ADAPT

TRUERGB+W 2.0



tivoli®



Project: _____ TYPE: _____

- Now available with our ADAPT PET shatterproof globe
- Tivoli's proprietary algorithm controls RGB+W (5000K) LEDs for superior color saturation and TRUE white performance with only 3 channels of DMX other than a standard 4 channel system
- Available DarkSky option with added light shade
- True RGB +W 2.0 Technology delivers more than 16 million combinations of pure and precise color tones
- Audio enhanced with MADRIX 5 software
- Individually control each globe with DMX512 protocol for a unique and personal environment
- Each globe is auto-addressed for fast set-up and connection
- Tivoli's proprietary PCB design delivers a high level performance and easy replacement
- Two mounting options for 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 leads for multiple runs
- IP67
- cULus listed
- 5 Year warranty

Dimensions



Tivoli, LLC. reserves the right to modify this specification without prior notice.

Strand 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 - 12" OC

Max strand run length (80 total globes each circuit): 80'

PRODUCT CODE		WIRE		SPACING		LED TYPE		GLOBE		LENGTH		VOLTAGE
LSTA2	-		-	**12**	-	**RGBW**	-		-		-	**24**
LSTA2 = ADAPT True RGB+W 2.0		**BK** = Black **WH** = White*		**12** = 12" OC		**RGBW** = Red Green Blue +White (5000K)		**GINPET** = Gina **ANGPET** = Angela **KATPET** = Katie **LUCPET** = Lucia **JOAPET** = Joanne **JENPET** = Jennifer **MNQPET** = Manqi		**05** = 05' **20** = 20' **40** = 40'		**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
LSTA2	-		-	**24**	-	**RGBW**	-		-		-	**24**
LSTA2 = ADAPT True RGB+W 2.0		**BK** = Black **WH** = White*		**24** = 24" OC		**RGBW** = Red Green Blue +White (5000K)		**GINPET** = Gina **ANGPET** = Angela **KATPET** = Katie **LUCPET** = Lucia **JOAPET** = Joanne **JENPET** = Jennifer **MNQPET** = Manqi		**10** = 10' **20** = 20' **40** = 40'		**24** = 24V DC

Strand Order Guide - 36" OC

Max strand run length (60 total globes each circuit): 180'

PRODUCT CODE		WIRE		SPACING		LED TYPE		GLOBE		LENGTH		VOLTAGE
LSTA2	-		-	**36**	-	**RGBW**	-		-		-	**24**
LSTA2 = ADAPT True RGB+W 2.0		**BK** = Black **WH** = White*		**36** = 36" OC		**RGBW** = Red Green Blue +White (5000K)		**GINPET** = Gina **ANGPET** = Angela **KATPET** = Katie **LUCPET** = Lucia **JOAPET** = Joanne **JENPET** = Jennifer **MNQPET** = Manqi		**10** = 10' **20** = 20' **40** = 40'		**24** = 24V DC

*Consult factory for MOQ and lead-time

Tivoli, LLC. reserves the right to modify this specification without prior notice.

Specifications

Output	
Pixels	1 pixel/globe
Lumens (lm/globe)	55 (all color fully on)
Electrical	
Input Voltage	24V DC
Power Consumption (W/globe)	1
Max Run (12" O.C. spacing)	80' (Total 80 globes per circuit)
Max Run (24" O.C. spacing)	160' (Total 80 globes per circuit)
Max Run (36" O.C. spacing)	180' (Total 60 globes per circuit)
Control	
Control System	DMX 512 (3 channel/globe)
Address Setting	Auto Addressing & Factory Addressing

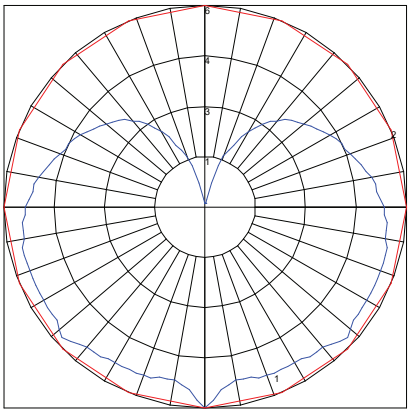
Physical	
Dimensions	5"W x 6.4"H
Socket Housing	PVC
Globe	PET
Mounting	Surface Mount, Suspended
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Storage Temperature	-40°C to 55°C (-40°F to 131°F)
Certification and Testing	
Certification	cULus
Environment	Wet Location
IP Rating	IP67
Warranty	5 Years

Weight & EPA

Weights	12"	24"	36"
lb/ft	0.31	0.335	CF
lb/ft with catenary cable	0.33	0.355	CF

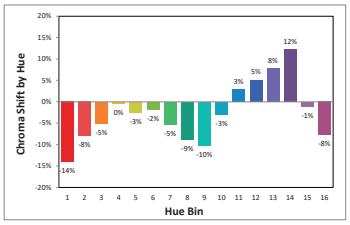
EPA	12"	24"	36"
Standard	0.16	0.09	CF
Hat 8"	0.53	0.28	CF
Hat 13"	N/A	0.71	CF
Dish 10"	0.82	0.42	CF
Flower 10"	0.82	0.42	CF
Flower 13"	N/A	0.71	CF

