

LITESPHERE
TRUE RGB+W



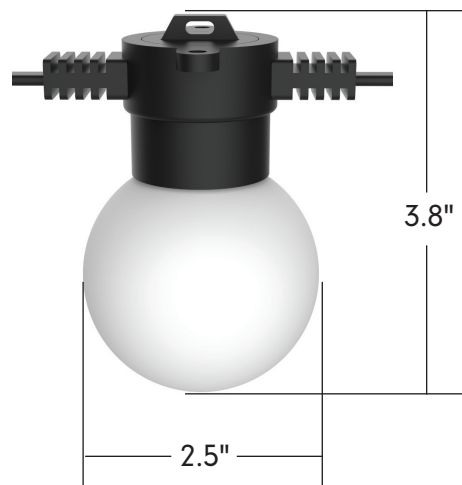
tivoli®



Project: _____ TYPE: _____

- Tivoli's proprietary algorithm controls RGB+W (5000K) LEDs for superior color saturation and TRUE white performance other than a standard four-channel system
- Audio enhanced with MADRIX software
- Available DarkSky option with added light shade
- Individually control each globe with DMX512 (3 Channels per/pixel) protocol for a unique and personal environment
- Each globe is auto-addressed for fast set-up and connection
- True RGB +W Technology delivers more than 16 million combinations of pure and precise color tones
- Tivoli's proprietary PCB design maintains a high level performance and easy replacement
- True RGB+W mount design provides optional suspended and a twist-off cap for surface applications
- 24V DC Low voltage system for long runs
- Pre-molded twist connect male and female power lead
- IP67
- cULus listed
- 3 Year warranty

Dimensions



Order Guide

Note: For suspension application, a catenary cable is required for proper installation.
Please contact Tivoli for recommendations on unique mounting applications.

Strand Order Guide - 06" OC Max strand run length (80 total globes each circuit): 40'

PRODUCT CODE	WIRE	SPACING	LED TYPE	GLOBE	LENGTH	VOLTAGE
LST		06	RGBW			24
LST = Litesphere True RGB+W	BK = Black WH = White*	06 = 6" OC	RGBW = Red Green Blue +White (5000K)	OP = Opal CL = Clear FR = Frosted GIN = Gina KAT = Katie ANG = Angela	10 = 10' 20 = 20' 40 = 40'	24 = 24V DC

Strand Order Guide - 12" OC Max strand run length (80 total globes each circuit): 80'

PRODUCT CODE	WIRE	SPACING	LED TYPE	GLOBE	LENGTH	VOLTAGE
LST		12	RGBW			24
LST = Litesphere True RGB+W	BK = Black WH = White*	12 = 12" OC	RGBW = Red Green Blue +White (5000K)	OP = Opal CL = Clear FR = Frosted GIN = Gina KAT = Katie ANG = Angela	10 = 10' 40 = 40' 80 = 80'	24 = 24V DC

Strand Order Guide - 24" OC Max strand run length (80 total globes each circuit): 160'

PRODUCT CODE	WIRE	SPACING	LED TYPE	GLOBE	LENGTH	VOLTAGE
LST		24	RGBW			24
LST = Litesphere True RGB+W	BK = Black WH = White*	24 = 24" OC	RGBW = Red Green Blue +White (5000K)	OP = Opal CL = Clear FR = Frosted GIN = Gina KAT = Katie ANG = Angela	10 = 10' 40 = 40' 80 = 80' 160 = 160'	24 = 24V DC

*Consult factory for MOQ and lead-time

Specifications

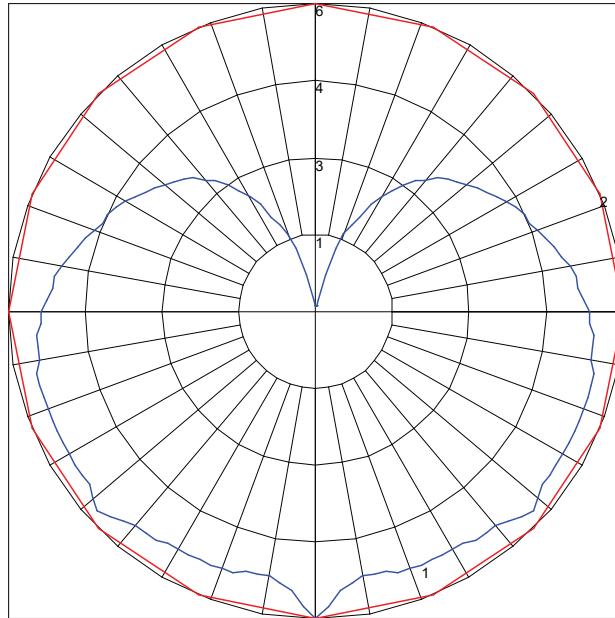
EPA	6"	12"	24"
Standard	0.10	0.06	0.04
Hat 8"	N/A	0.53	0.28
Hat 13"	N/A	N/A	0.71
Dish 10"	N/A	0.82	0.42
Flower 10"	N/A	0.82	0.42
Flower 13"	N/A	N/A	0.71

