

LITESPHERE
TRUE RGB+W



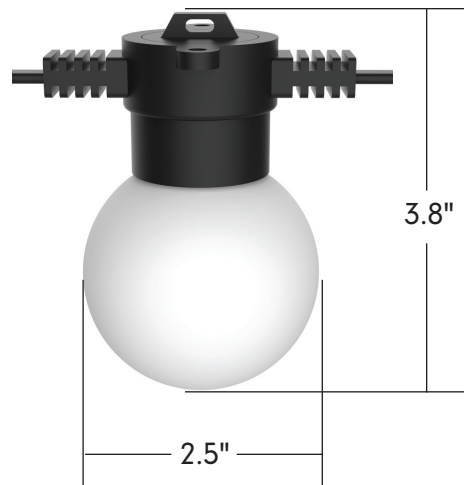
tivoli®



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
- 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	10 = 10' 20 = 20' 40 = 40'	24 = 24V DC

*Consult factory for MOQ and lead-time

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	10 = 10' 40 = 40' 80 = 80'	24 = 24V DC

*Consult factory for MOQ and lead-time

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	10 = 10' 40 = 40' 80 = 80' 160 = 160'	24 = 24V DC

*Consult factory for MOQ and lead-time

Specifications

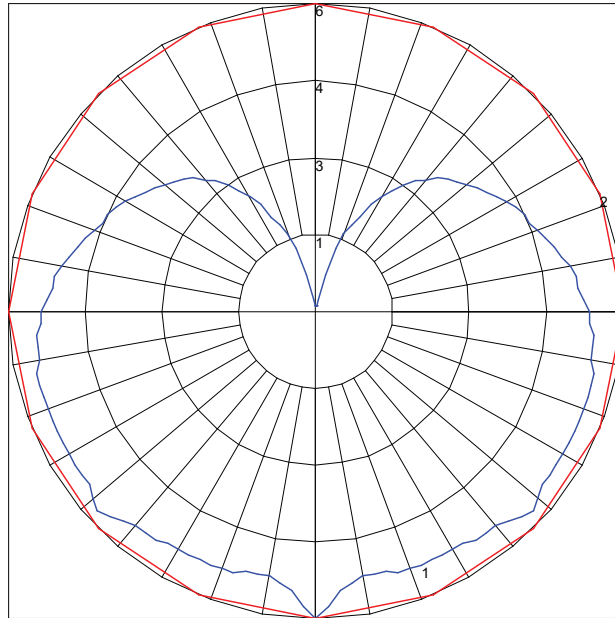
EPA	6"	12"	24"
Standard	0.10	0.06	0.04
Hat 8"	N/A	0.53	0.28
Hat 13"	N/A	N/A	0.71
Dish 10"	N/A	0.82	0.42
Flower 10"	N/A	0.82	0.42
Flower 13"	N/A	N/A	0.71

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

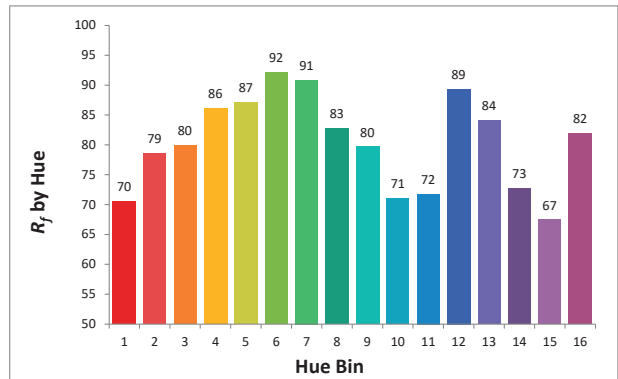
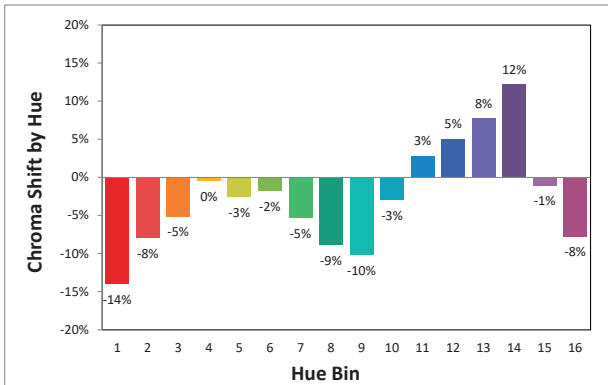
Output	
Kelvin Temperature	Red / Green / Blue / White (5000K)
Pixels	1 pixel/globe
Lumens (lm/globe)	55 (all color fully on)
Electrical	
Input Voltage	24V DC
Power Consumption (W/globe)	1
Maximum STRAND Run (based on O.C. spacing)	40' @ 6" OC, 80' @ 12" OC, 160' @ 24" OC (Total 80 globes per circuit)
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	PE
Mounting	Surface Mount, Suspended
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Storage Temperature	-40°C to 80°C (-40°F to 176°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.)

