⚠ **INSTRUCTIONS PERTAINING TO RISK OF FIRE OR INJURY TO PERSONS. READ ALL INSTRUCTIONS. IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.**

DANGER - RISK OF SHOCK - DISCONNECT POWER BEFORE INSTALLATION! Please read all instructions before installation.

- Keep these instructions for future reference.
- Must be installed by a qualified electrician in accordance with national and local standards. Designplan is not responsible for fixtures installed without regard to these standards.
- Unauthorized alterations or tampering of product voids warranty.
- The main power connection must be in accordance with local electrical codes.
- Suitable for INDOOR and OUTDOOR applications.
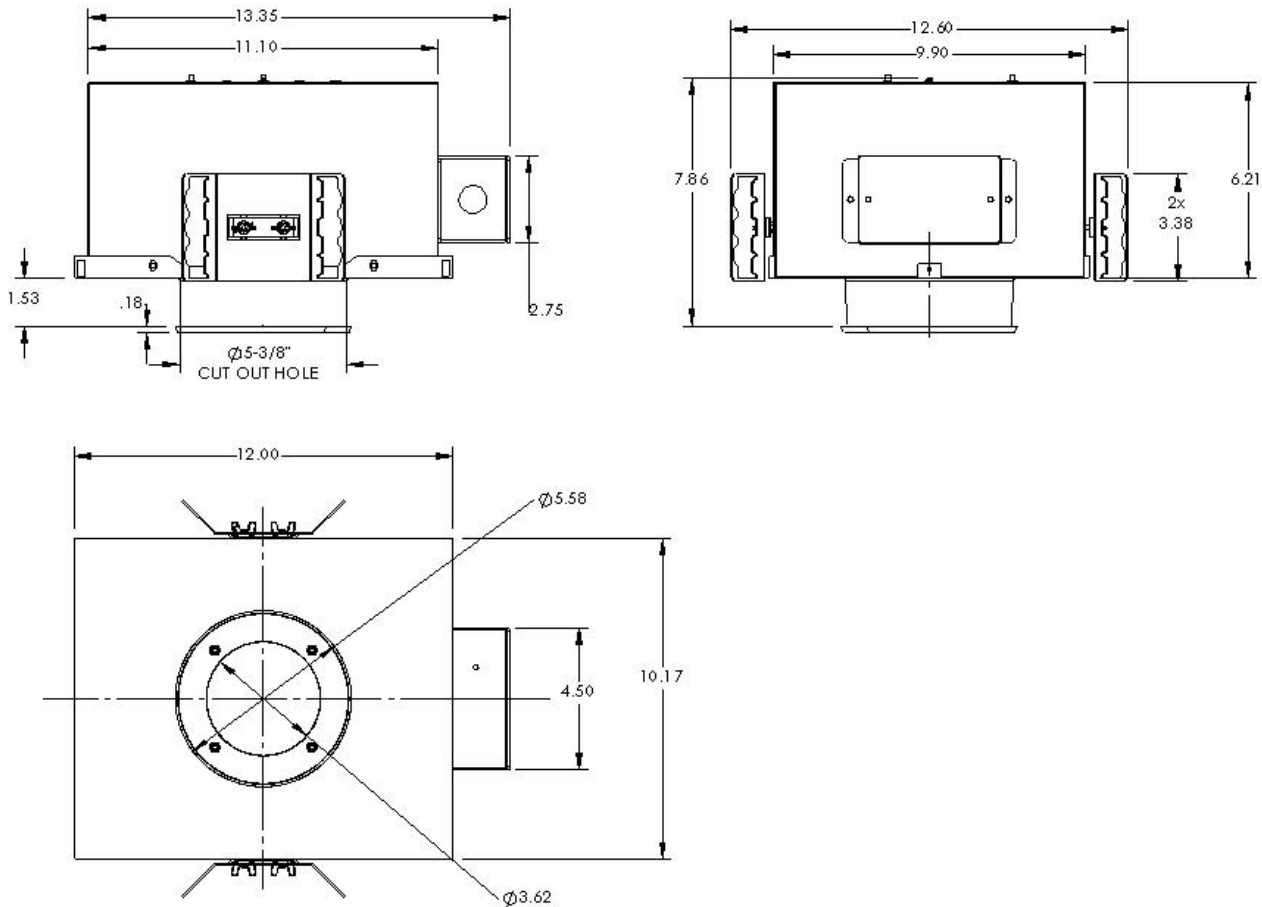- DO NOT INSTALL INSULATION WITHIN 3.0" (76 mm) OF ANY PART OF THE LUMINAIRE.