Weights	6"	12"	24"
lb/ft	0.31	0.17	0.11
lb/ft with catenary cable	0.33	0.19	0.13

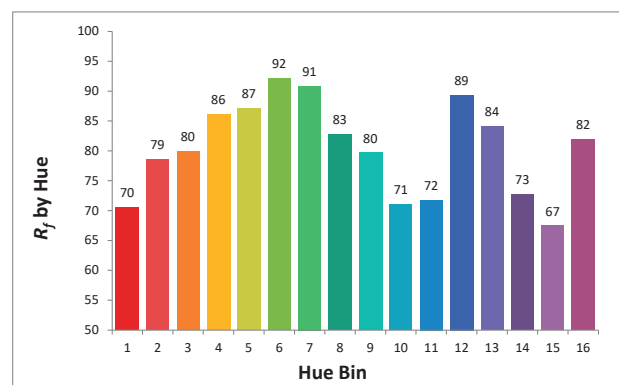
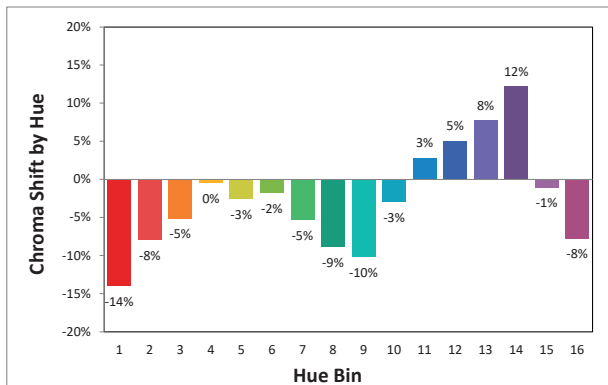
Output	
Kelvin Temperature	Red / Green / Blue / White (5000K)
Pixels	1 pixel/globe
Lumens (lm/globe)	55 (all color fully on)
Electrical	
Input Voltage	24V DC
Power Consumption (W/globe)	1
Maximum STRAND Run (based on O.C. spacing)	40' @ 6" OC, 80' @ 12" OC, 160' @ 24" OC (Total 80 globes per circuit)
Control	
Control System	DMX 512 (3 channel/globe)
Address Setting	Auto Addressing, Manual Addressing (factory setting only)
Physical	
Dimensions	2.5"W x 3.8"H
Socket Housing	PVC
Globe	PET
Mounting	Surface Mount, Suspended
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Storage Temperature	-40°C to 65°C (-40°F to 149°F)
Certification and Testing	
Certification	cULus
Environment	Wet Location
IP Rating	IP67
Warranty	3 Years

Photometrics

Maximum Candela = 5.6
 Located At Horizontal Angle = 0
 Vertical Angle = 0
 #1 Vertical Plane Through Horizontal Angles (0-180) (Through Max. Cd.)
 #2 Vertical Cone Through Vertical Angle (0) (Through Max. Cd.)

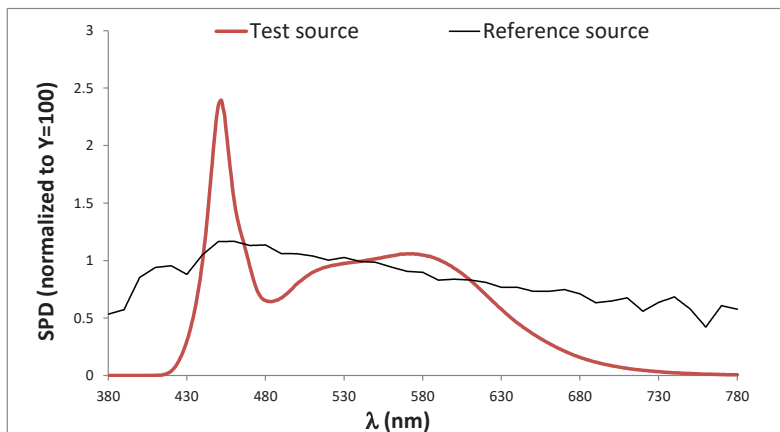


TM-30-15



TM-30-15

R_f	R_g	CCT (K)	D_{uv}	u'	v'
81	94	6887	0.0030	0.1961	0.4642



		Graphic Shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	70	-14%	0%
2	79	-8%	7%
3	80	-5%	9%
4	86	0%	6%
5	87	-3%	2%
6	92	-2%	-2%
7	91	-5%	0%
8	83	-9%	2%
9	80	-10%	12%
10	71	-3%	17%
11	72	3%	14%
12	89	5%	3%
13	84	8%	-7%
14	73	12%	-15%
15	67	-1%	-23%
16	82	-8%	-6%

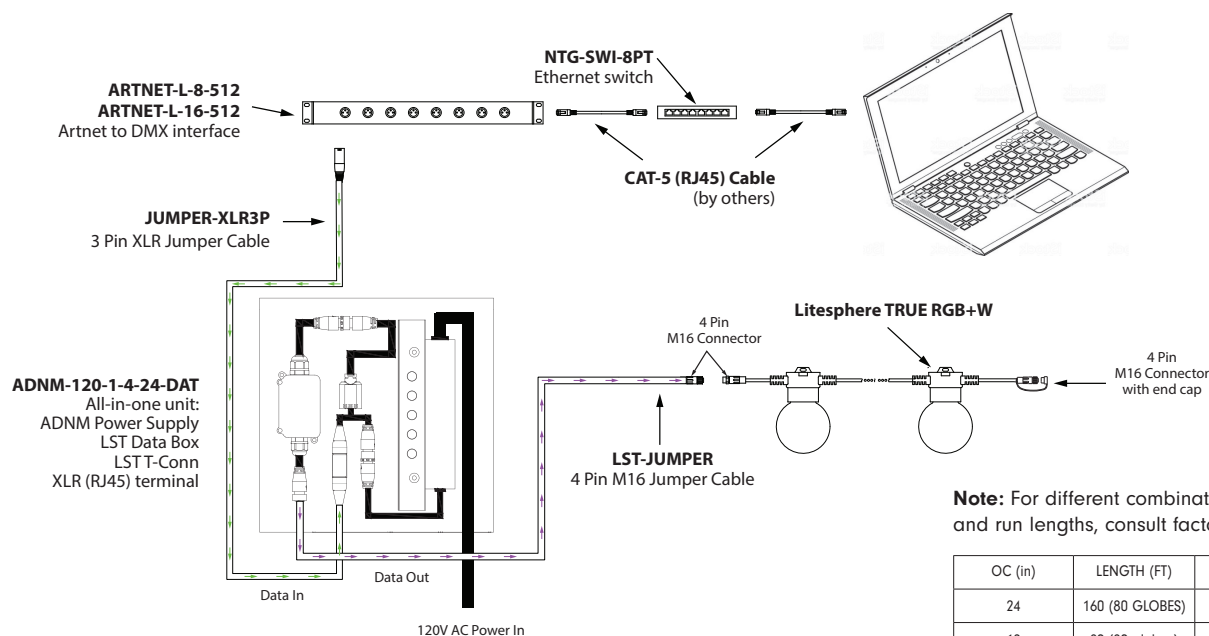
Data Operation & Wiring Diagram

DMX Databox base address is always 001 and auto addresses on powerup all connected globes up to a maximum of 170 globes equal to 510 DMX channels. (3 DMX Ch. per Globe) DMX Ch 511-512 can be used for DMX relay controlled powerup, optional.

