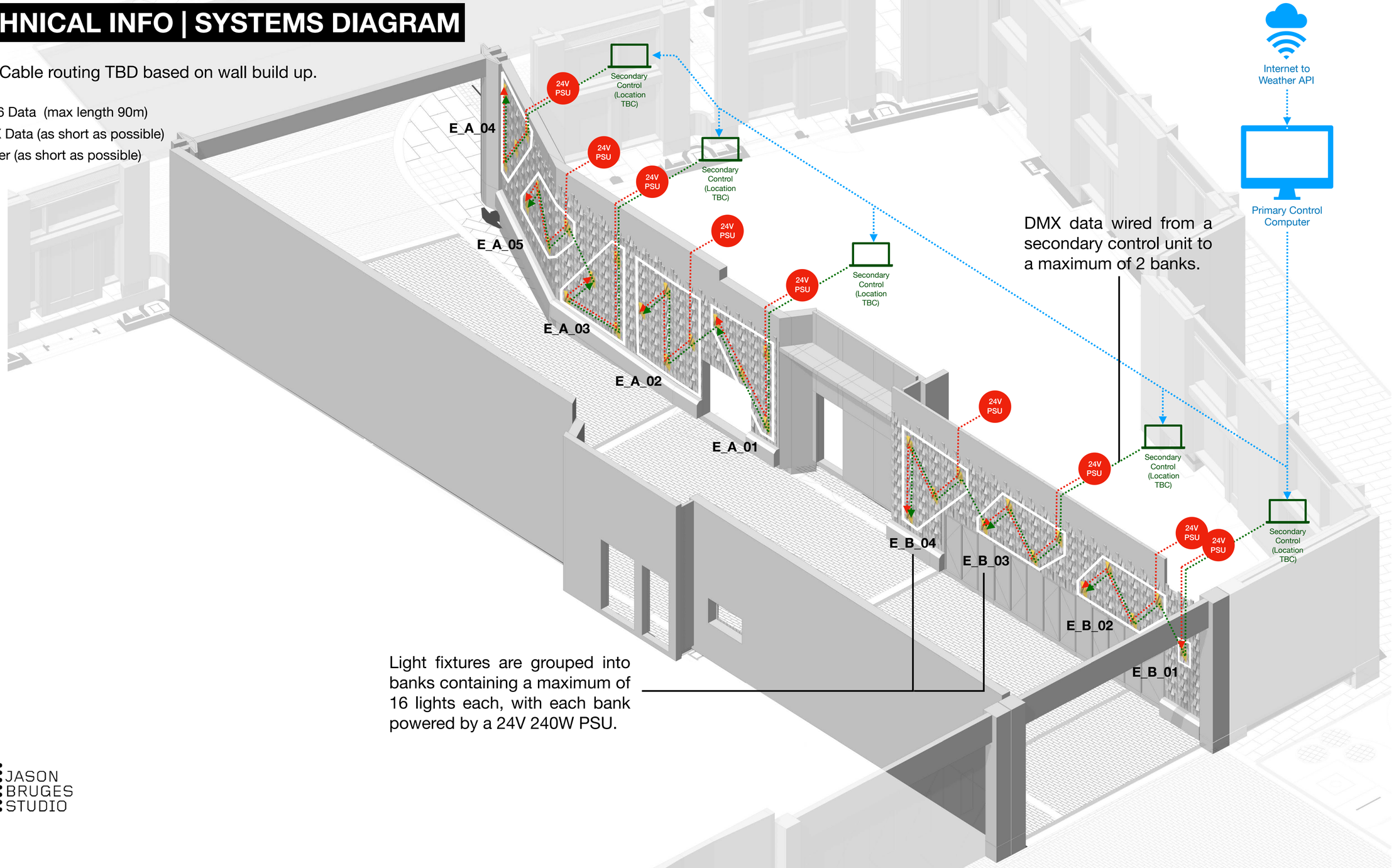
TECHNICAL INFO | SYSTEMS DIAGRAM

NOTE: Cable routing TBD based on wall build up.