ETL Intertek   **IP65**

Electrical Connections:

- Fixture requires remote driver.
- **CHOOSE POWER SUPPLY ACCORDINGLY**.
- Please select 24VDC driver and consider the max power consumption if connecting multiple fixtures.
- **Connect power only if all fixtures are connected.**
- The power supplies MUST be installed in aerated rooms, far from heat sources. Overworking or lack of air circulation will not permit natural dissipation.
- The electronic power supply is current-stable, therefore it partially compensates the voltage-drop problems related to the cable length; we suggest not to exceed 100 ft.
- Use only Class 2 type electronic power supply.
- Never use switches on secondary circuit.
- Fixture also requires DMX connection.

Maintenance

Scheduled maintenance must be carried out once a year on all lighting devices, regardless of appliance class and type of use. It must include the following operations:

- Periodically clean fixtures to remove dirt from gratings and screw heads.
- Check tightness of screws on various parts of the device.
- Check that all cable glands and cables are intact and tight. Check that the glass or plastic lens is intact, and replace it if broken or damaged.
- The internal components such as the ballast, driver, washers and screws must not show clear signs of oxidation or rust. Clear traces of rust and oxidation will indicate the presence of water inside the device.
- In the case of damage, the components must be replaced by original components or spare parts.

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- The lighting fixture comes fully assembled.

- Remove the lens assembly. Mount fixture by utilizing the hanger bars on the sides of the body. It is the contractor's responsibility to supply proper mounting based on job condition. The fixture is suitable for a maximum 1 1/2" ceiling thickness. A 5 3/8" diameter cut out hole is required for the fixture to properly fit through the ceiling.

- Utilize the conduit entries on the sides of the J-box for wiring. CONNECT GREEN WIRE TO "GROUND", CONNECT BLACK FIXTURE TO BLACK BUIDLING WIRE AND CONNECT WHITE FIXTURE WIRE TO WHITE BUILDING WIRE. The remote driver should be in a suitable electrical enclosure.

- Re-install the lens assembly. Assure proper seal between top of lens assembly and ceiling structure.

  For Installation in Steam Rooms:

- This is only available for the RSR LED version. It is very important that the contractor seal the trim assembly to the sealed ceiling structure. This step must completed every time the fixture is opened for any reason.

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8.3.2 DMX512-A Recommended Field Wiring

Liberty 24-2P-485 (Non-Plenum), 24 AWG, 2 pair dual 120 ohm, 11.2 pf/ft low capacitance (Wago, XLR and PHX connectors)

Liberty 24-2P-P485 (Plenum), 24 AWG, 2 pair dual 120 ohm, 11.2 pf/ft low capacitance (XLR and PHX connectors)

Belden #9842 (Non-Plenum), 24 AWG, 2 pair dual shielded 120 ohm, 12.8 pf/ft low capacitance (XLR and PHX connectors)

Belden #89842 (Plenum), 24 AWG, 2 pair dual shielded 120 ohm, 12.8 pf/ft low capacitance (XLR and PHX connectors)

Please refer to wire manufacturer's lighting catalog for and/equals as required by code.

Category Wire or Equal

The Entertainment Services and Technology Association (ESTA) does not define a maximum run length for DMX over Cat5 since many factors will affect the maximum run length, such as number of devices, number of splices in the cable, the strength of the DMX transmitter(s), if Remote Device Management (RDM) is being used, and sources of interference. ESTA does state (again, in ANSI E1.21-2):

"A properly selected and installed DMX512 cable should provide acceptable signal strength for runs of 300m (1000ft). Please note that the technical requirements, such as run-length and topology for other networking technologies, such as Ethernet, should be considered if using the installed cable for another networking technology in the future is anticipated."