Online Operation

MADRIX (Live)

This is a live control performance setup. Widely used for concerts or performance-based manipulation. Use of a live network is necessary for communication between MADRIX software and Litesphere True RGB+W.



Note: For different combinations of lead and run lengths, consult factory

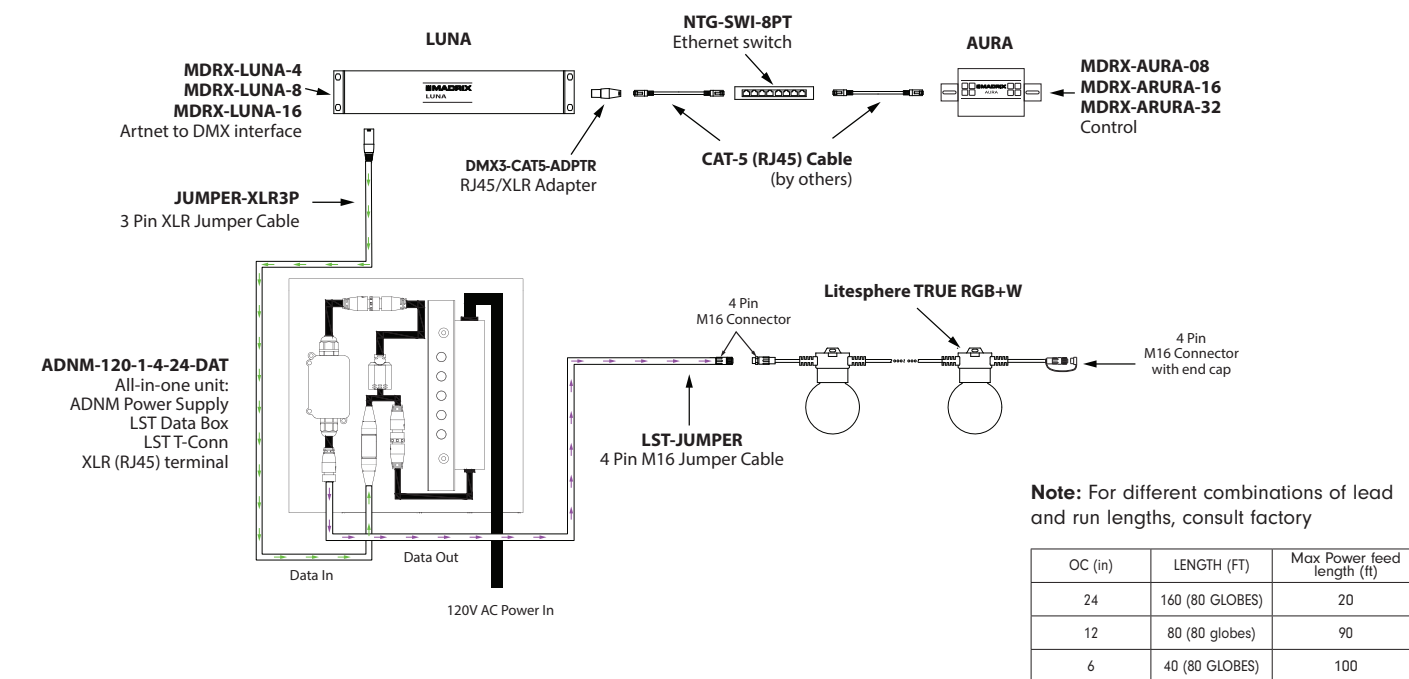
OC (in)	LENGTH (FT)	Max Power feed length (ft)
24	160 (80 GLOBES)	20
12	80 (80 globes)	90
6	40 (80 GLOBES)	100

DMX Databox base address is always 001 and auto addresses on powerup all connected globes up to a maximum of 170 globes equal to 510 DMX channels. (3 DMX Ch. per Globe) DMX Ch 511-512 can be used for DMX relay controlled powerup, optional.

On-line/Off-line Operation

MADRIX AURA

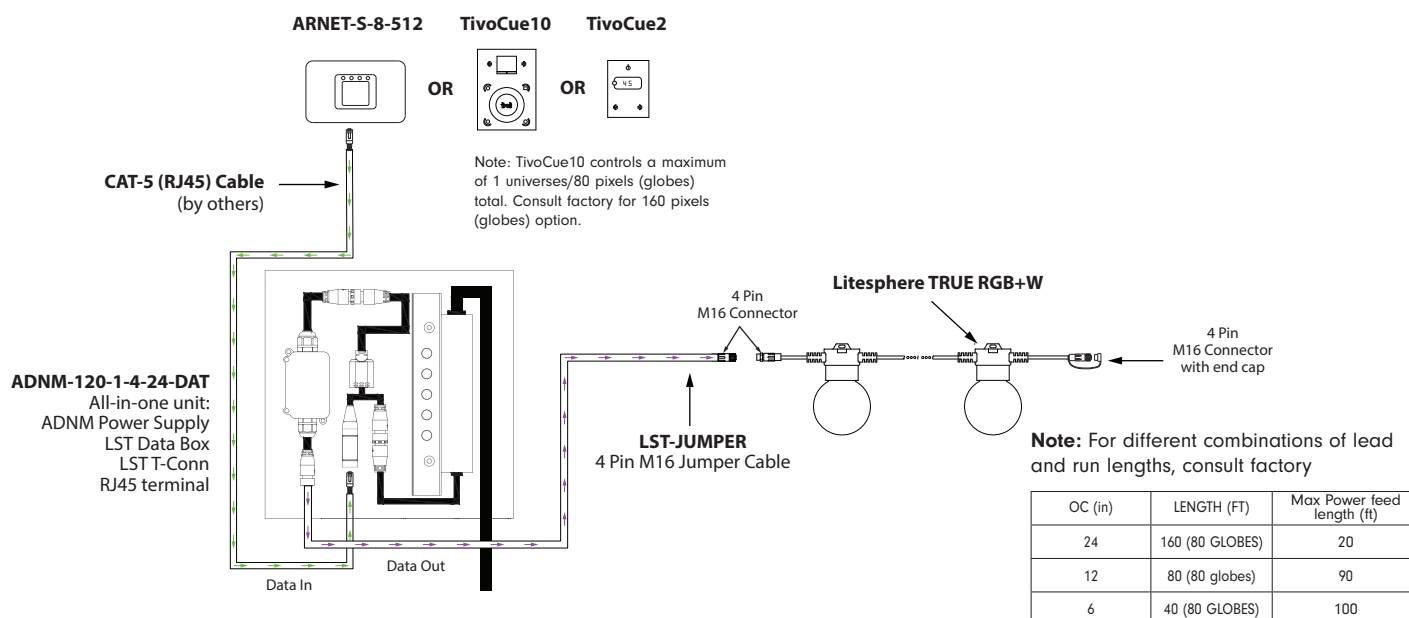
Programmed via MADRIX5 and recorded into AURA. This is a stand-alone feature with no need for network support by software (MADRIX) once recorded and transferred to control hardware.