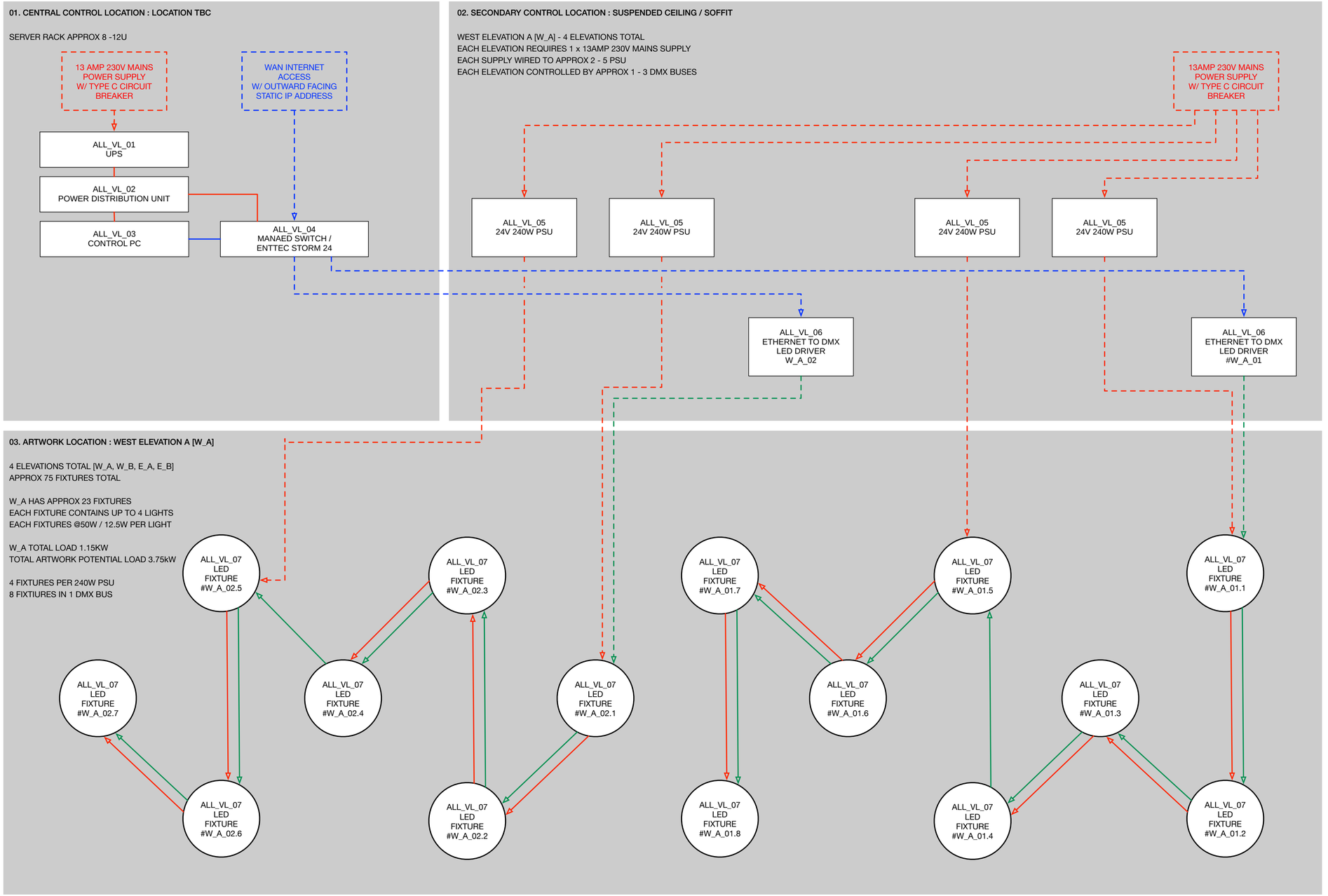
- CAT6 Data (max length 90m)
- DMX Data (as short as possible)
- Power (as short as possible)



JASON BRUGES STUDIO

TECHNICAL INFO | SYSTEMS DIAGRAM

Electrical Loading
Approx 73 light fixtures
50W per light fixture
Total electrical loading kW3.75