Cat5 or equivalent is not preferred as a portable cable since it is not as rugged as other DMX cables. Male RJ45 connectors are especially prone to breakage over repeated re-connections.

LUMENETIX RECOMMENDATION:

CAT 5E -150 FEET

CRESTRON

DM-CBL-8G-NP

DM-CBL-8G-P

CAT 7- 330 FEET

CRESTRON

DM-CBL-ULTRA-NP

DM-CBL-ULTRA-P

DMX512-A Recommended Field Connectors (or Equal)

WAGO 221

PHOENIX CONTACT

XLR NEUTRIK

CRESTRON

RJ45 DM -8G-CONN

RJ45 IDC DM-CONN

DMX512-A Wiring Connections

DMX512-A Control Systems (recommended list)

Choreo

Cognito

Crestron Greenlight System

Entec

ETC Mosaic

ETC Paradigm

Fresco

Interactive Technologies

Lutron HomeWorks QS
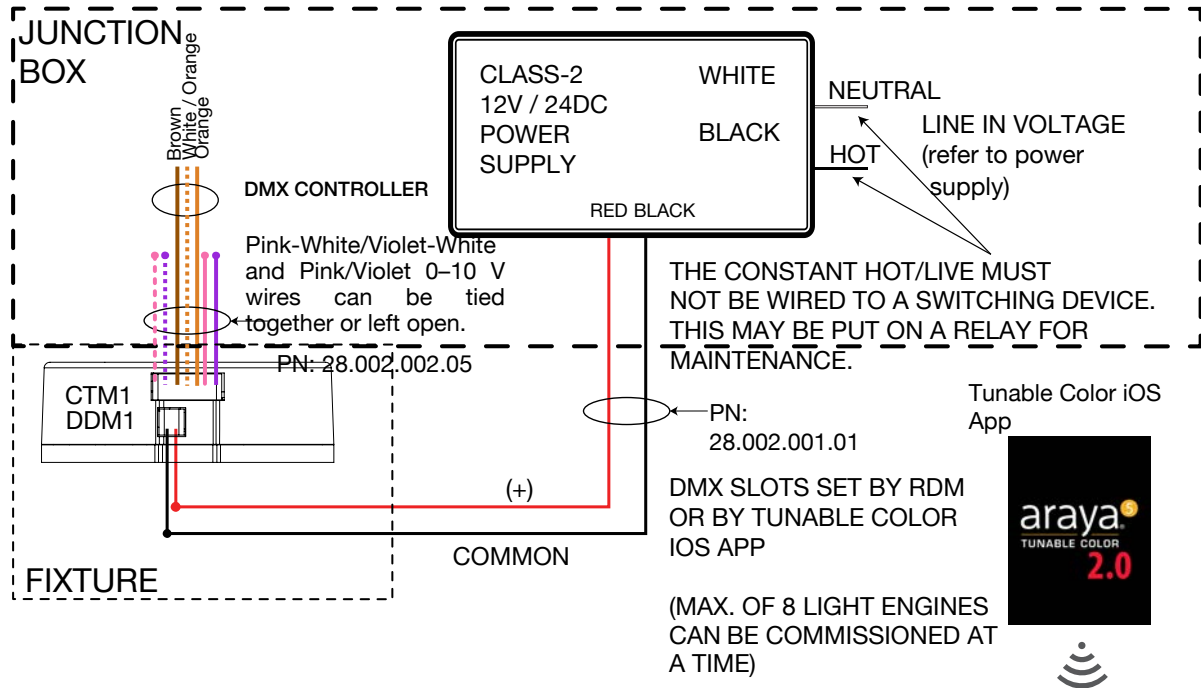
Lutron Quantum

Nicolaudie

Pathway Connectivity

Pharos

Traxon Ecue

Vantage Controls

*Recommendations are subject to change. Consult your Lumenetix representative for the most updated list.

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10 DMX512-A-RDM WIRING DIAGRAM

Please download the Araya DMX512-A Specifications guide on the ERP website, for more detailed information.