Off-line Operation

TivoCUE or Artnet Interface (Preset)

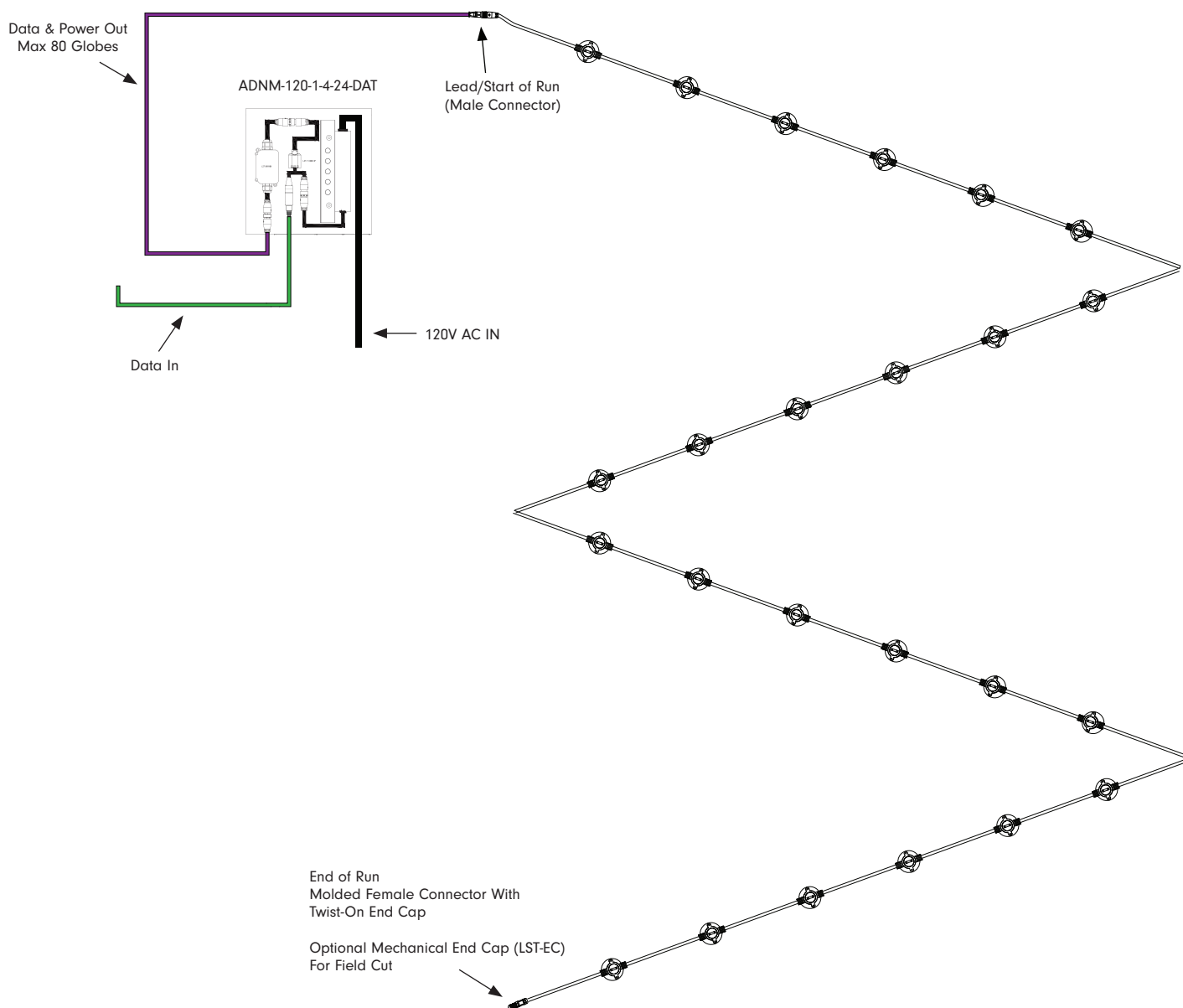
Programmed via CUE software or MADRIX5 and recorded to a Micro SD card for data transfer into TivoCUE or Artnet Interface control. This is a stand-alone feature with no need for network support by software (CUE or MADRIX) once recorded and transferred to control hardware. Please refer to the TivoCue10 or ARTNET-S-8-512 specification for setup/record information.



Wiring Single Run with single circuit 96W

OC (in)	LENGTH (FT)	Max Power feed length (ft)
24	160 (80 GLOBES)	20
12	80 (80 globes)	90
6	40 (80 GLOBES)	100

Note: For different combinations of lead and run lengths, consult factory



⚠ Warnings: Risk of injury or fire.

Do not cover any luminaire as the covering may cause it to overheat.

Do not install this lighting system where the exposed bare contacts can be shorted or contact any conductive material to reduce the risk of fire and burns.

Do not install any luminaire closer than 6 inches (15.25cm) from any curtain, or similar combustible material.

Do not use any luminaire if damaged; such as, broken globe, loose connections, or frayed wire insulation. Inspect periodically.

Do not submerge any luminaire in liquid. Use waterproof connectors for all outdoor applications.