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TECHNICAL INFO | LED LIGHT SPEC SHEET

Chosen Light
Lumenetix Araya CTM1C 19NR
12W, 750 peak lumens, 19mm LES

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lumenetix-araya™ Bluetooth®

2000 Maximum Peak Lumens
LED Color Tuning Module (24V DC)
CTM1C

1 DESCRIPTION AND ORDERING INFORMATION

CTM1C 09 | CTM1C 12 | CTM1C 19 | CTM1C 19 (2000 / 1500 LM) | CTM1C 19NR

Description

Lumenetix-araya Color Tuning Modules (CTM1C) mix five colors of LEDs to deliver tunable and dimmable white light at 90+ CRI* and color consistency of <2 MacAdam ellipse across a tuning range of 1650 - 8000K. Light can be dimmed from 100 - 1% while maintaining constant CCT. Gradients of saturated colors from 1 - 100% can be added to color points within the tuning range. The modules integrate the driver electronics for precise control of current and PWM inputs and LED light output. On board closed loop thermal feedback compensates each color channel for thermally induced variations in optical output due to tuning, dimming or ambient temperatures. On board closed loop optical feedback measures the lumen depreciation of each channel and re-balances the color model to ensure color consistency over the 50,000 hour life of the module. An in-line manufacturing process captures the spectral characteristics of each LED under multiple conditions, generating a unique color model for each color tuning module. The modules are compatible with traditional 0 - 10V wired controls, feature on-board DMX512-A-RDM, and also Bluetooth Low Energy (BLE) for commissioning. Lutron® EcoSystem compatibility is achieved by using the optional Lumenetix Digital Control Adapter. Modules can be paired with Legrand's Wattstopper® Digital Light Management (DLM) interface via an external adapter, to allow automatic fixture commissioning. For simple deployment, scene set allows up to five scenes to be pre-programmed into the module during production and recalled at the venue using a 0 - 10V recommended dimmer. Commissioning of the module, re-programming of scenes, and configuration of DMX channels is done via RDM or the wireless Lumenetix-araya Tunable Color 2.0 iOS app that connects to the embedded radio. The CTM1C series features nominal light emitting surfaces (LES) of 9 mm, 12 mm and 19 mm.

Key Features

- Tunable range: 1650 - 8000K
- 90+ CRI*
- Dimmable from 100% - 1% at constant CCT
- Color gamut control: gradients of saturated colors from 1 - 100% can be added to color points
- Integrated driver electronics
- On board thermal and optical feedback for color consistency of <2 MacAdam ellipse over 50,000 hour life
- In-line spectral capture creates unique color model for each module, resulting in consistent CRI and CCT across all modules
- On board thermal turndown
- Compatible with 0 - 10V wired controls
- On-board Bluetooth Low Energy (BLE) for commissioning
- On-board DMX512-A-RDM, with DMX slots set by RDM or via wireless Lumenetix-araya Tunable Color 2.0 iOS app
- Lutron EcoSystem compatibility via optional Digital Control Adapter
- Wattstopper DLM compatibility via an optional adapter
- Scene set enables up to five scenes to be preprogrammed and recalled using a 0 - 10V recommended dimmer
- Light emitting surface (LES): 9 mm, 12 mm and 19 mm (nominal)
- Zhaga compliant footprint and front heat sink mounting
- Provisions for reflector mounting