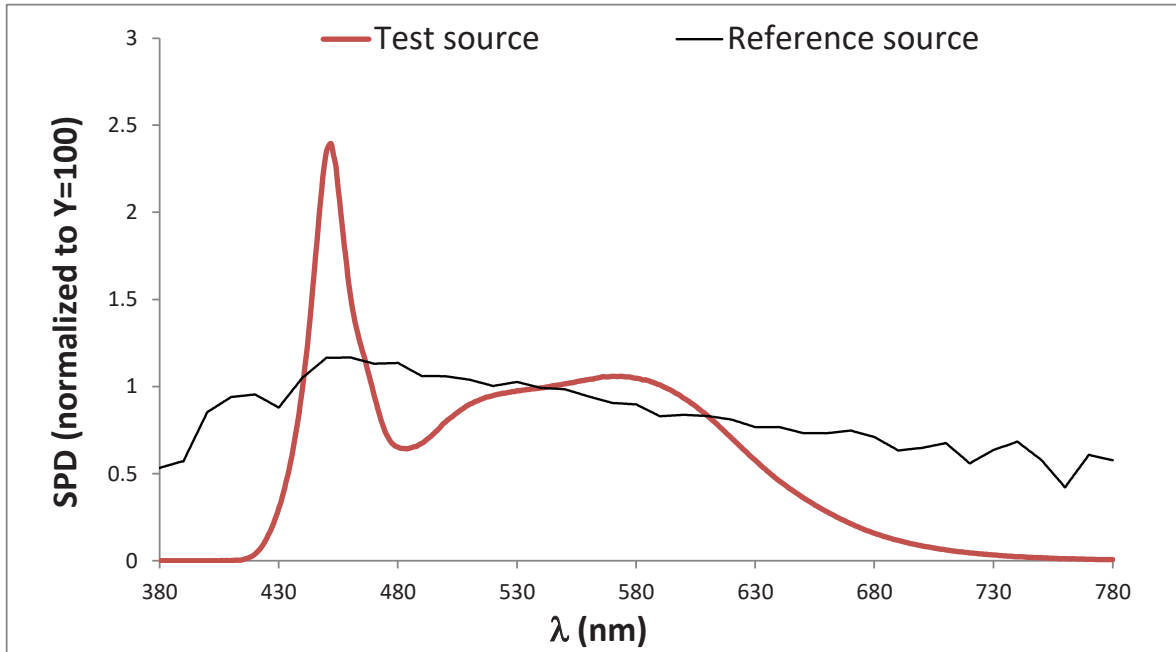


TM-30-15

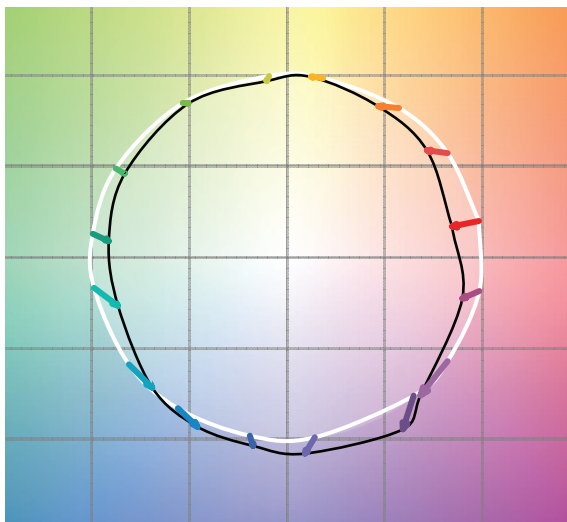


TM-30-15

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



Color Vector Graphic



Hue Bin	R_f	Graphic Shifts (%)	
		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%

