75 Watt CC 0-10 Athena

SCOUT

Part #SDRVCC01075-ATH



Quick Specs

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Max Load (2000mA)

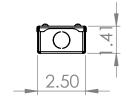
Super Low (50mA)	40 Feet
Low (89mA)	22 Feet
Medium (149mA)	13 Feet
High (250mA)	8 Feet
Super High (300mA)	5 Feet

Max Distance

20 AWG	20 Feet
18 AWG	40 Feet
16 AWG	60 Feet
14 AWG	100 Feet
12 AWG	150 Feet

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Athena Wireless Node

The Athena wireless node is a radio frequency (RF) device that enables simple, digital control of individual light fixtures in an Athena control system. The small size and compatibility with a wide variety of drivers allow for seamless integration with common commercial lighting fixtures from any manufacturer.

The Athena wireless node works with the following LED driver types:

Tunable White Control	Lutron digital LED drivers (coming soon)
Turiable-white Control	Lutron digital LED drivers (coming soon) DALI-2 certified Type 8 LED drivers
	Lutron digital LED drivers (coming soon)
	DALI-2 certified LED drivers
	ANSI C137.1 compliant 0-10 V== LED drivers

The Athena wireless processor or Clear Connect gateway – Type X is required to operate an Athena wireless node in an Athena control system via a simple setup process using an iOS® or Android® compatible app. This enables these fixtures to be controllable by other Lutron wall controls, keypads, sensors, Pico remote controls, etc.

Models

Model Number	Description	
A-WN-D01-RF-WH	Athena wireless node (RF only) (White)	
A-WN-D01-RF-BL	Athena wireless node (RF only) (Black)	
A-WN-D01-OCC-WH	Athena wireless node with sensor (White)	
A-WN-D01-OCC-BL	Athena wireless node with sensor (Black)	
DFC-OEM-DBI	Fixture control digital link interface	

· NOMENT

Athena Wireless Node RF Only (White)



Athena Wireless Node RF Only (Black)



Athena Wireless Node Sensor (White)



Athena Wireless Node Sensor (Black)

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Features

- Enables individual, wireless control of each fixture in an Athena control system. Accommodates zone and control changes without rewiring.
- Typically installed at OEM factory no wiring required on-site. Fixture is ready to communicate wirelessly once power is connected.
- Pairs with Lutron digital LED drivers (coming soon) for either Tunable White or Static White control.
- DALI-2 and ANSI C137.1 compatible for simple interoperability with third-party LED drivers.
- All drivers on the link are controlled as a single zone.

• A-WN-D01-RF

 Plenum rated and can be installed above the ceiling for wireless control of a fixture without any impact on fixture aesthetics.

• A-WN-D01-OCC

 Provides wireless control of the fixture and includes a passive infrared (PIR) sensor for occupancy and a daylight sensor.

DFC-OEM-DBI

 Can be used in-fixture to power the Athena wireless node when used with DALI-2 and ANSI C137.1 compliant 0–10 V=== drivers without integrated power supplies.

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Specifications

A-WN-D01 Features

Regulatory Approvals

- cULus Listed (UL916)
- UL 2043 Plenum Rated
- FCC compliant with the limits for a Class B digital device
- IC (Industry Canada)
- ANSI C137.1 0-10 V== Electronic Off
- D4i certified
- Supports DALI-2 Type 8 tunable-white color temperature (T_C) applications - IEC 62386-209 ed.1*

Power/Load

- IEC SELV/NEC® Class 2
- Operating voltage: 9.5-28.8 V==
- Operating current: 46 mA max
- See page 5 for power supply requirements for DALI or 0–10 V== driver selection

Colors

 Available in white and black flange only
 Note: The occupancy sensor dome is white on both the white and black sensor models for the A-WN-D01-OCC

Environmental

 Ambient operating temperature (immediate vicinity of Athena wireless node): 32 °F to 131 °F (0 °C to 55 °C), 0% to 90% humidity, noncondensing; indoor use only

Warranty

 5 Year Limited Warranty.
 For additional Warranty information, please visit: https://www.lutron.com/TechnicalDocumentLibrary/ 3601462_ENG.pdf

Wiring

- 4-position screw terminal for 26 AWG to 18 AWG (0.20 mm² to 0.75 mm²) wire
- For Lutron digital LED drivers (coming soon) and D4i/DALI-2 drivers, only (2) wires are required
- For 0-10 V== drivers, all (4) wires are required
- See pages 8 and 9 for complete wiring diagrams

Mounting

- Mounts to a lighting fixture
- Fits Zhaga Specification Book 20 hole size: 0.859 in to 0.906 in (21.8 mm to 23.0 mm) diameter
- Fits in standard ½ in trade size knockout (0.875 in [22.5 mm] diameter knockout nominal)
- Compatible with fixture wall thicknesses of 0.016 in to 0.080 in (0.4 mm to 2.0 mm)

Radio Frequency for Wireless Communication

• 2.4 GHz

Range

- Reference Clear Connect gateway Type X specification for system details (www.lutron.com/ TechnicalDocumentLibrary/3691144_ENG.pdf)
- Each Athena wireless node should be installed within 25 ft (7.62 m) of two or more Athena wireless nodes or other Clear Connect – Type X devices.