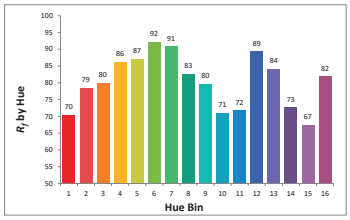
Photometrics



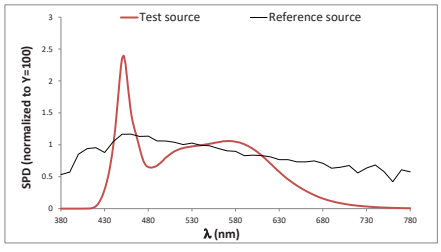
Maximum Candela = 5.6
Located At Horizontal Angle = 0
Vertical Angle = 0
#1 Vertical Plane Through Horizontal Angles (0-180) (Through Max. Cd.)
#2 Vertical Cone Through Vertical Angle (0) (Through Max. Cd.)

TM-30-15





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%

Tivoli, LLC. reserves the right to modify this specification without prior notice.

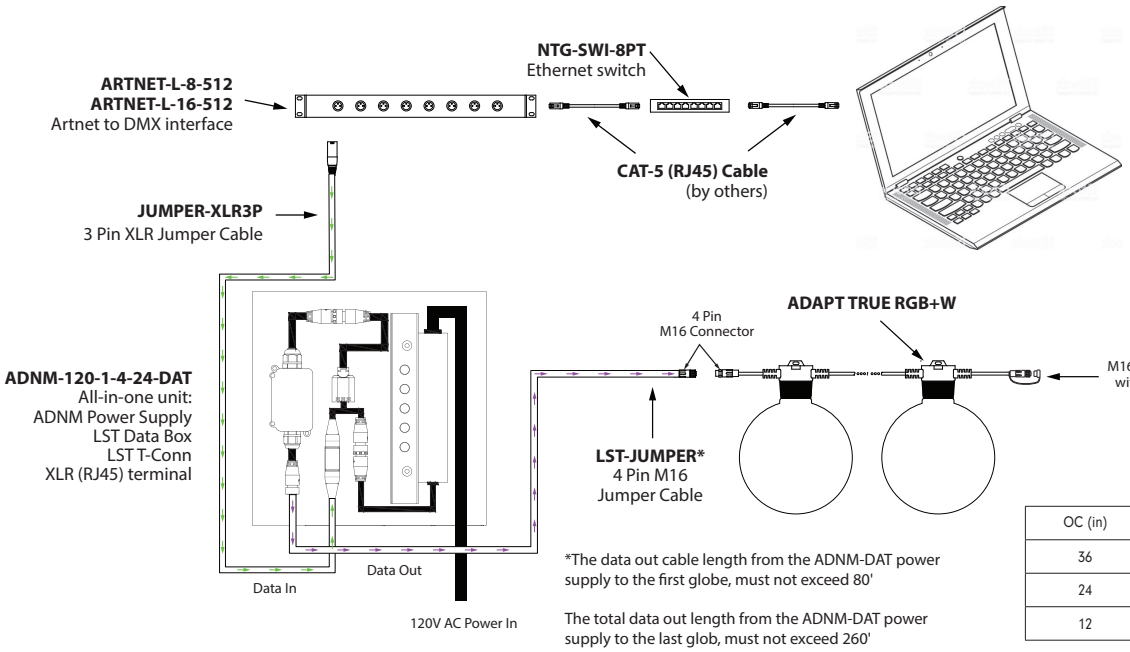
Data Operation & Wiring Diagram

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.



*The data out cable length from the ADNM-DAT power supply to the first globe, must not exceed 80'

The total data out length from the ADNM-DAT power supply to the last glob, must not exceed 260'