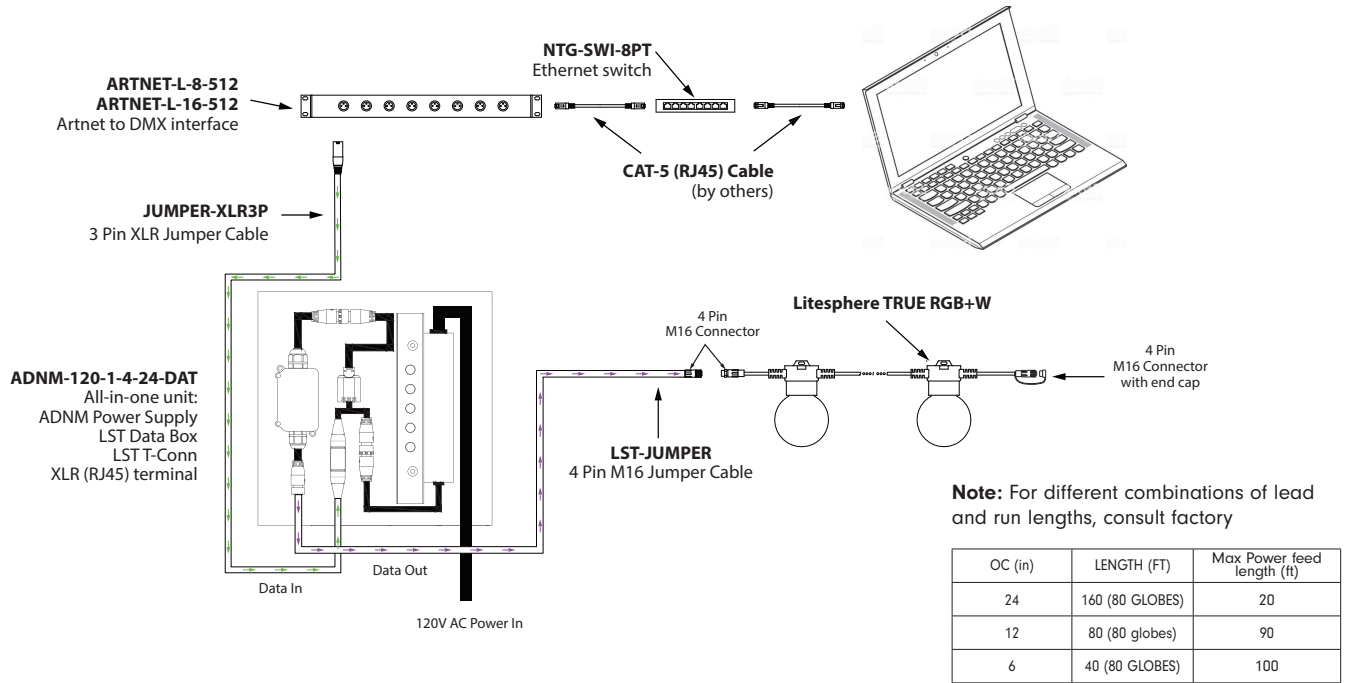
Data Operation & Wiring Diagram

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)