araya TUNABLE COLOR 2.0

Tunable Color 2.0 iOS App

Photometrics and Ordering Codes

Tunable Range: 1650 - 8000K	Nominal Wattage	CTM1C 09		CTM1C 12		CTM1C 19 / 19NR		
		Typical Peak Lumens	Ordering Code	Typical Peak Lumens	Ordering Code	Typical Peak Lumens	Ordering Code (CTM1C 19)	Ordering Code (CTM1C 19NR)
Specifications**	35W	N/A	N/A	N/A	N/A	2000	80.002.082.01	N/A
	25W	N/A	N/A	N/A	N/A	1500	80.002.083.01	N/A
	25W	950	80.002.045.01	1000	80.002.048.01	1250	80.002.051.01	80.002.054.01
	18W	750	80.002.046.01	900	80.002.049.01	1000	80.002.052.01	80.002.055.01
	12W	550	80.002.047.01	650	80.002.050.01	750	80.002.053.01	80.002.056.01
CRI (Ra) Across Tuning Range	>90*							
Dimming	100% to 1% in increments of 1% at constant CCT							
Nominal Color Consistency	<2 MacAdam ellipse (±0.002 Duv from ANSI C78.377-2008 curve)*							
Color Consistency Over Life	Calibration maintains original color points over life*							
Lumen Maintenance	L70 (70% of initial lumens) at 50,000 hours							

*From 2000 - 6000K, down to 5% dim level. **Lumen and wattage range is within +/- 10% of the nominal value. Peak efficacy is not necessarily at typical peak lumens.

2 ELECTRICAL & MECHANICAL SPECIFICATIONS

2.1 Electrical Specifications

Input Voltage	24V DC
Nominal Power Input	35, 25, 18 and 12 Watts
Nominal Current Input	35W: 1.46A; 25W: 1.04A; 18W: 0.75A; 12.5W: 0.5A
Power Supply Classification	Class 2
Power Connector	Molex 874380243 (requires Molex 874390200)
Control Connector	Molex 874370543 (requires Molex 874390700)
Control Options[1]	0 - 10V, DMX512-A-RDM[2], Lutron® EcoSystem, Wattstopper® DLM
CCT and Dimming Control Connections	Connector harness, 24 gauge leads

1. DMX channel configuration is done via RDM or wireless Tunable Color iOS app. Lutron EcoSystem requires optional Digital Control Adapter. Wattstopper DLM compatibility requires optional external adapter from Wattstopper.
2. Remote Device Management or RDM is a protocol enhancement to DMX512-A that allows bi-directional communication between a lighting or system controller and attached RDM compliant devices over a standard DMX line.

2.1a Control Specifications

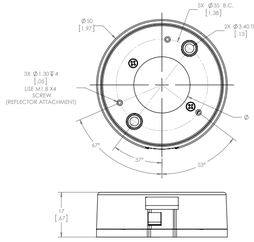
PROTOCOL	1 DIMMING	2 CCT	3 SAT	4 HUE	NOTES
DMX512-A-RDM [1]	1%	1650 - 8000K	Yes	Yes	1. Refer to the separate DMX Lookup Tables for specific programming values and information.
0 - 10V	~1% [2]	1650 - 8000K	*	*	2. 1 - 10V signal dims module to approximately 1%. In-line power relay required to achieve 0% output.
LUTRON ECOSYSTEM [3, 4]	1%	1650 - 8000K	N/A	N/A	3. Requires external Digital Control Adapter. 4. Refer to the separate Lutron EcoSystem Lookup Tables for specific programming values and information.
WATTSTOPPER DLM [5]	1%	1650 - 8000K	N/A	N/A	5. Requires external LMFC-LXI adapter by Wattstopper.

*Two 0-10V lines can be used to control DIM and CCT independently, or program Scenes — in any combination of DIM, CCT, HUE and SAT — and recall them with five 0-10V presets.

2.2 Mechanical Specifications

Dimensions	Diameter:	1.97 inches (50 mm)
	Height:	0.67 inches (17 mm); CTM1C 19NR: 0.84 inches (21.44 mm)
Light Emitting Surface	9 mm, 12mm and 19 mm (nominal)	
Weight	0.12 pounds (0.06kg)	
Heat Sink Attachment	Front mount, M2.5 or 4-40 Screws	
Max Case Temperature	≤90°C	

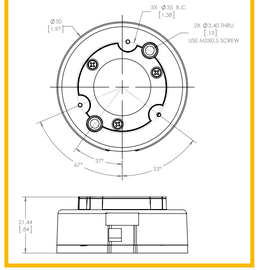
CTM1C 19 (1250 lumens), CTM1C 12, CTM1C 09



Model	LES Diameter
CTM1C 09	9.5 mm (0.37 inches)
CTM1C 12	12.75 mm (0.50 inches)
CTM1C 19	22 mm (0.87 inches)

