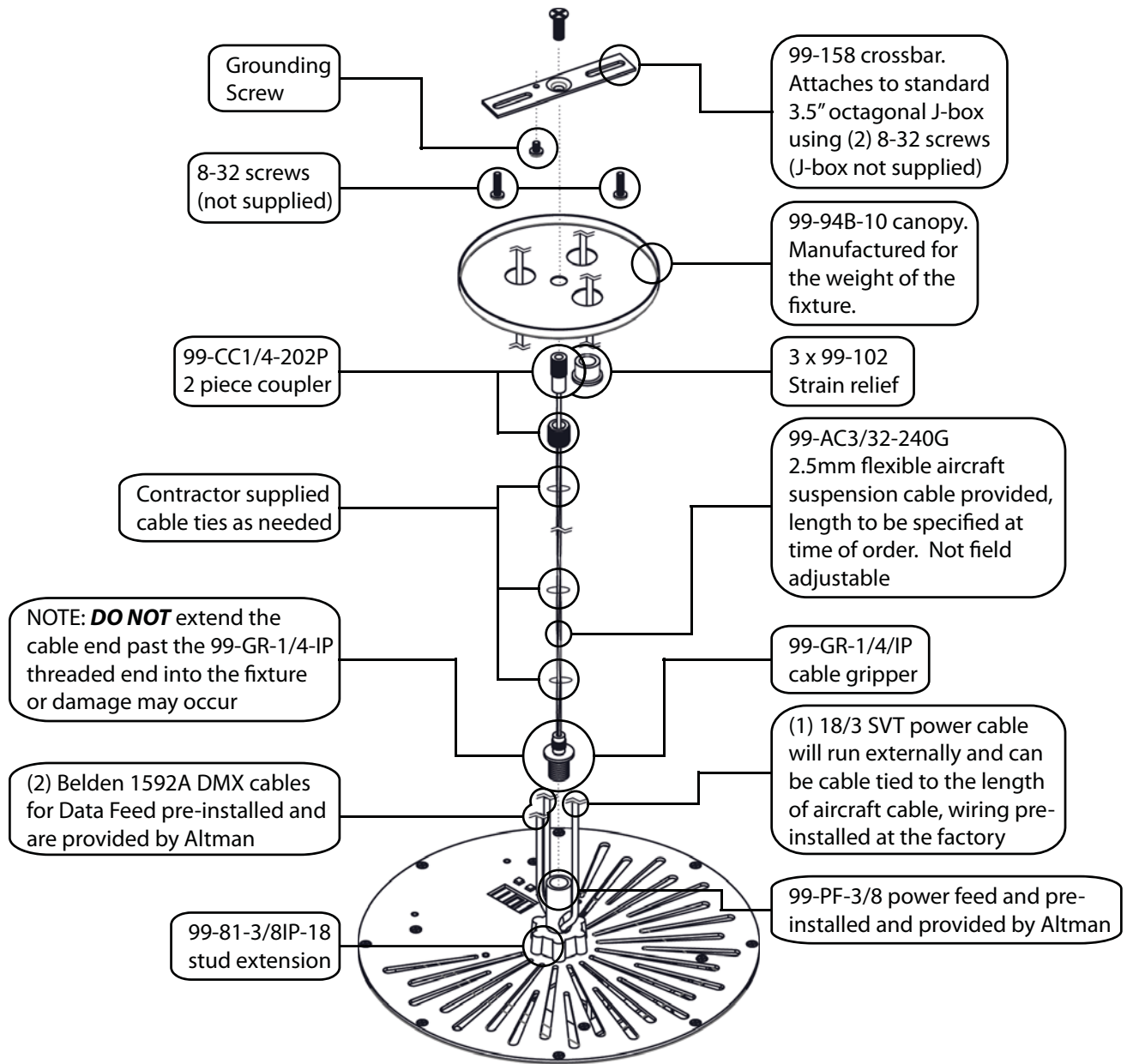
J-Box Connection Details:

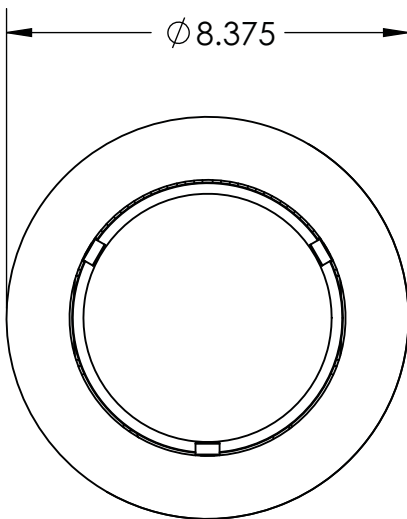
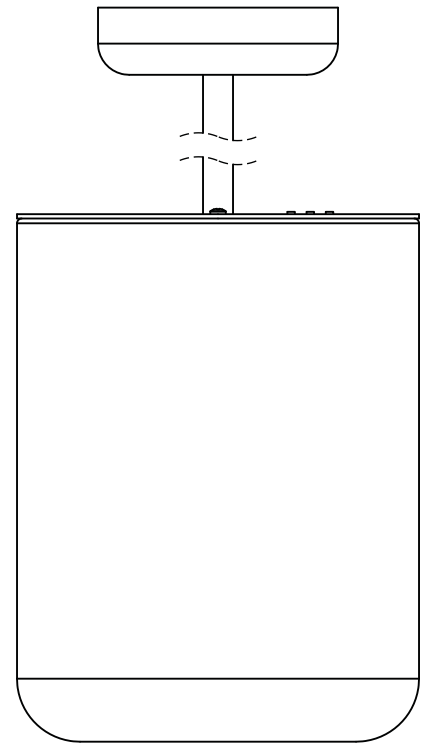
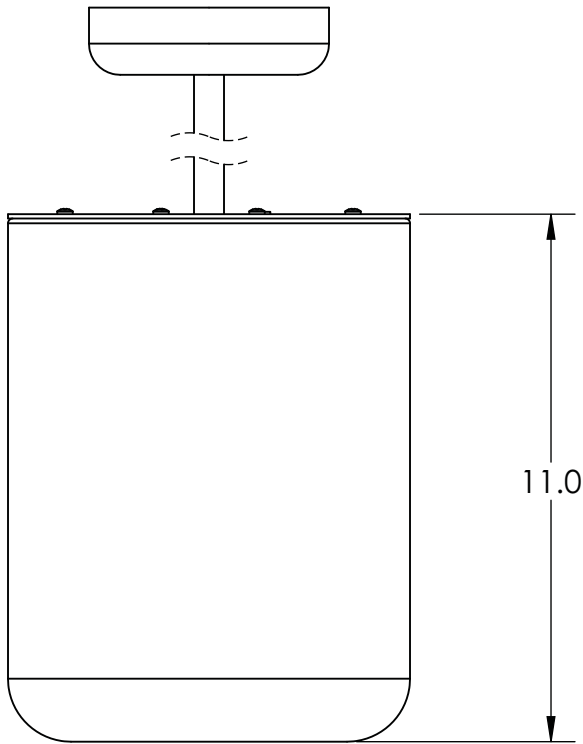


Ball Mount Details:



# Cable Mount Details:







Installation Manual  
WALL MOUNT CHALICE



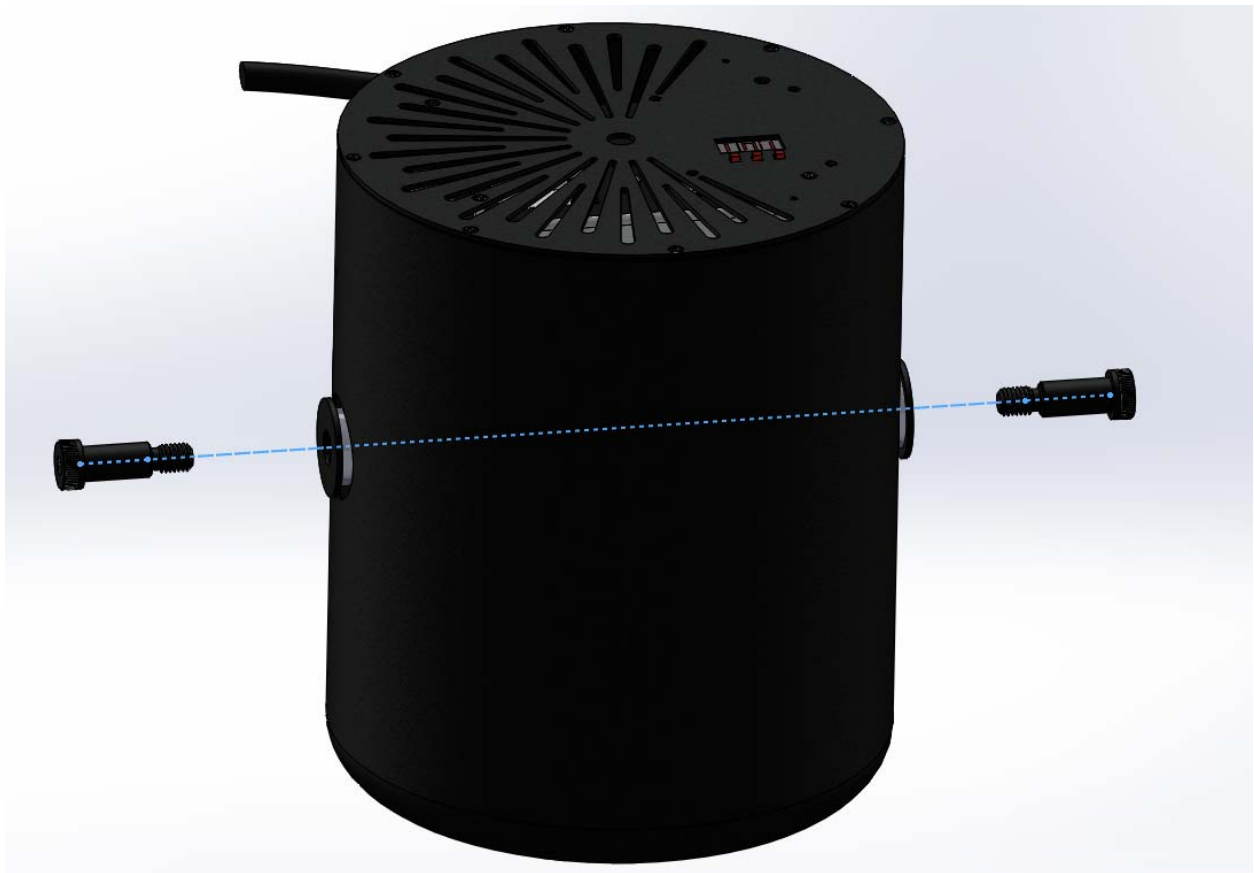
# CHALICE YOKE INSTALLATION MANUAL

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STEP 1: FIX THE YOKE TO THE WALL WITH APPROPRIATE FASTENERS



STEP 2 : REMOVE THE SHOULDER BOLTS FROM THE FIXTURE



## CHALICE YOKE INSTALLATION MANUAL

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STEP 3: INSERT THE FIXTURE BETWEEN THE YOKE AND FASTEN IT WITH REMOVED FASTENERS (STEP 2). MAKE SURE RUBBER WASHERS ARE IN BETWEEN YOKE AND FIXTURE.

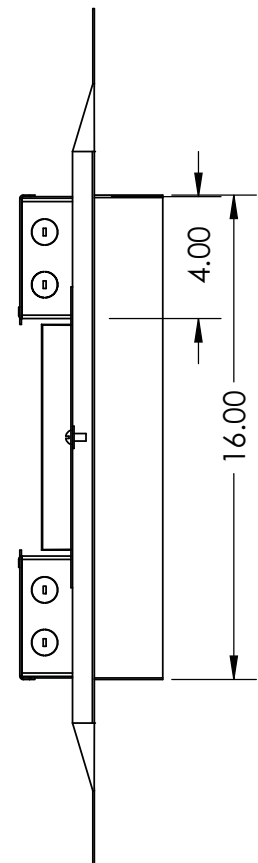
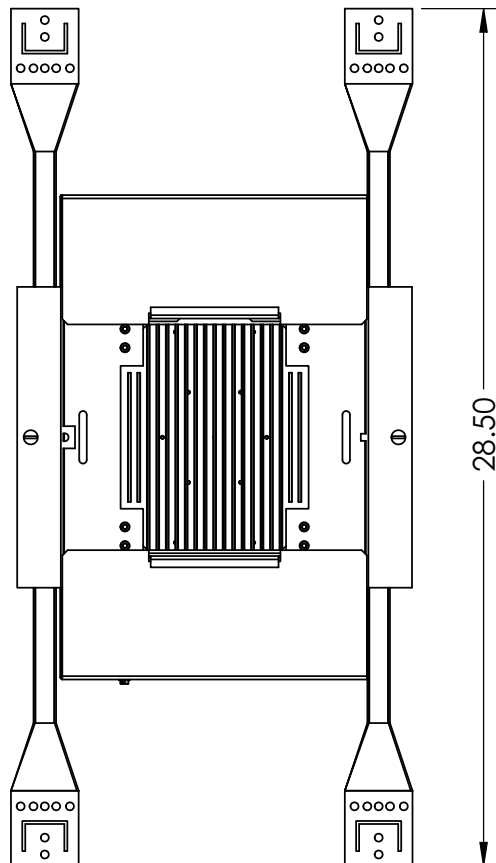
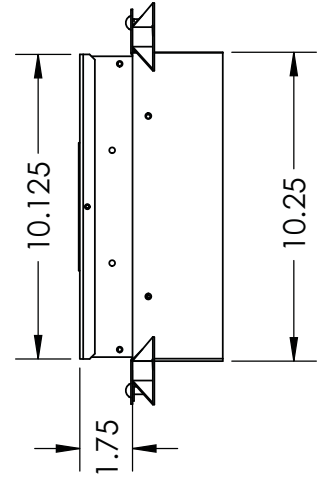
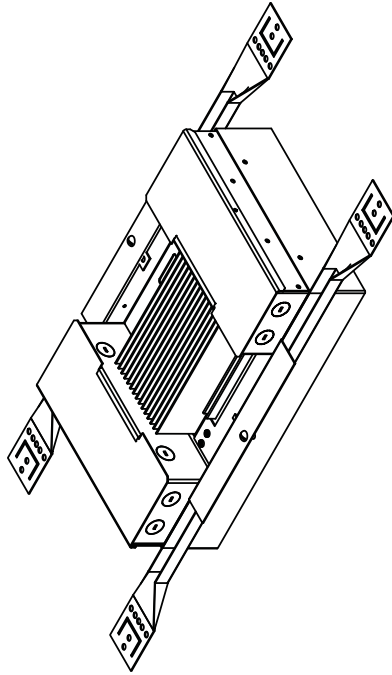


STEP 4: PERFORM THE REQUIRED WIRING TO LIGHTUP THE UNIT.





Recessed Chalice, 100W  
CDR100



# Recessed Chalice, 50W CDR50