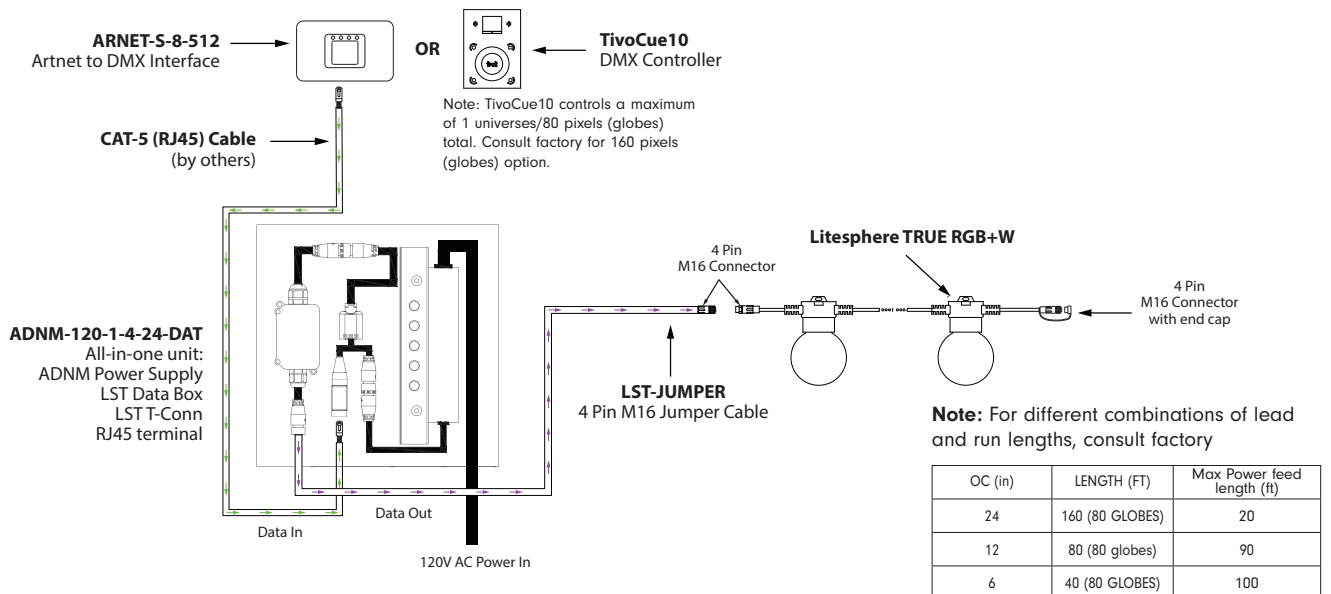
This is a live control performance setup. Widely used for concerts or performance-based manipulation. Use of a live network is necessary for communication between MADRIX software and Litesphere True RGB+W.



Off-line Operation

TivoCUE or Artnet Interface (Preset)

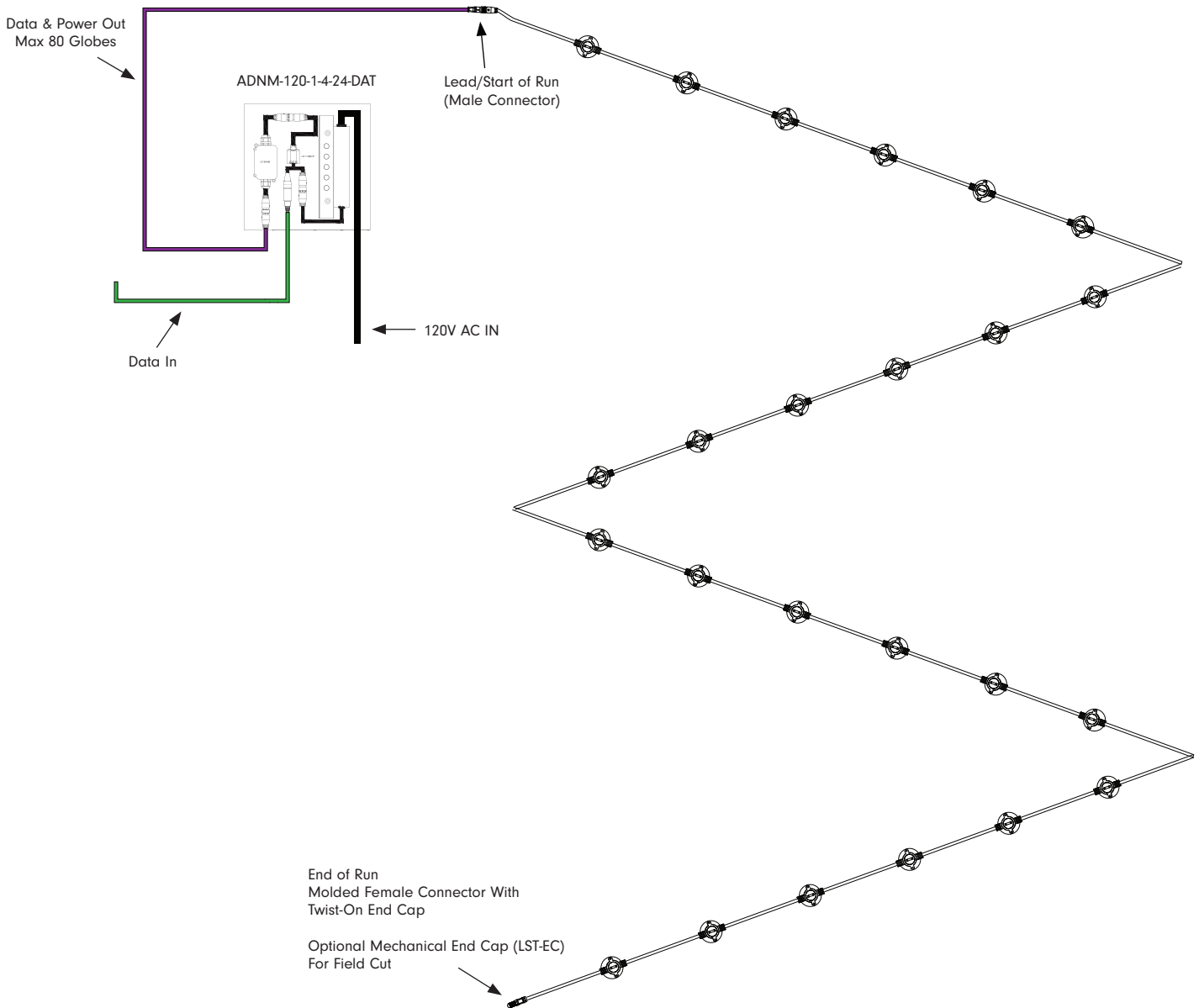
Programmed via CUE software or MADRIX and recorded to a Micro SD card for data transfer into TivoCUE or Artnet Interface control. This is a stand-alone feature with no need for network support by software (CUE or MADRIX) once recorded and transferred to control hardware. Please refer to the TivoCue10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