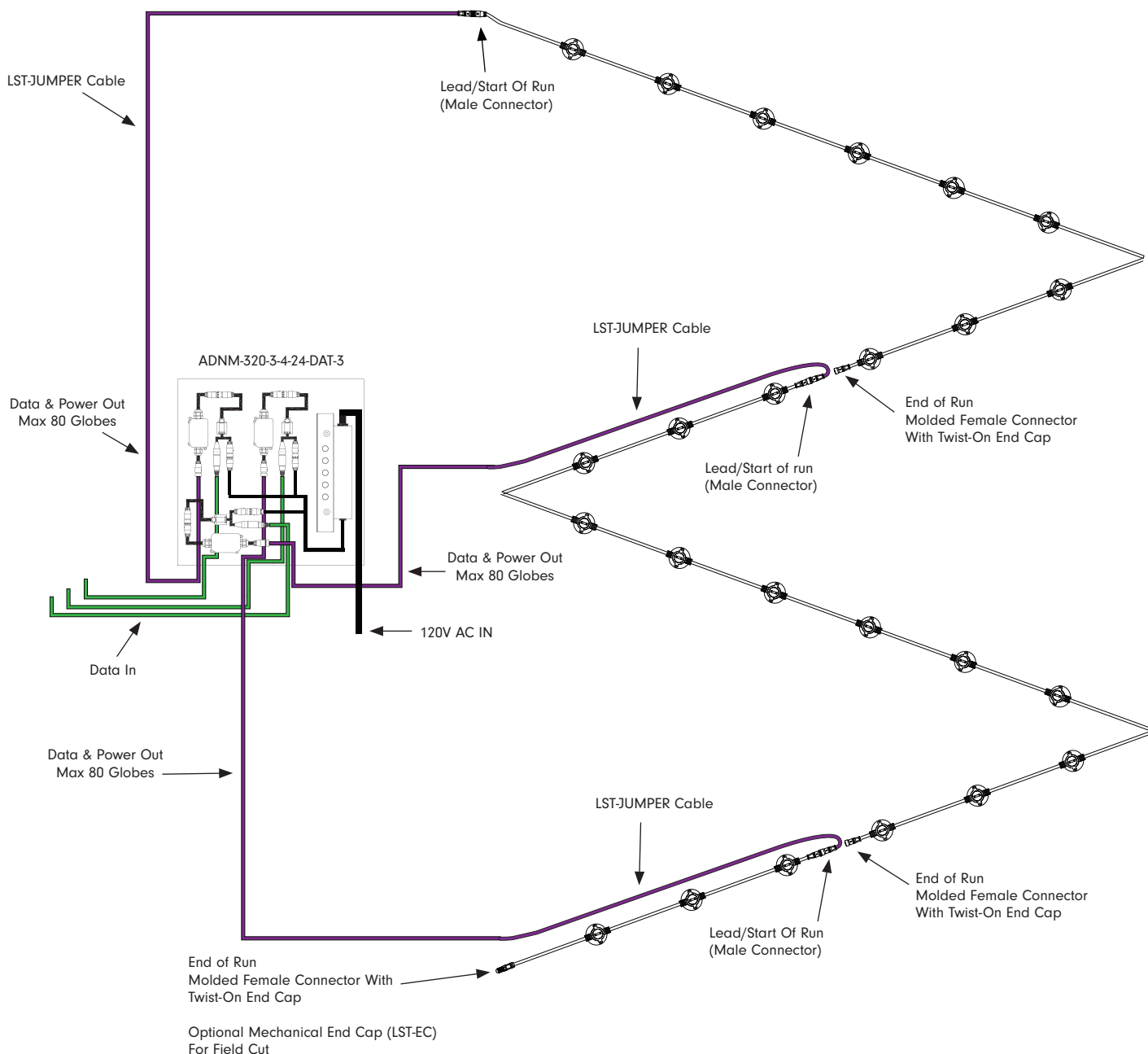
Do not secure any luminaire with staples, nails or like means that might damage the wire insulation. Secure it by using screws through the base.

Do not run any luminaire at an operating temperature exceeding -20°C to 50°C (-4°F to 122°F)

Wiring Multiple Runs with multi circuit 96W

OC (in)	LENGTH (FT)	Max Power feed length (ft)
24	160 (80 GLOBES)	20
12	80 (80 globes)	90
6	40 (80 GLOBES)	100

Note: For different combinations of lead and run lengths, consult factory



⚠ Warnings: Risk of injury or fire.

Do not cover any luminaire as the covering may cause it to overheat.

Do not install this lighting system where the exposed bare contacts can be shorted or contact any conductive material to reduce the risk of fire and burns.

Do not install any luminaire closer than 6 inches (15.25cm) from any curtain, or similar combustible material.

Do not use any luminaire if damaged; such as, broken globe, loose connections, or frayed wire insulation. Inspect periodically.

Do not submerge any luminaire in liquid. Use waterproof connectors for all outdoor applications.