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

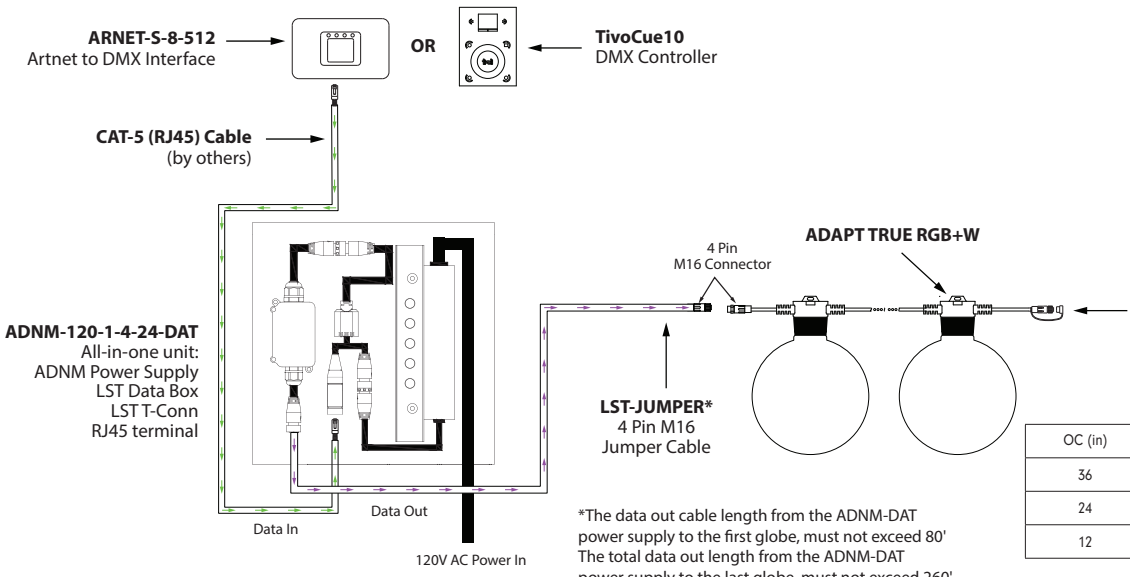
OC (in)	LENGTH (FT)	Max Power feed length (ft)
36	180 (60 GLOBES)	15
24	160 (80 GLOBES)	20
12	80 (80 GLOBES)	90

Off-line Operation

TivoCUE (Preset)

Programmed via CUE software and recorded to a Micro SD card for data transfer into TivoCUE control. This is a stand-alone feature with no need for network support by software (CUE) once recorded and transferred to in-wall DMX control hardware. Please refer to TivoCue10 User Manual for additional information.

Note: TivoCue10 controls a maximum of 1 universes with 80 pixels (globes) total. Consult factory for 160 pixels (globes) maximum option.



*The data out cable length from the ADNM-DAT power supply to the first globe, must not exceed 80'
The total data out length from the ADNM-DAT power supply to the last globe, must not exceed 260'

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

OC (in)	LENGTH (FT)	Max Power feed length (ft)
36	180 (60 GLOBES)	15
24	160 (80 GLOBES)	20
12	80 (80 GLOBES)	90

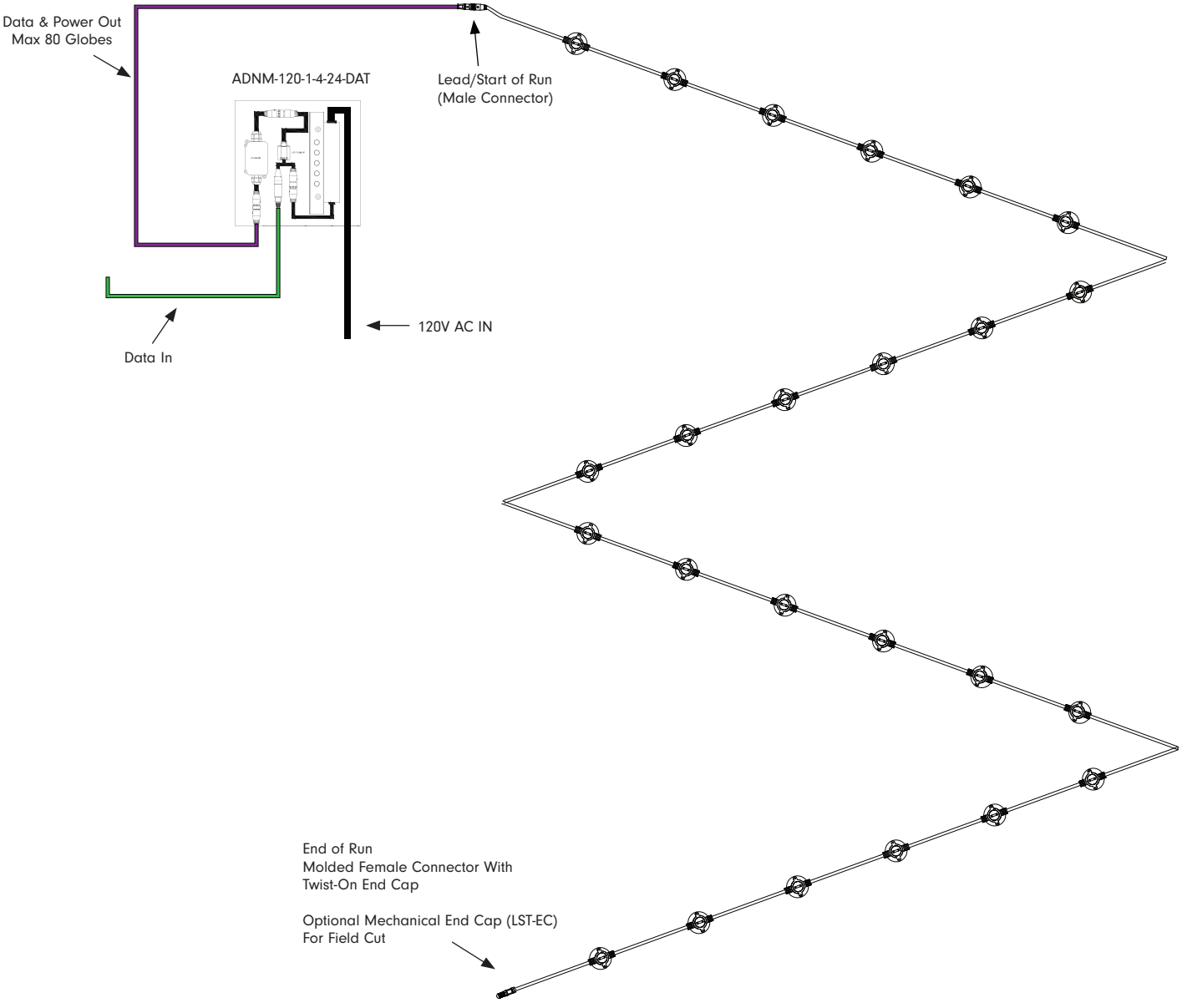
Tivoli, LLC. reserves the right to modify this specification without prior notice.