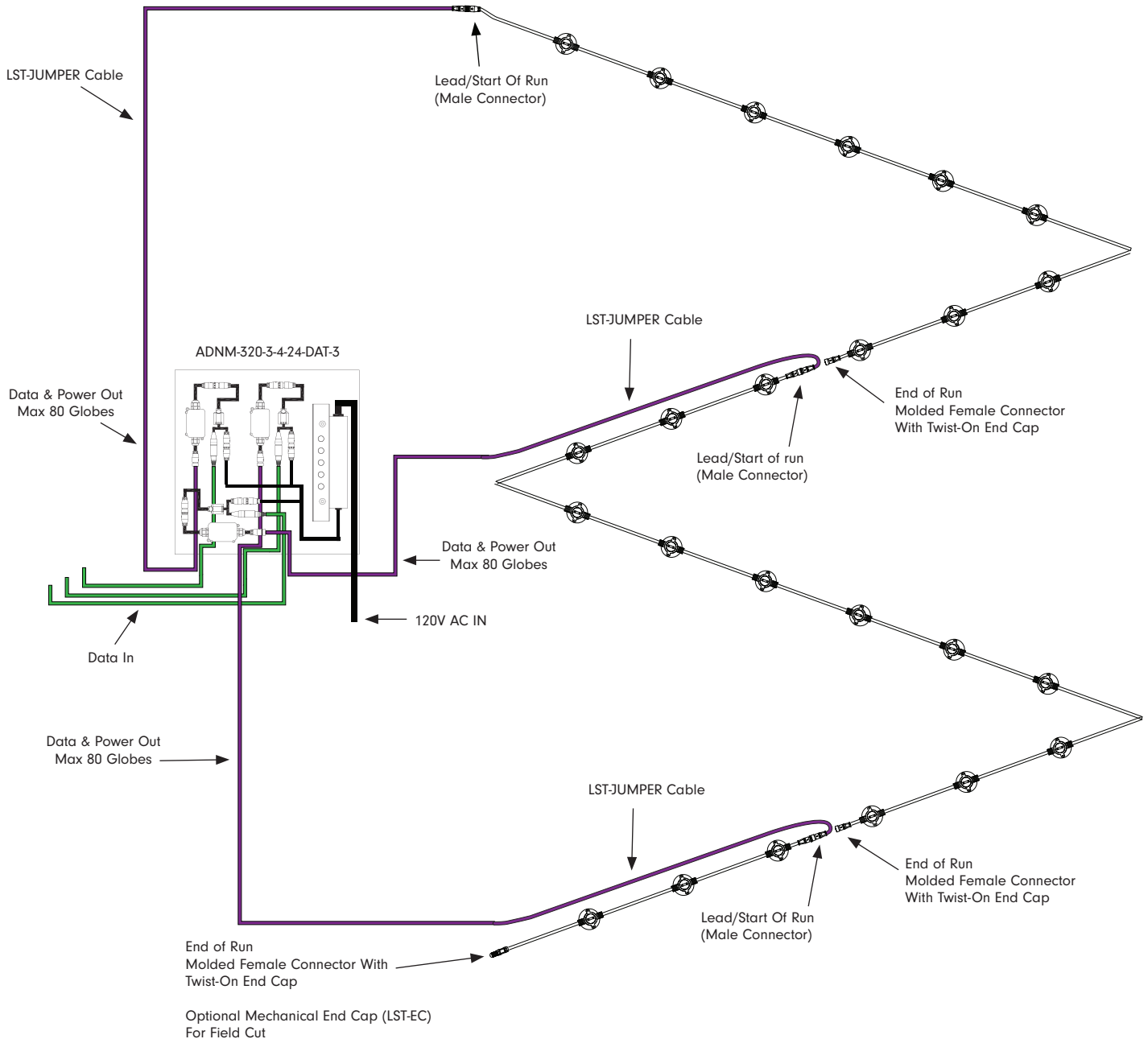
Do not secure any luminaire with staples, nails or like means that might damage the wire insulation. Secure it by using screws through the base.