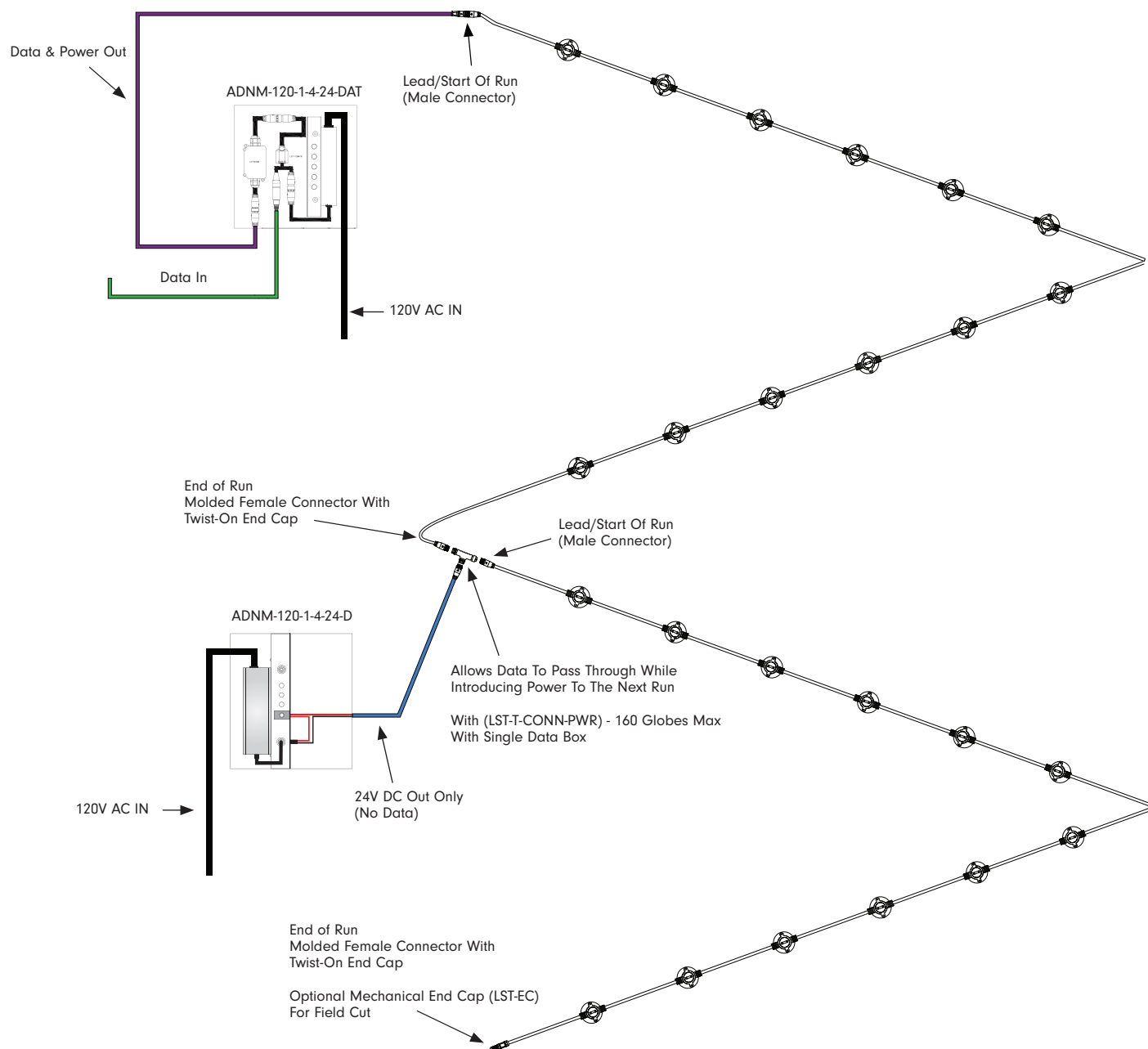
Do not secure any luminaire with staples, nails or like means that might damage the wire insulation. Secure it by using screws through the base.

Do not run any luminaire at an operating temperature exceeding -20°C to 50°C (-4°F to 122°F)

Wiring Dual Runs with single circuit 96W

OC (in)	LENGTH (FT)	Max Power feed length (ft)
24	160 (80 GLOBES)	20
12	80 (80 globes)	90
6	40 (80 GLOBES)	100

Note: For different combinations of lead and run lengths, consult factory



⚠ Warnings: Risk of injury or fire.

Do not cover any luminaire as the covering may cause it to overheat.

Do not install this lighting system where the exposed bare contacts can be shorted or contact any conductive material to reduce the risk of fire and burns.

Do not install any luminaire closer than 6 inches (15.25cm) from any curtain, or similar combustible material.

Do not use any luminaire if damaged; such as, broken globe, loose connections, or frayed wire insulation. Inspect periodically.

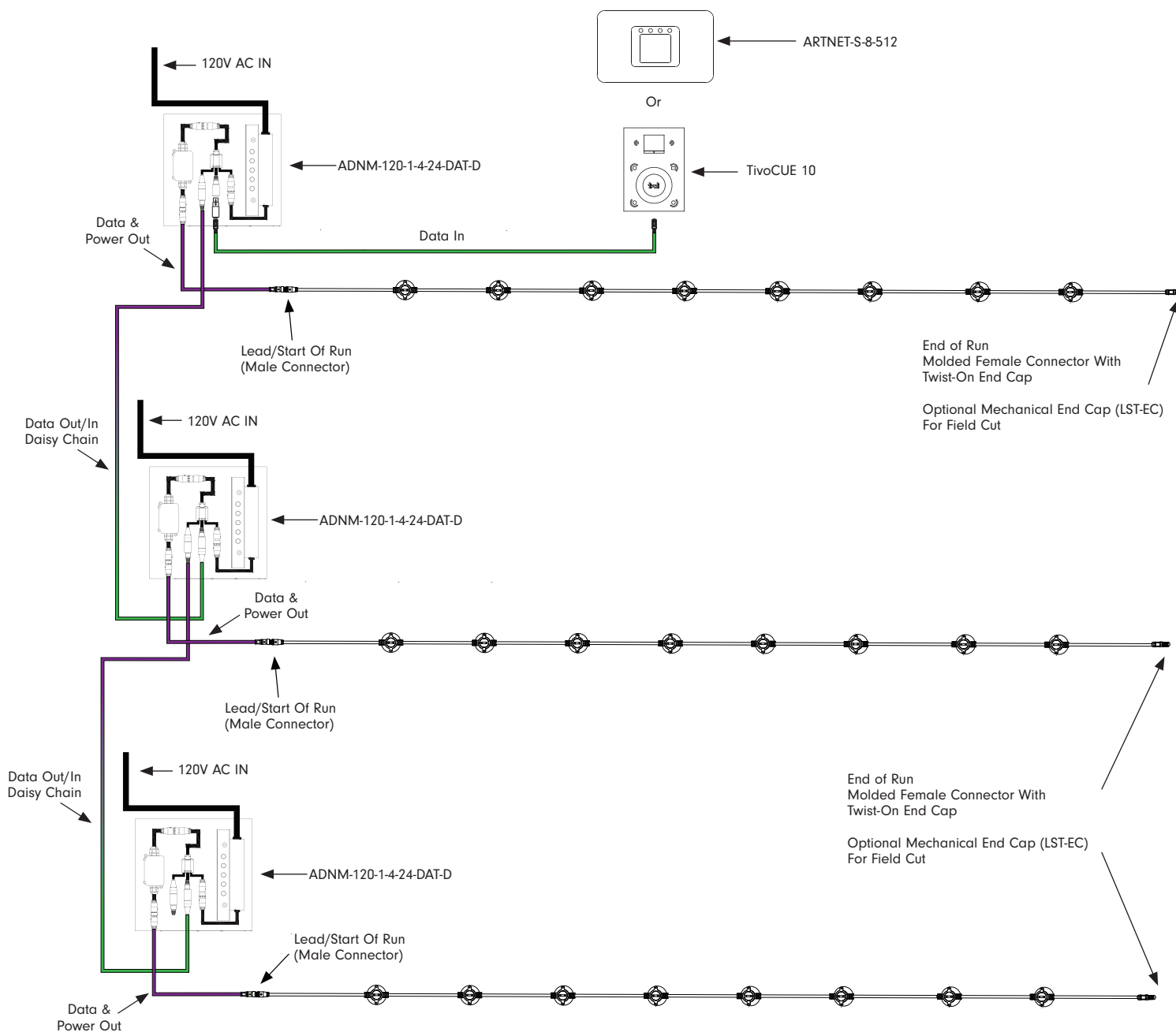
Do not submerge any luminaire in liquid. Use waterproof connectors for all outdoor applications.