JUNCTION BOX

Brown
White / Orange
Orange

CLASS-2 12V / 24DC POWER SUPPLY

WHITE

BLACK

RED BLACK

NEUTRAL

HOT

LINE IN VOLTAGE (refer to power supply)

DMX CONTROLLER

Pink-White/Violet-White and Pink/Violet 0–10 V wires can be tied together or left open.

PN: 28.002.002.05

CTM1 DDM1

FIXTURE

(+)

COMMON

THE CONSTANT HOT/LIVE MUST NOT BE WIRED TO A SWITCHING DEVICE. THIS MAY BE PUT ON A RELAY FOR MAINTENANCE.

PN: 28.002.001.01

DMX SLOTS SET BY RDM OR BY TUNABLE COLOR IOS APP

(MAX. OF 8 LIGHT ENGINES CAN BE COMMISSIONED AT A TIME)

Tunable Color iOS App

araya
TUNABLE COLOR
2.0

Lead Color

Lead Color	Input
Red	Power 12V / 24VDC (+)
Black	Power Common (-)
Violet	0–10 V Dimming (+); Left Open
Pink	Signal Common for 0–10V Dimming (-);Left Open
Violet with White Spiral	0–10V Color (+); Left Open
Pink with White Spiral	Signal Common for 0–10V Color (-); Left Open
Orange (TOP / BOTTOM)	Data (-)
White with Orange Spiral (TOP / BOTTOM)	Data (+)
Brown (TOP / BOTTOM)	Digital Common

Part Numbers:
28.002.001.01 (2-wire power cable assembly) 28.002.002.05 (7+3-wire control cable assembly)

Notes:
1. The DMX channels can be set by RDM or by using the Tunable Color iOS App.
2. Maximum of 8 light engines can be commissioned at a time using the app.
3. Bluetooth operation should only be used for commissioning light engines, NOT controlling them.
4. The DMX control system should first be powered OFF, and only light engines that are connected to the DMX system should be powered on.
5. If more than one line of DMX is needed, then a DMX Splitter must be used to create multiple independent branches of a DMX signal and/or to extend the usable distance of each branch. Each of the splitter's 4, 6, 8, or 16 output ports generates an independently protected DMX signal.
6. See Tunable Color Instruction Manual for more details.
7. Some older versions of the 7-wire control cable assembly may be shipped with diffferently colored leads.

7 POWER / CONTROL CABLE ASSEMBLIES

7.1 Power Cable Assembly

Provides power to each light engine.

Part Number: 28.002.001.01
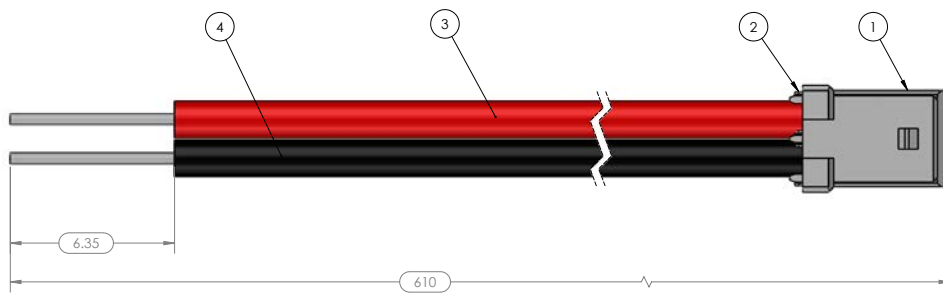
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	874390200	MOLEX CONNECTOR	1
2	874210000	CRIMP	2
3	A2015R-100-ND	24 AWG WIRE, RED	1
4	A2015B-100-ND	24 AWG WIRE, BLACK	1

UNLESS OTHERWISE SPECIFIED:

Lumenetix

7.1.2 Pin Allocation Chart for Power Cable Assembly

Pin #	Lead Color	Input
Pin 1	Red	Power 24VDC
Pin 2	Black	Power Common

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8 0–10V WIRING DIAGRAMS

Please refer to the separate 0–10V Protocol and Wiring Specifications Guide, for more detailed information.