Wiring Single Run with single circuit 96W

WARNING! Risk of Product Failure
The data & power out cable length from the ADNM-DAT power supply to the first globe, must not exceed 80'

OC (in)	LENGTH (FT)	Max Power feed length (ft)
36	180 (60 GLOBES)	15
24	160 (80 GLOBES)	20
12	80 (80 GLOBES)	90

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)

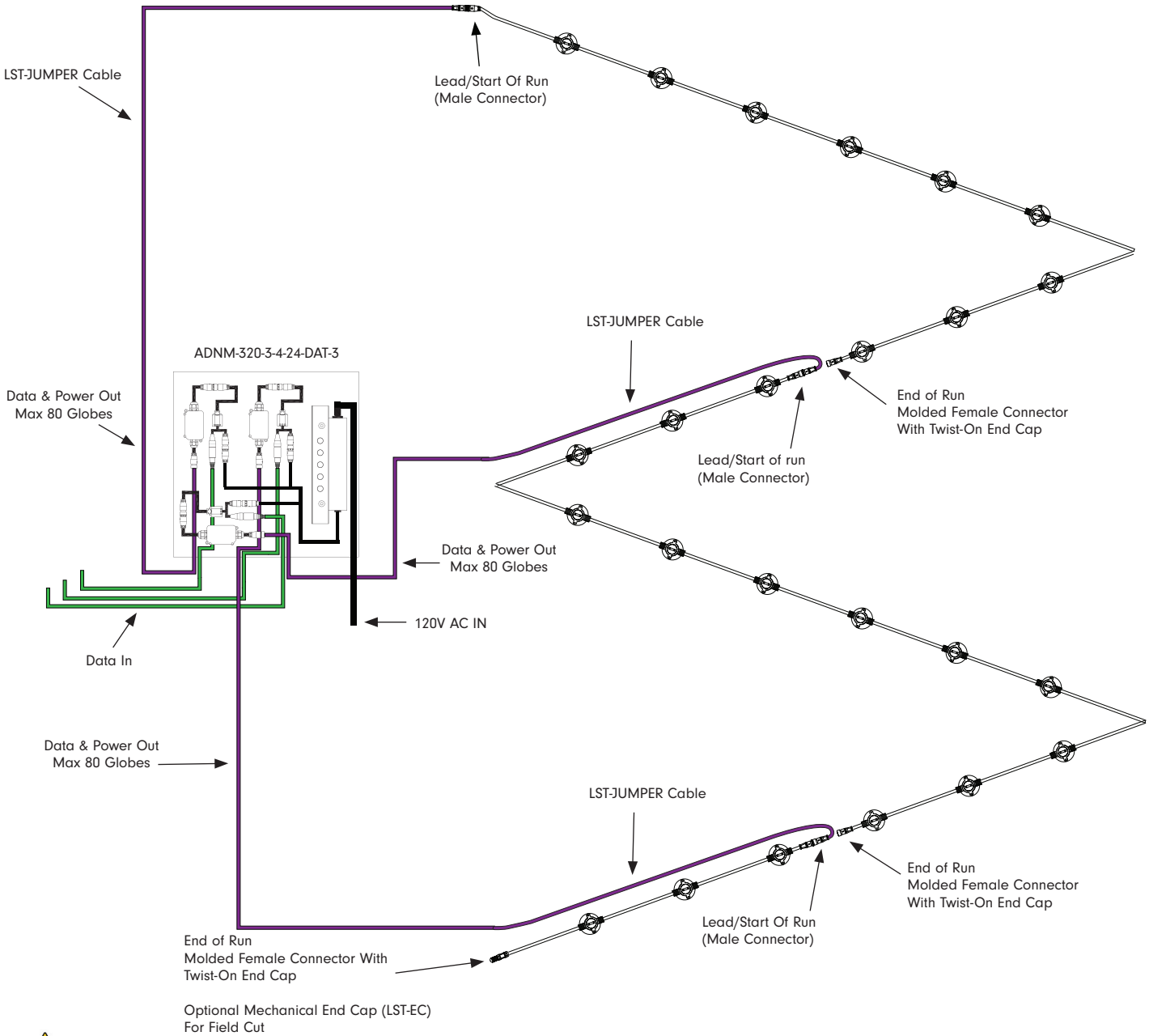
Tivoli, LLC. reserves the right to modify this specification without prior notice.