CTM1C 19 (2000 / 1500 lumens)

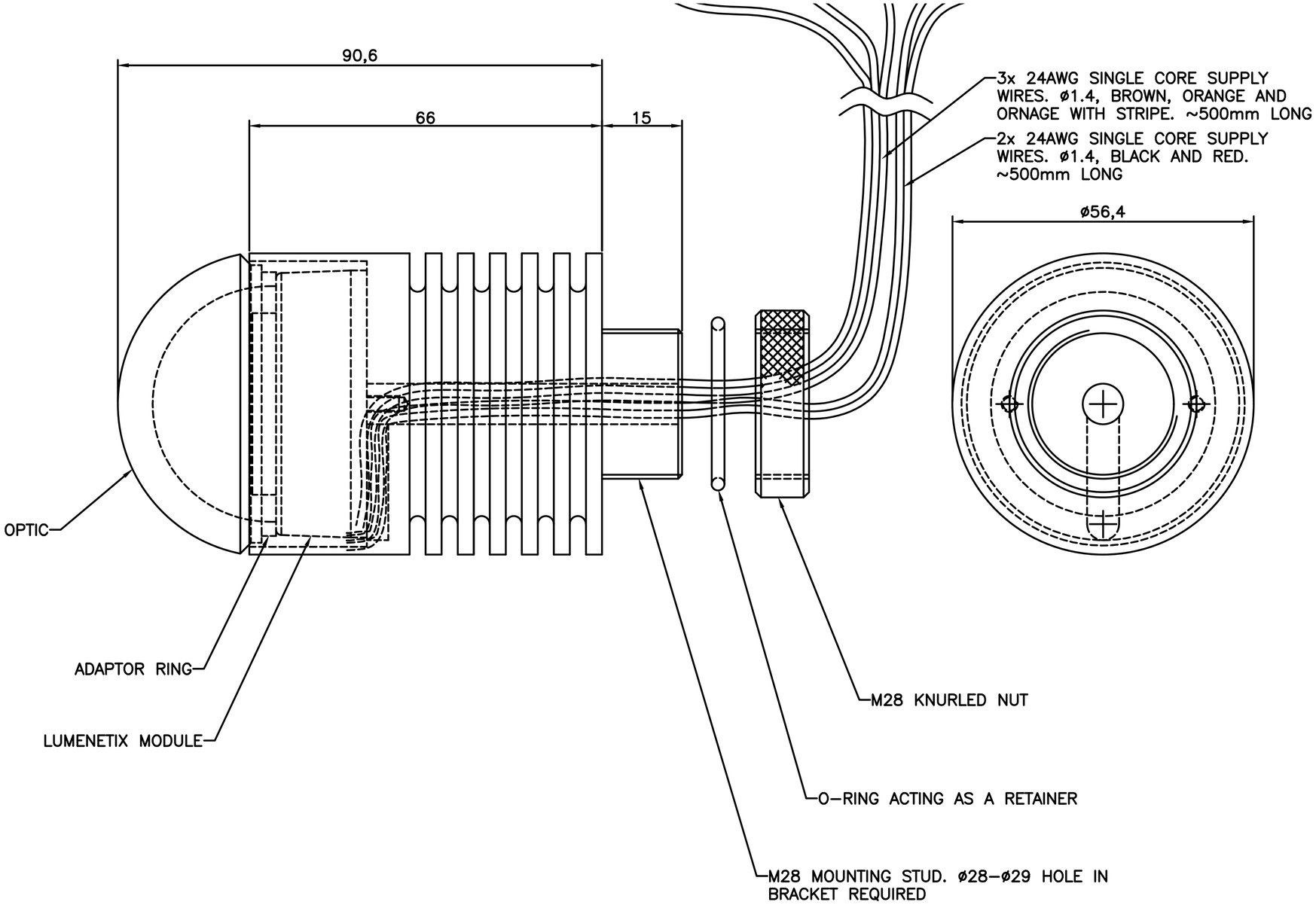
CTM1C 19NR (1250 lumens) – Raised Face



TECHNICAL INFO | LIGHT FIXTURE (INDICATIVE)

Indicative Light Fixture

Custom light fixture and housing to be finalised in technical design stage in collaboration with Stoane Lighting. Final light fixture will be IP 67 rated and designed to easily integrate with geometric wall assembly.