8.1   0–10V Analog Control of CCT and Dimming
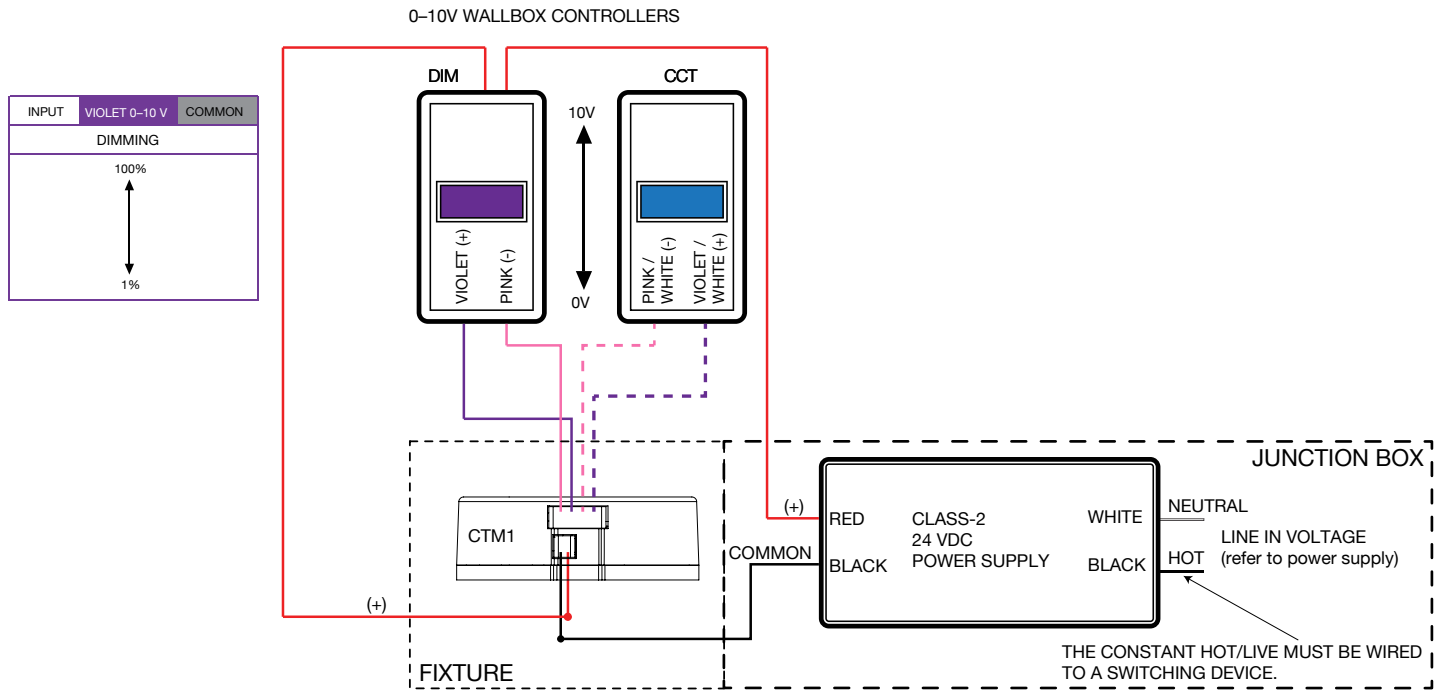
Lead Color and Input

Lead Color	Input
Red	Power 24VDC (+)
Black	Power Common (-)
Violet	0–10V Dimming (+)
Pink	Signal Common for 0–10V Dimming (-)
Pink with White Spiral	Signal Common for 0–10V Color (-)
Violet with White Spiral	0–10V Color (+)

Notes:

1. If 0–10V control is not being used for dimming, the violet control lead must be grounded to gray common lead.

2. CTM sources current to 0–10V control at 0.2 mA nominal capacity.

3. *If using a wall box dimmer, power only the DIM unit. The CCT unit does not get line-in voltage.
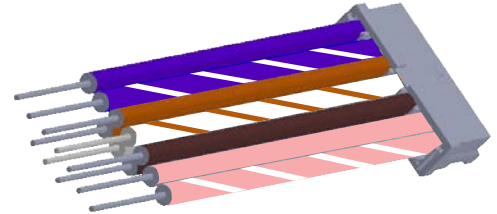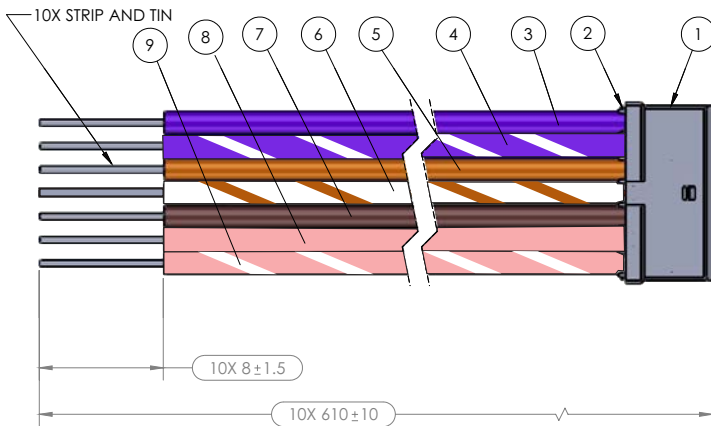
Part Number(s):
28.002.001.01 (power cable assembly)
28.002.002.01 (control cable assembly)

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7 POWER / CONTROL CABLE ASSEMBLIES

7.3 Control Cable Assembly (7+3 Wire)
Provides dual-DMX control and RS-485 signals to each light engine.

Part Number: 28.002.002.05

ITEM NO.	PART NUMBER	MANUFACTURE	DESCRIPTION	QTY.
1	874390700	MOLEX	CONNECTOR 7-PIN	1
2	874210000	MOLEX	CONNECTOR CRIMP	7
3	UL 1061	ANY	WIRE STRANDED TINNED 24AWG 7-32 VIOLET	1
4	UL 1061	ANY	WIRE STRANDED TINNED 24AWG 7-32 VIOLET WITH WHITE SPIRAL	1
5	UL 1061	ANY	WIRE STRANDED TINNED 26AWG 7-34 ORANGE	2
6	UL 1061	ANY	WIRE STRANDED TINNED 26AWG 7-34 WHITE WITH ORANGE SPIRAL	2
7	UL 1061	ANY	WIRE STRANDED TINNED 26AWG 7-34 BROWN	2
8	UL 1061	ANY	WIRE STRANDED TINNED 24AWG 7-32 PINK	1
9	UL 1061	ANY	WIRE STRANDED TINNED 24AWG 7-32 PINK WITH WHITE SPIRAL	1
ITEM NO.	ALT PART NUMBER	MANUFACTURE	DESCRIPTION	QTY.
1	A1501H-07P	LDZY	CONNECTOR 7-PIN	1
2	A1501TF-PT1	LDZY	CONNECTOR CRIMP	7

UNLESS OTHERWISE SPECIFIED:

Lumenetix

7.3.2 Pin Allocation Chart for Control Cable Assembly

Pin #	Lead Color	Input
Pin 1	Violet	0–10 V Dimming (+)
Pin 2	Violet with White Spiral*	0–10 V Color (+)
Pins 3a / 3b (TOP / BOTTOM)	Orange	Data (-)
Pins 4a / 4b (TOP / BOTTOM)	White with Orange Spiral*	Data (+)
Pin 5a / 5b (TOP / BOTTOM)	Brown	Digital Common
Pin 6	Pink*	Signal Common for 0–10 V Dimming (-)
Pin 7	Pink with White Spiral*	Signal Common for 0–10 V Color (-)