Wiring Multiple Runs with multi circuit 96W

WARNING! Risk of Product Failure
The data & power out cable length from the ADNM-DAT power supply to the first globe, must not exceed 80'

OC (in)	LENGTH (FT)	Max Power feed length (ft)
36	180 (60 GLOBES)	15
24	160 (80 GLOBES)	20
12	80 (80 GLOBES)	90

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)

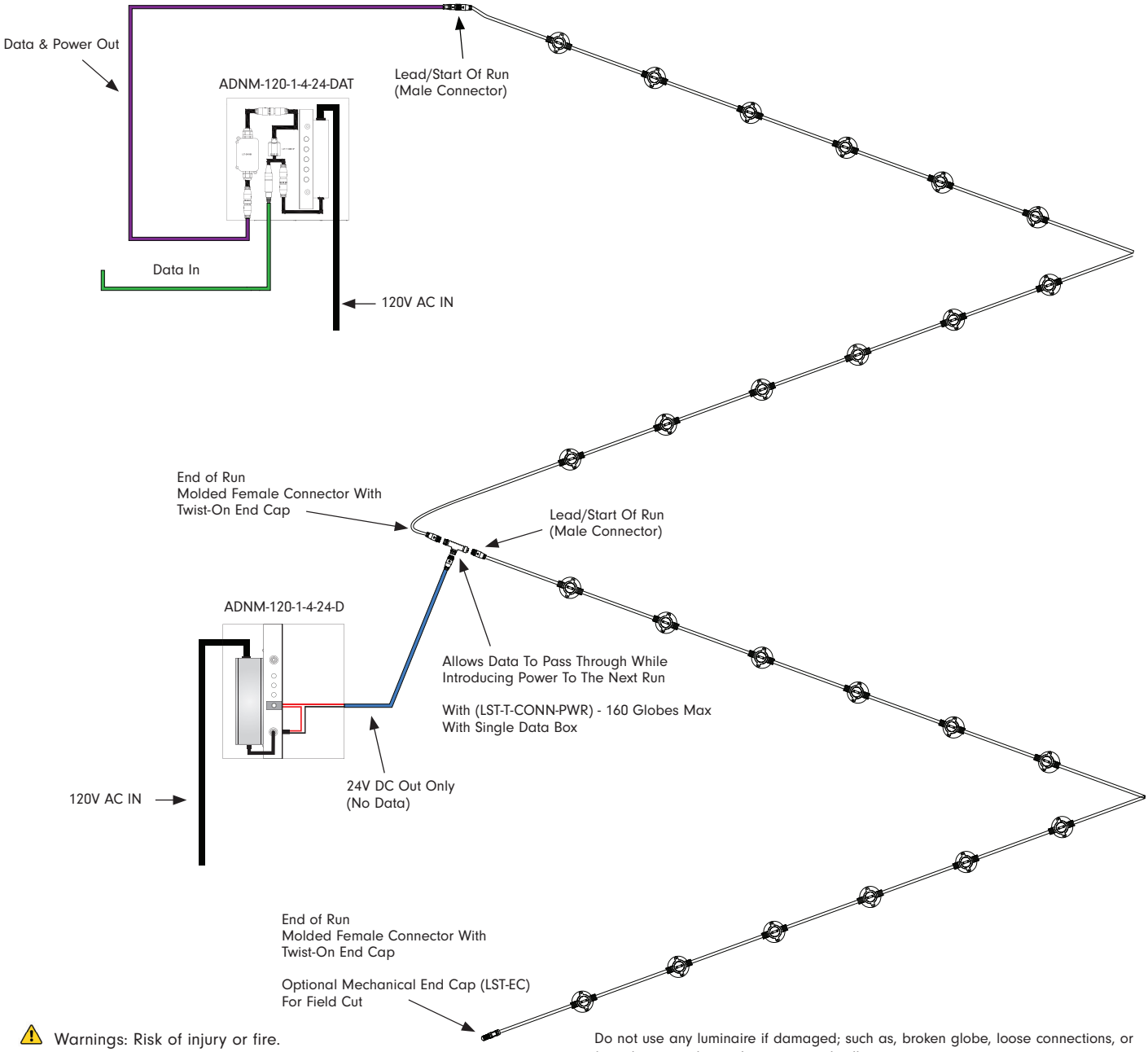
Tivoli, LLC. reserves the right to modify this specification without prior notice.