Do not secure any luminaire with staples, nails or like means that might damage the wire insulation. Secure it by using screws through the base.

Do not run any luminaire at an operating temperature exceeding -20°C to 50°C (-4°F to 122°F)

Daisy-Chain Multiple Runs within single Universe

The below example is for **160 globes max on (1) universe** with different globe count per strand. This process includes **manually programming of each Data Box for a specified DMX address** according to your setup. **Each Data Box must be addressed in house by the factory before shipment.**



⚠ Warnings: Risk of injury or fire.

Do not cover any luminaire as the covering may cause it to overheat.

Do not install this lighting system where the exposed bare contacts can be shorted or contact any conductive material to reduce the risk of fire and burns.

Do not install any luminaire closer than 6 inches (15.25cm) from any curtain, or similar combustible material.

Do not use any luminaire if damaged; such as, broken globe, loose connections, or frayed wire insulation. Inspect periodically.

Do not submerge any luminaire in liquid. Use waterproof connectors for all outdoor applications.

Do not secure any luminaire with staples, nails or like means that might damage the wire insulation. Secure it by using screws through the base.

Do not run any luminaire at an operating temperature exceeding -20°C to 50°C (-4°F to 122°F)

Accessories



LST-JUMPER-X-XX
4 PIN jumper cable, IP67
X = B (Black), **W*** (White)
XX = 10, 20, 40, 60, 80, 100
(lengths in ft)



JUMPER-XLR3P-X
Jumper Cable 3-PIN XLR
X = 5, 10, 25 (lengths in ft)



LST-EC-X
End Cap
X = B (Black), **W*** (White)



LST-T-CONN-PWR-X
T-CONN power pass through
X = B (Black), **W*** (White)



LST-PWR-2-X-XX
2 pin power lead
(for T-CONN-PWR)
X = B (Black), **W*** (White)
XX = 10 (10'), **15** (15'), **20** (20'),
25 (25')



LST-T-CONN-3P
T Connector, IP67
3-PIN XLR Male for DMX
5-PIN M16 Female for LED
2-PIN M16 female to 2-PIN
male



LST-T-CONN-DSY
Daisy-Chain T Connector, IP67
3-PIN XLR Male
3-PIN XLR Female
5-PIN M16 Female for LED
2-PIN M16 female (power)



LST-DATABX-MTL
Metal Data Box
(for custom programming consult
factory)



DMX3-CAT5-ADPTR
DMX Adapter
3-pin XLR Female to RJ45

*Consult factory for MOQ and lead-time

Hardware



MDRX-LUNA-XX
X = 04, 08, 16 (ports)
MADRIX Luna 4, 8, 16 port
universe Artnet to DMX interface
16 port 8192, 8 port 4096, 4 port
2048 DMX channels



ARTNET-L-X-512
X = 8 (8 Ports), **16** (Ports)
8 or 16 port universe Artnet to
DMX interface, 16 port 8192



NTG-SWI-XXPT
XX = 8 (8 Ports), **16** (16 Ports)
NETGEAR 16-Port gigabit
Unmanaged Switch



DMX-SPLT-8
DMX Splitter
1 Input to 8 Output
Ethernet or Hardwire Connection

Key & Software Levels

PRODUCT CODE	CONTROL	5 KEY & SOFTWARE LEVEL
MDRX MDRX = MADRIX	LC LC = Lighting Control	5S = Start Level 5E = Entry Level 5B = Basic Level 5P = Professional Level 5U = Ultimate Level 5M = Maximum Level

MADRIX KEY

A USB dongle unlocks the software's full output. You can freely switch between different PCs as it is not bound to a specific one. It only needs to be activated online once.

MADRIX 5 LICENSE UPGRADES

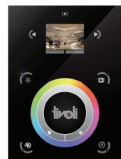
You can easily upgrade your MADRIX 5 KEY to any higher license at any time, increasing the available output.

Level	START	ENTRY	BASIC	PROFESSIONAL	ULTIMATE	MAXIMUM
MADRIX 5 Order Code	MDRX-LC-5S	MDRX-LC-5E	MDRX-LC-5B	MDRX-LC-5P	MDRX-LC-5U	MDRX-LC-5M
DMX-Based Output						
DMX Channels	1,024	4,096	16,384	65,536	262,144	1,048,576
DMX Universe Example	2	8	32	128	512	2,048
RGB Voxels Example	341	1,365	5,461	21,845	87,381	349,525
DVI-Based Output						
DVI Voxels	4,096	16,384	262,144	1,048,576	2,097,152	2,097,152
Render Resolution (Pixel x Pixel)	64 x 64	128 x 128	512 x 512	1,024 x 1,024	2,048 x 1,024	2,048 x 1,024



Cue™ and CuePro™ softwares are specifically designed for the TivoCUE™ in-wall DMX controls and includes an array of tools required by the latest DMX lighting fixtures. Intuitive, with easy-to-use effects that can be dropped into timelines, and multi-zone synchronization capabilities allow you to program a project effortlessly.

Controls



TVOQ-10-XX-7
XX = BK (black), WH (white)



TVOQ-2-BK
Black



ARTNET-S-8-512
8 port universe Artnet to DMX interface, 4096 DMX channels
Programmable for playback and live support
(Online or Offline option)



MDRX-AURA-XX
X = 02, 12, 32 (ports)
MADRIX Aura is a stand-alone controller for up to 2, 12, or 32 universes per unit

Mounting Options

SURFACE/FLUSH

For surface mount applications, remove the top suspension-plate by turning counter-clockwise until off. Place socket flush against the desired surface and mount using proper screws according to substrate.