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8 0–10V WIRING DIAGRAMS

8.2   0–10V Analog Control of Scenes / Tunable Color App to Set or Amend Scenes
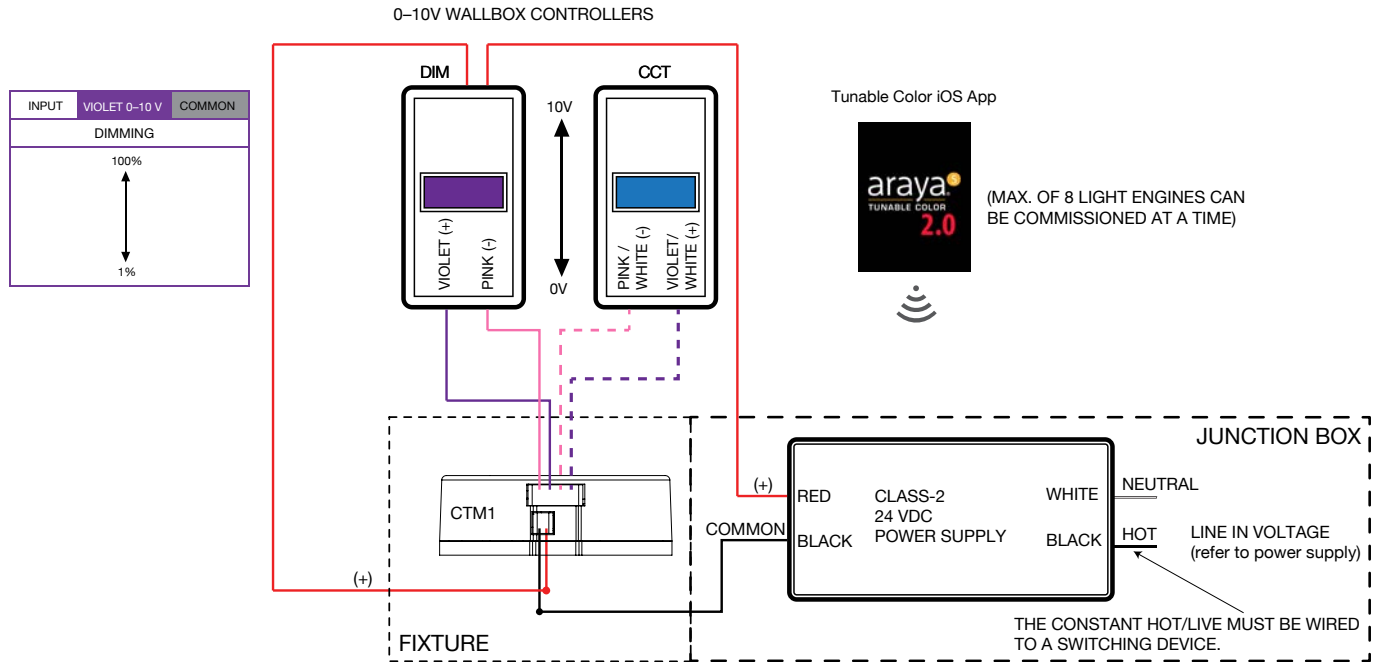
Lead Color and Input

Lead Color	Input
Red	Power 24 VDC (+)
Black	Power Common (-)
Violet	0–10V Dimming (+)
Pink	Signal Common for 0–10V Dimming (-)
Pink with White Spiral	Signal Common for 0–10V Presets (-)
Violet with White Spiral	0–10V Presets (+)

Part Number(s):
28.002.001.01 (power cable assembly)
28.002.002.01 (control cable assembly)

Notes:

1. When the lamp is connected to a 0–10V line, the default is control of the continuous CCT range. The 0–10V line can instead be set to control scene set by sliding the Stored Scenes button to the "on" position in the Tunable Color iOS App. In this mode, the 0–10V control will toggle the light between up to 5 preset scenes. A scene is comprised of a CCT, Dim, Saturation & Hue level. Individual preset scenes can also be modi i ed and activated with the iOS app. See Tunable Color Instruction Manual for more instructions.

2. If 0–10 V control is not being used for dimming, the violet control lead must be grounded to gray common lead.

3. CTM sources current to 0–10V control at 0.2 mA nominal capacity.

4. *If using a wall box dimmer, power only the DIM unit. The CCT unit does not get line-in voltage.

NOTE: SOME OLDER VERSIONS OF THE 7-WIRE CONTROL CABLE ASSEMBLY MAY BE SHIPPED WITH DIFFERENTLY COLORED LEADS.

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