Wiring Dual Runs with single circuit 96W

WARNING! Risk of Product Failure
The data & power out cable length from the ADNM-DAT power supply to the first globe, must not exceed 80'
The total data out length from the ADNM-DAT power supply to the last globe, must not exceed 260'

OC (in)	LENGTH (FT)	Max Power feed length (ft)
36	180 (60 GLOBES)	15
24	160 (80 GLOBES)	20
12	80 (80 GLOBES)	90

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)

Tivoli, LLC. reserves the right to modify this specification without prior notice.

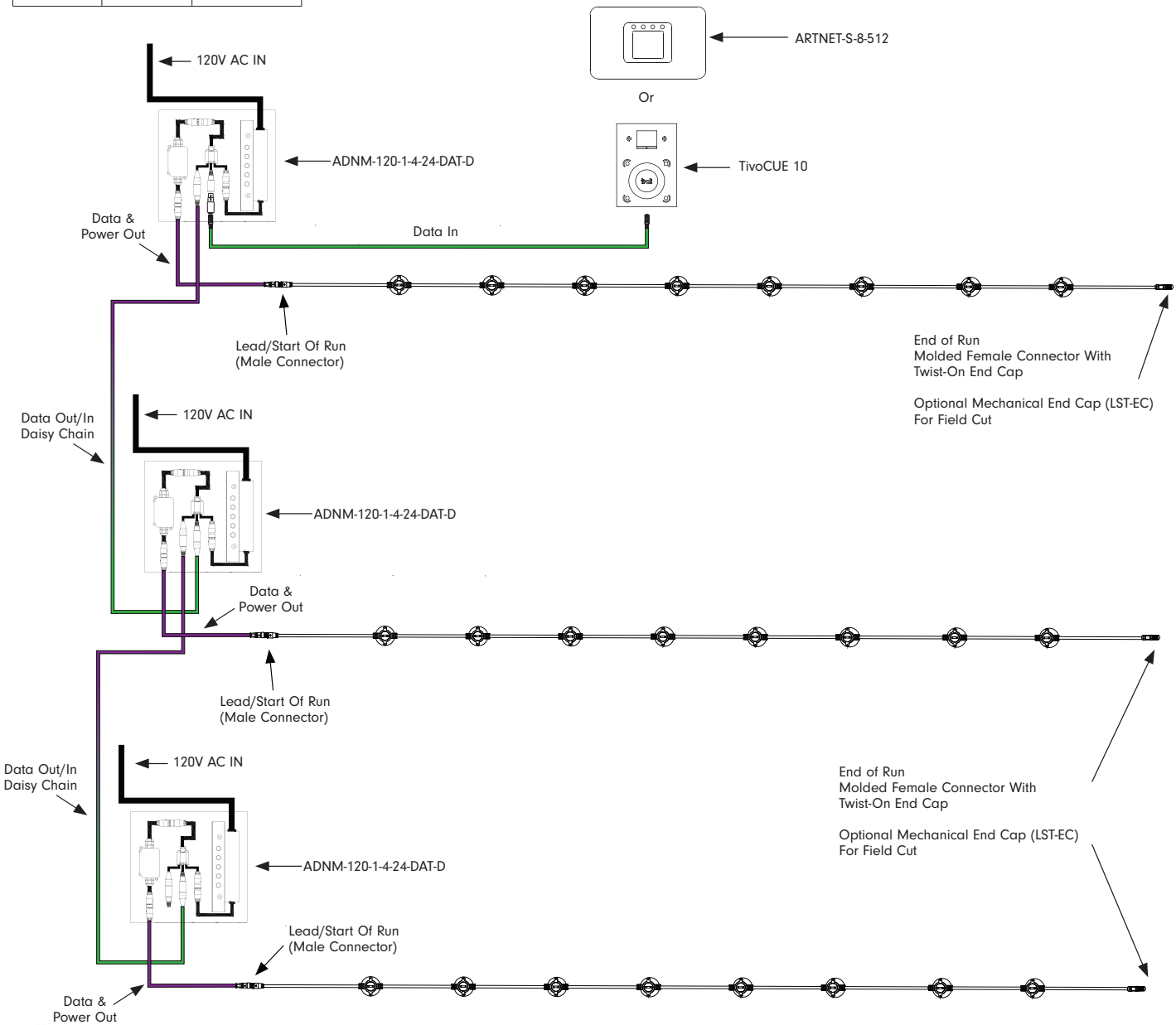
Daisy-Chain Multiple Runs within single Universe

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

WARNING! Risk of Product Failure
The data & power out cable length from the ADNM-DAT-D power supply to the first globe, must not exceed 80'
The total data out length from the ADNM-DAT-D power supply to the last globe, must not exceed 260'

OC (in)	LENGTH (FT)	Max Power feed length (ft)
36	180 (60 GLOBES)	15
24	160 (80 GLOBES)	20
12	80 (80 GLOBES)	90

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)

Tivoli, LLC. reserves the right to modify this specification without prior notice.