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.

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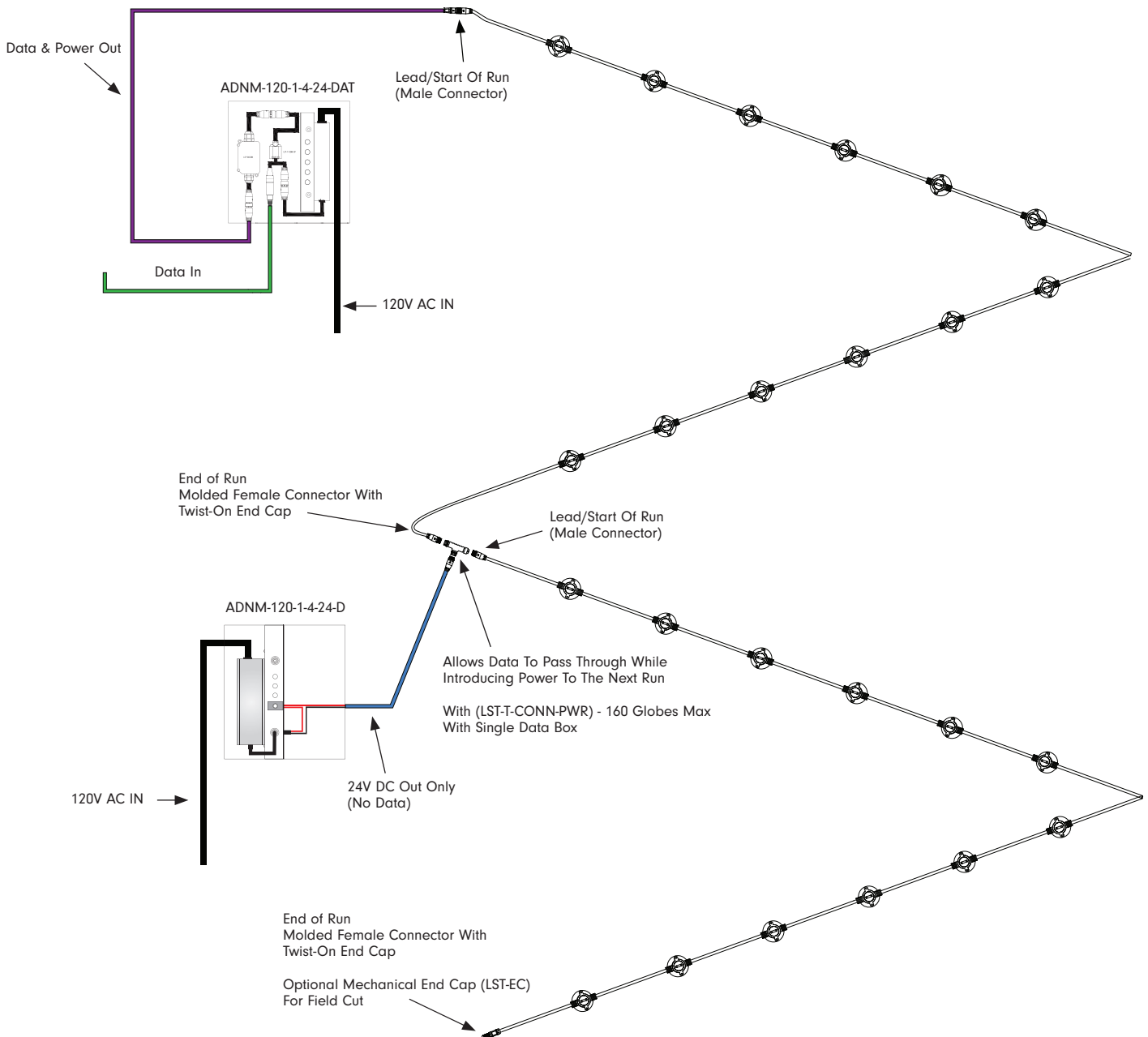
Do not secure any luminaire with staples, nails or like means that might damage the wire insulation. Secure it by using screws through the base.