SUSPENDED

Suspended mounting will use a combination of LS-Cable, LS-Locks with LS-UVZP. Tension the cable wire with our LS-TT (Tension Tool) for desired sag (Please adhere to local city code for suspended application).

Note: For suspension application, a catenary cable is required for proper installation.
Please contact Tivoli for recommendations on unique mounting applications.



Mounting Accessories



LS-CABLE-X

X = 60 (60'), **110** (110'),
500 (500')
1/8" Galvanized cable
includes (2) cable locks for use
with loads up to 200lbs
Note: 500' no locks included



LS-LOCK-X

X = 2 (2 pcs), **4** (4 pcs)
Includes (1) release key
Cable Lock for 1/8" cable,
support loads up to 200 lbs.



LS-TT

Cable tensioning tool up to
880lbs with 6:1 gear drive with
integral torque gauge controls



LS-UVZP-BK-XX

XX = 30 (30 pcs), **50** (50 pcs)
Black UV resistant, heavy duty
ties maximum weight up to
100 lbs./per tie

Light Shade Accessories

<p>Hat</p> <p>SHADE-HT-BK-XX-XX XX = BK (black), CO* (copper) XX = 8 (8.3"), 13** (12.6") Black top, black/copper bottom Weight: 0.46 lb (10), 1.2 lb (13)</p>	<p>Dish</p> <p>SHADE-DS-BK-BK-10 10.2" Black top, black bottom Weight: 0.76 lb</p>	<p>Flower</p> <p>SHADE-FL-BK-BK-XX XX = 10 (9.8"), 13 (13.8") Black top, black bottom Weight: 0.63 lb (10), 1.48 lb (13)</p>	<p>SHADE-ADP-LSL2-XX-XX XX = BK (Black), WH (White) XX = 01 (1 pc), 25 (25 pcs), 50 (pcs) PVC shade adapters black</p>
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*Only available for 13 (Hat) **Consult factory for lead time and MOQ

Replacement Parts

<p>LST-CG 2.5" Clear PET globe sold each</p>	<p>LST-OG 2.5" Opal PET globe sold each</p>	<p>LST-FG 2.5" Frosted PET globe sold each</p>	<p>LST-ANG-2-PET 2.5" Angela PET globe sold each</p>
<p>LST-GIN-2-PET 2.5" Gina PET globe sold each</p>	<p>LST-KAT-2-PET 2.5" Katie PET globe sold each</p>	<p>LST-RGBW-24 Litesphere True RGB+W LED sold each</p>	<p>LST-DATABX Data Box (for custom programing consult factory)</p>

Power Supplies

DESCRIPTION	CAT NO	APPLICATION	PRIMARY VOLTAGE	SECONDARY VOLTAGE	CIRCUIT BREAKERS	MAX LOAD	CIRCUIT CAPACITY
ADNM Series Class 2 Transformer	ADNM-120-1-4-24-D	Indoor / Outdoor	100-277V AC 5ø80 HZ	24V DC	1	96W	4A

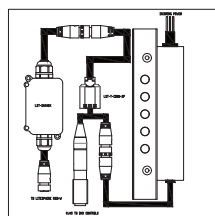
ADNM-DAT / ALL - IN - ONE

Litesphere True RGB+W ADNM-DAT power supply is an all-in-one unit that comes with: Power Supply, LST Data Box, LST T-Conn, RJ45-to-XLR connection. All contained within our outdoor rated NEMA 3 box. Box size can vary depending on number of circuits.

DESCRIPTION	CAT NO	APPLICATION	PRIMARY VOLTAGE	SECONDARY VOLTAGE	CIRCUIT BREAKERS	DATA BOXES	MAX LOAD	CIRCUIT CAPACITY
ADNM Series Class 2 Transformer	ADNM-120-1-4-24-DAT	Indoor / Outdoor	100-277V AC 5ø80 HZ	24V DC	1	1	96W	4A
	ADNM-240-2-4-24-DAT-2				2	2	2x96W	2x4A
	ADNM-320-3-4-24-DAT-3				3	3	3x96W	3x4A

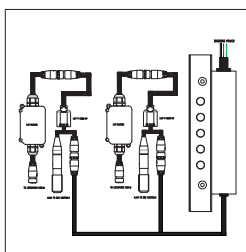
ADNM-120-1-4-24-DAT

120-277V AC / 24V DC, 96W / 1 CIRCUIT X 4A
1 LS RGB+W DATA BOX(s), (1) LST-T-CONN



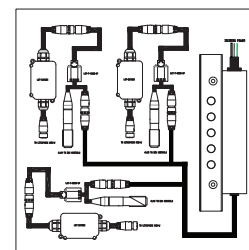
ADNM-240-2-4-24-DAT-2

120-277V AC / 24V DC, 192W / 2 CIRCUITS X 4A
2 LS RGB+W DATA BOX(s), (1) LST-T-CONN



ADNM-320-3-4-24-DAT-3

120-277V AC / 24V DC, 288W / 3 CIRCUITS X 4A
3 LS RGB+W DATA BOX(s), (1) LST-T-CONN



ADNM-DAT-D / ALL - IN - ONE

Litesphere True RGB+W ADNM-DAT-D power supply is an all-in-one unit that comes with: Power Supply, LST Data Box, LST T-Conn-DSY. All are contained within our outdoor rated NEMA 3 box that allows you to daisy-chain multiple runs (not to exceed 160 globes) to (1) DMX universe. Manual addressing of each Data Box must be done at the factory.

DESCRIPTION	CAT NO	APPLICATION	PRIMARY VOLT-AGE	SECONDARY VOLTAGE	CIRCUIT BREAKERS	DATA BOXES	MAX LOAD	CIRCUIT CAPACITY
ADNM Series Class 2 Transformer	ADNM-120-1-4-24-DAT-D	Indoor / Outdoor	100-277V AC 5ø80 HZ	24V DC	1	1	96W	4A

ADNM-120-1-4-24-DAT-D

120-277V AC / 24V DC, 96W / 1 CIRCUIT X 4A
1 LS RGB+W DATA BOX(s), (1) LST-T-CONN-DSY