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 programing consult factory)



DMX3-X-CAT5-ADPTR
X = **M** (Male), **F** (Female)
DMX Adapter
3-pin XLR to RJ45



DMX5-X-CAT5-ADPTR
X = **M** (Male), **F** (Female)
DMX Adapter
5-pin XLR to RJ45
Note: DMX5 Adapter needed for LUNA RJ45 connection



LST-T-CONN-DSY-RJ45
Daisy-Chain T Connector, IP67
RJ45 female (in/out)
5-PIN M16 female for LED
2-PIN M16 female (power)



LST-T-CONN-RJ45
T Connector, IP67
RJ45 for DMX
5-PIN M16 female for LED
2-PIN M16 female-male (power)

*Consult factory for MOQ and lead-time

Hardware



MDRX-LUNA-XX
X = **4, 8, 16** (ports)
MADRIX Luna 4, 8, 16 port universe Artnet to DMX interface
16 port 8192, 8 port 4096, 4 port 2048 DMX channels
Note: DMX5 Adapter needed for LUNA RJ45 connection



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-X
X= **2, 4, 8** (Output Channels)
DMX Splitter
1 Input to 8 Output
Ethernet or Hardwire Connection

Tivoli, LLC. reserves the right to modify this specification without prior notice.

Key & Software Levels

PRODUCT CODE		CONTROL		5 KEY & SOFTWARE LEVEL
MDRX	-	**LC**	-	
MDRX = MADRIX		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

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

Tivoli, LLC. reserves the right to modify this specification without prior notice.

Replacement

Note: Polyethylene Terephthalate (PET) globe for 100% shatter proof design
PET globes should not be exposed to industrial alcohol



LSA2-MNQ-PET
Manqi PET Globe
Diffused Pearl Design



LSA2-LUC-PET
Lucia PET Globe
Clear Design



LSA2-JEN-PET
Jennifer PET Globe
Simulated Cracked Design



LSA2-JOA-PET
Joanne PET Globe
Simulated Fragmented Design



LSA2-GIN-PET
Gina PET Globe
Clear with Frosted Design



LSA2-KAT-PET
Katie PET Globe
Clear with Frosted Design
LSA2-KAT-F-PET
Slightly Frosted with
Frosted Design



LSA2-ANG-PET
Angela PET Globe
Clear with Frosted Design

Mounting Accessories

Warning: For suspension application, catenary cable is required to support the product, otherwise the warranty will be void.



LS-CABLE-XXX
XXX = **60** (60'), **110** (110'), **500** (500')
1/8" Galvanized cable
includes (1) LS-LOCK-3-02



LS-LOCK-3-XX
XX = **02** (2 locks), **04** (4 locks)
Horizontal loading cable lock,
Includes (1) cable release key and (1) allen key.
Note: 1/8"cable 66 lbs max load



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

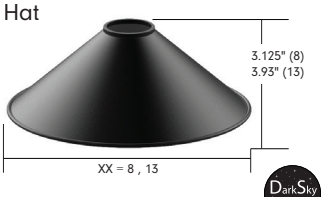


LS-UVZP-BK-XX
XX = **30** (30 pcs), **50** (50 pcs)
Black UV resistant, heavy duty ties maximum weight up to 100 lbs./per tie

Light Shade Accessories

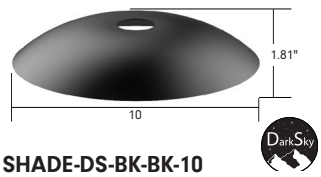
Note: Light Shade needed for DarkSky compliance

Hat



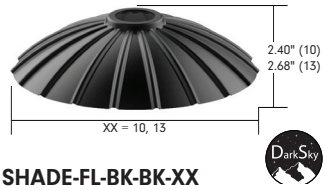
SHADE-HT-BK-XX-XX
XX = **BK** (black), **CO*** (copper)
XX = **8** (8.3"), **13**** (12.6")
Black top, black/copper bottom
Weight: 0.46 lb (8),1.2 lb (13)

Dish

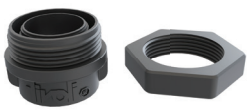


SHADE-DS-BK-BK-10
10.2"
Black top, black bottom
Weight: 0.76 lb

Flower



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
Note: One adaptor required for each shade

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

Tivoli, LLC. reserves the right to modify this specification without prior notice.