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.

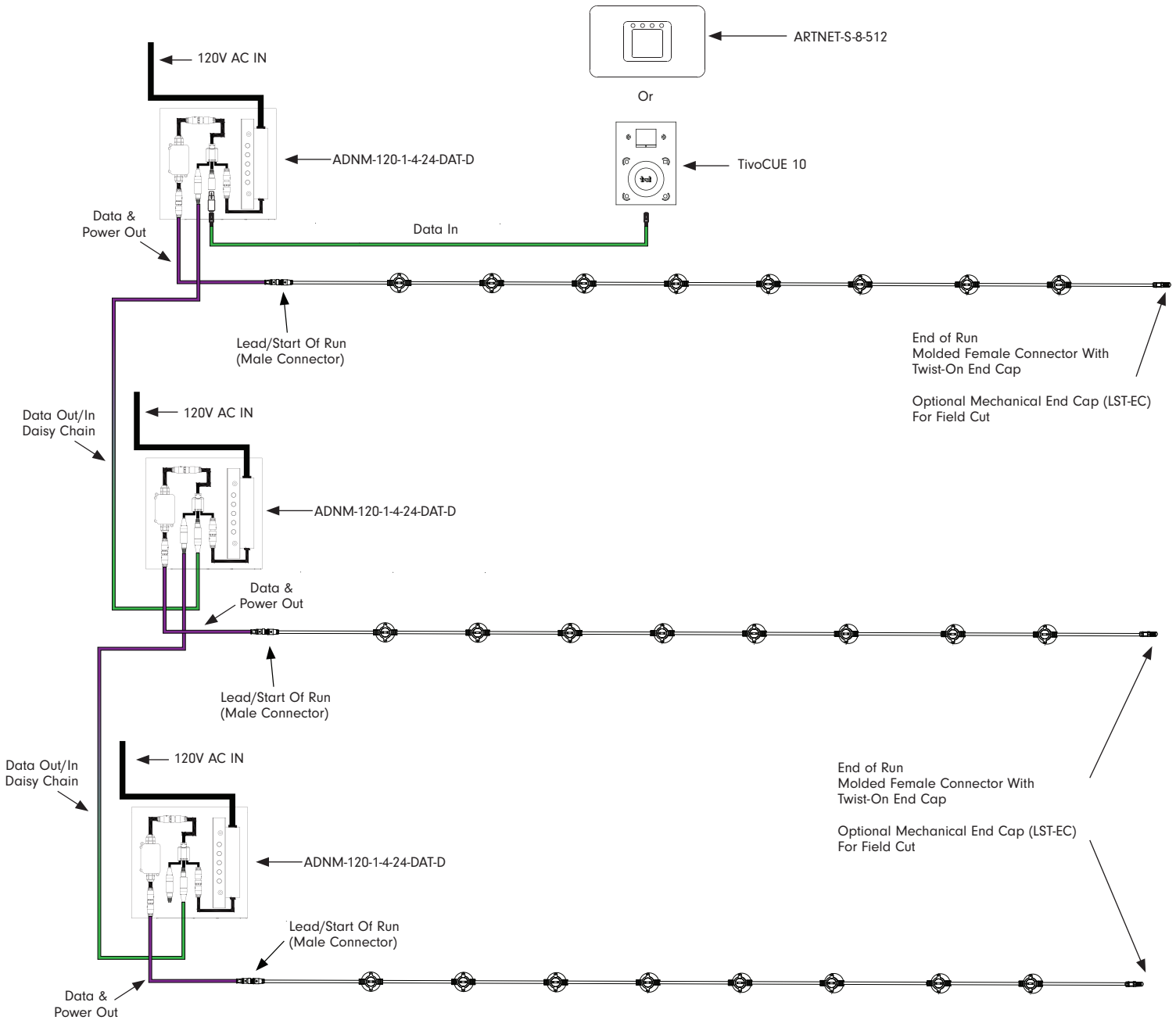
Do not submerge any luminaire in liquid. Use waterproof connectors for all outdoor applications.