JASON BRUGES STUDIO

TECHNICAL INFO | SERVER RACK

JBS require a 12 unit server rack.

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Features & Benefits

- Ventilated top
- Adjustable mounting posts
- Lockable Perspex front door
- Lockable and removable rear door
- Cable access in base
- 800 kg static load capacity
- Supplied fully assembled

Ordering Information

Product Description	Part Number
Floor Standing 12u 600w x 600d	RR-F1-12-P
Floor Standing 18u 600w x 600d	RR-F1-18-P
Floor Standing 21u 600w x 600d	RR-F1-21-P
Floor Standing 24u 600w x 600d	RR-F1-24-P
Floor Standing 27u 600w x 600d	RR-F1-27-P
Floor Standing 39u 600w x 600d	RR-F1-39-P
Floor Standing 42u 600w x 600d	RR-F1-42-P
Floor Standing 12u 600w x 800d	RR-F2-12-P
Floor Standing 18u 600w x 800d	RR-F2-18-P
Floor Standing 24u 600w x 800d	RR-F2-24-P
Floor Standing 27u 600w x 800d	RR-F2-27-P
Floor Standing 39u 600w x 800d	RR-F2-39-P
Floor Standing 42u 600w x 800d	RR-F2-42-P
Floor Standing 21u 800w x 600d	RR-F3-21-P
Floor Standing 27u 800w x 600d	RR-F3-27-P
Floor Standing 42u 800w x 600d	RR-F3-42-P
Floor Standing 27u 800w x 800d	RR-F4-27-P
Floor Standing 27u 800w x 800d	RR-F4-27-P
Floor Standing 42u 800w x 800d	RR-F4-42-P

Accessories

A full range of cabinet accessories are available including; wall mounting frames, PDUs, fixed shelves, telescopic shelves, castors, cage nuts, baying kits, roof mounting fan units and plinths. See the cabinet accessories page.

The range of 19” Floor Standing Cabinets are an ideal solution for housing network hardware and patching equipment. The robust design makes them suitable for use in IT departments and offices.

The cabinets are available in various configurations and are supplied fully assembled. Each cabinet utilises a ventilated top and four 19” adjustable front and rear mounting posts. The cabinets feature lift-off sides and a lockable door for maximum access to the internal equipment, with cable access in the base for convenient routing of network cables. The side panels can be fitted with cabinet locks. The cabinet frameworks are finished in black with a Perspex lockable front door.

These 19” Floor Standing Cabinets incorporate the essential features for data communication environments - security, durable construction, easy access and protection from dust or contamination for the network equipment.

Rackyrax.com

TECHNICAL INFO | SPEC SHEET

Component	Part # [ALL_VL]	Description	Estimated Qty	Dimensions U / mm (wxhxd)	Image
UPS	_01	TUniterupted Power Supply - ensures system can continue to run for a period of time in the event of a building power outage. When power returns no action should be required to reactivate the artwork. Hardwired to mains supply.	1	2U	
PDU	_02	Power Distribution Unit - Connected to UPS to ensure all sever rack remains powered to the same uninterupted circuit.	1	1U	NA
Control PC	_03	A custom build control server which will run JBS control software - outputting DMX data via Cat6a.	1	3U	NA
Managed Switch / Enttec Storm 24	_04	Managed switch takes various Cat6a data lines from central control to distributed local controllers.	1	TBC	
24V PSU	_05	Solid State Meanwell 24V 240W Power Supply - to power a bus of 4 LED fixtures - 16 lamps total ~ 200W	18	TBC	
Ethernet to DMX Controller / LED Driver	_06	Converts Cat6a data line to DMX + Power to connect to LED Fixtures	9	~ 69 x 57 x 107	
LED Fixture	_07	A custom housing containing up to 4 LED Lamps	69	TBC	NA

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