Power Supplies

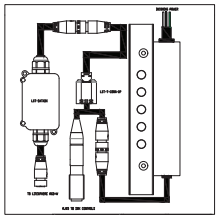
DESCRIPTION	CAT NO	APPLICATION	PRIMARY VOLTAGE	SECONDARY VOLTAGE	CIRCUIT BREAKERS	MAX LOAD	CIRCUIT CAPACITY
ADNM Series Class 2 Transformer	ADNM-120-1-4-24-D	Indoor / Outdoor	100-277V AC 50/60 HZ	24V DC	1	96W	4A

ADNM-DAT / ALL - IN - ONE

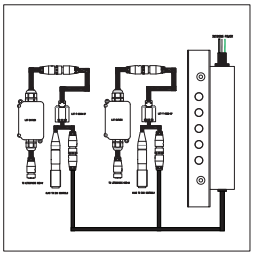
Litesphere True RGB+W ADNM-DAT power supply is an all-in-one unit that comes with: Power Supply, LST Data Box, LST T-Conn, RJ45-to-XLR connection. All contained within our outdoor rated NEMA 3 box. Box size can vary depending on number of circuits.

DESCRIPTION	CAT NO	APPLICATION	PRIMARY VOLTAGE	SECONDARY VOLTAGE	CIRCUIT BREAKERS	DATA BOXES	MAX LOAD	CIRCUIT CAPACITY	DIMENSION
ADNM Series Class 2 Transformer	ADNM-120-1-4-24-DAT	Indoor / Outdoor	100-277V AC 50/60 HZ	24V DC	1	1	96W	4A	12.00" W X 12.00" L X 4.00" D
	ADNM-240-2-4-24-DAT-2				2	2	2x96W	2x4A	16.00" W X 16.00" L X 4.00" D
	ADNM-320-3-4-24-DAT-3				3	3	3x96W	3x4A	

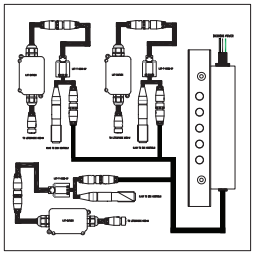
ADNM-120-1-4-24-DAT
120-277V AC / 24V DC, 96W /1 CIRCUIT X 4A
1 LS RGB+W DATA BOX(s), (1) LST-T-CONN



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

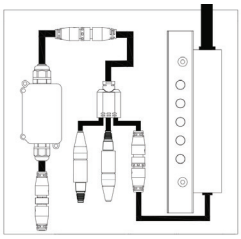


ADNM-DAT-D / ALL - IN - ONE

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 VOLTAGE	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 50/60 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



Tivoli, LLC. reserves the right to modify this specification without prior notice.

Tivoli Commissioning Service

Tivoli's DMX Commissioning service involves the setup and configuration of our DMX lighting and control system, ensuring the seamless integration of our lighting fixtures with the specified DMX Control system ordered.

For more information about commission service, contact:
sales@tivoliusa.com
714-957-6101 (Engineering Tech Support)

Tivocue Wall Controllers (Default Scenes: White, Red,Green, Blue, Light Blue, Purple, Pink, Dim White, Yellow, Cool Cycle, Warm Cycle, All Cycle, Rainbow Scroll, Blackout)	
TVOQ-REM-COMM-1	Remote DMX commissioning for TIVOCUE 2 and 10 dmx wall controller. Pixel mapping/control is not offered for remote commissioning
TVOQ-ONS-COMM-1	Onsite DMX comissioning for TIVOCUE 2 and 10 dmx wall controller (est. 2 days)
ARTNET-S-8-512 (Default Scenes: White, Red,Green, Blue, Light Blue, Purple, Pink, Dim White, Yellow, Cool Cycle, Warm Cycle, All Cycle, Rainbow Scroll, Blackout)	
ARTNET-S-REM-COMM-8	Remote DMX commissioning for artnet-s recorder up to 8 universes. Pixel mapping/control is not offered for remote commissioning
ARTNET-S-ONS-COMM-8	Onsite DMX commissioning for artnet-s recorder up to 8 universes (est. 3 days)
MADRIX DMX SYSTEM	
DMX-COMM-2U-MDRX	Onsite commissioning for madrix, up to 2 universes (est. 3 days)
DMX-COMM-8U-MDRX	Onsite commissioning for madrix, up to 8 universes (est. 3 days)
DMX-COMM-16U-MDRX	Onsite commissioning for madrix, up to 16 universes (est. 4 days)
DMX-COMM-24U-MDRX	Onsite commissioning for madrix, up to 24 universes (est. 4 days)
DMX-COMM-32U-MDRX	Onsite commissioning for madrix, up to 32 universes (est. 5 days)
32+ UNIVERSE	Contact factory

Tivoli, LLC. reserves the right to modify this specification without prior notice.