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)



MOFT-CHAN-SLV-6.5
Anodized Aluminum Extrusion,
available in 6.5' lengths



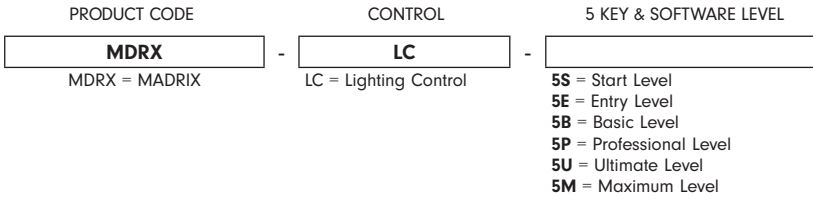
NTG-SWI-XXPT
XX = 8 (8 Ports), **16** (16 Ports)
NETGEAR 16-Port gigabit
Unmanaged Switch



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

*Consult factory for MOQ and lead-time

Key & Software Levels



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)

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" Stainless steel 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

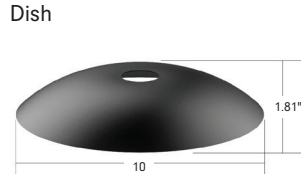


LS-UVZP-BK-XX
XX = 30 (30 pcs), 50 (50 pcs)
 Black UV resistant, heavy duty ties maximum weight up to 100 lbs./per tie

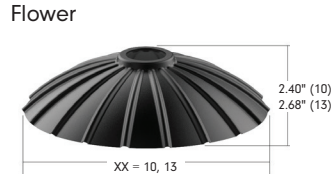
Light Shade Accessories



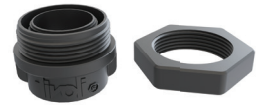
SHADE-HT-BK-XX-XX
XX = BK (black), **CO*** (copper)
XX = 8 (8.3"), **13**** (12.6")
 Black top, black/copper bottom
 Weight: 0.46 lb (10), 1.2 lb (13)



SHADE-DS-BK-BK-10
 10.2"
 Black top, black bottom
 Weight: 0.76 lb



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)



SHADE-ADP-LSL2-XX-XX
XX = BK (Black), **WH** (White)
XX = 01 (1 pc), **25** (25 pcs),
50 (pcs)
 PVC shade adapters black

*Only available for 13 (Hat) **Consult factory for lead time and MOQ

Replacement Parts



LST-RGBW-24
 Litesphere True RGB+W LED
 sold each



LST-OG
 Opal globe
 sold each



LST-CG
 Clear globe
 sold each



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



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-DATABX
 Data Box
 (for custom programming consult factory)



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)

Power Supplies

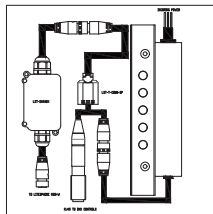
DESCRIPTION	CAT NO	APPLICATION	PRIMARY VOLTAGE	SECONDARY VOLTAGE	CIRCUIT BREAKERS	MAX LOAD	CIRCUIT CAPACITY
ADNM Series Class 2 Transformer	ADNM-120-1-4-24-D	Indoor / Outdoor	100-277V AC 5ø80 HZ	24V DC	1	96W	4A

ADNM-DAT / ALL - IN - ONE

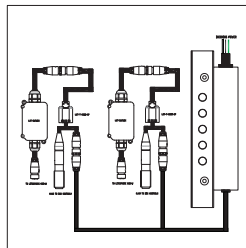
Litesphere True RGB+W ADNM-DAT power supply is an all-in-one unit that comes with: Power Supply, LST Data Box, LST T-Conn, RJ45-to-XLR connection. All contained within our outdoor rated NEMA 3 box. Box size can vary depending on number of circuits.

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

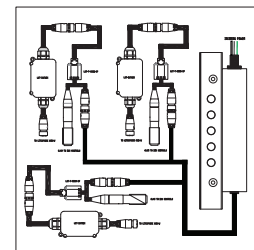
ADNM-120-1-4-24-DAT
120-277V AC / 24V DC, 96W /1 CIRCUIT X 4A
1 LS RGB+W DATA BOX(s), (1) LST-T-CONN



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