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Job Name:	Model Numbers:
Job Number:	

 $^{^{\}star}$ Athena wireless node does not support tunable-white color temperature applications via DALI Type 6 or 0–10 V==-

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Specifications (continued)

Default Behavior Prior to Programming

- · Occupancy (sensor only): Disabled
- Daylighting (sensor only): Disabled
- Light Level: 100%
- Color Temperature
 - Tunable White: 4000 K (or closest fixture color temperature limit)
 - Static White: Default color temperature of fixture
- Note: Athena wireless node performs an unprogrammed startup sequence on every power up until the device is added to an Athena system

Occupancy/Vacancy Functionality

- Default timeout: 15 minutes¹
- Minimum timeout: 1 minute¹
- Passive infrared motion detection with exclusive Lutron XCT technology for major and minor motion detection
- 360° field-of-view

Daylight Sensor Functionality

- Daylight sensor has simple, automatic fixturefeedback calibration out-of-the-box that is performed on first vacancy after the sensor is added into an Athena system
- Designed to give a linear response to changes in light level
- \bullet Detects ambient light level changes from 0 lx to 1600 lx (0 f $_{\rm C}$ to 150 f $_{\rm C}$)

Digital Features

- Enables individual fixture addressing, control, and configuration in an Athena control system
- Simple programming using mobile device running an iOS_® or Android_® compatible app when connected to an Athena wireless processor or Clear Connect gateway – Type X in an Athena control system

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Wireless Features

- Simplify installation and save materials no control wire is required to install fixtures
- Simplify design flexible zoning allows you to re-zone without re-wiring as space needs change

Fixture Level Settings (via Lutron Designer)

- Fixture zoning/re-zoning
- Low-end and high-end trim adjustment
- Minimum light level setting (optional): Certain applications, such as hallways, may require that the lights never turn off. For these areas, select the minimum light level option and the load will lower to programmed low-end level
- Create preset color temperature and intensity settings of tunable white fixtures
- Occupancy sensor timeout and sensitivity
- Occupancy sensor mode (occupancy or vacancy)
- Daylight sensor enable/disable
- Daylight sensor setpoint

Emergency Support/Override & Lockout

 Compatible with LUT-SHUNT-FM. For additional details, reference Lutron Application Note 106 (P/N 048106 at lutron.com)

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Job Name:	Model Numbers:	
Job Number:		

¹ Timeouts valid once device is programmed in an Athena system. Prior to programming, occupancy functionality is disabled.

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Page

Specifications (continued)

DFC-OEM-DBI Features

Regulatory Approvals

- cULus Recognized
- NOM
- CE
- DALI compliant

Power/Load

- Output: 18 V=== 60 mA max

Environmental

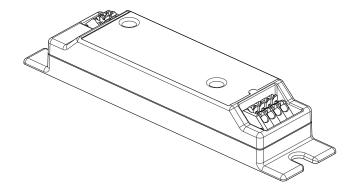
- Ambient operating temperature: 32 °F to 140 °F (0 °C to 60 °C), 0%–90% humidity, non-condensing; indoor use only
- Maximum rated temperature @ ($T_{\rm C}$) for Warranty: 70 °C (158 °F)

Warranty

 5 Year Limited Warranty. For additional Warranty information, please visit https://assets.lutron.com/a/ documents/3601201A_Commercial_Limited_Warranty.pdf

Mounting

- Fixture control digital link interface must be mounted inside a fixture (it must not be used for external/remote mounting)
- Only one Athena wireless node can be used per DFC-OEM-DBI



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Job Name:	Model Numbers:	
Job Number:		

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Compatible Drivers*

Athena wireless node is compatible with a wide variety of LED Drivers to maximize design flexibility for lighting designers, engineers, contractors, and lighting manufacturers.

Note: Not for use with fluorescent fixtures.

For Tunable-White Fixtures

- Premier tunable-white control with Lutron digital LED drivers (P2Q Models [coming soon])
- Supports DALI-2 Type 8 tunable-white color temperature (T_C) applications - IEC 62386-209

For Static-White Fixtures

- Premier static-white control with Lutron digital LED drivers (P2Q Models [coming soon])
- Supports DALI-2 static-white applications -IEC 62386-207
- Compatible with ANSI C137.1 compliant 0-10 V== drivers with electronic off
 - 0-10 V== max. sink current: 10 mA
 - Controls up to 5 drivers (IEC 60929 Annex E.2 requires the driver to limit current to 2.0 mA maximum)

Note: Athena wireless node uses a linear 0-10 V== control output. For best dimming performance, it is recommended to pair with a 0-10 V=== driver with a logarithmic dimming curve.

Power Supply Requirements DALI

- D4i certified LED drivers
- DALI-2 certified LED drivers with an integrated bus supply
- Maximum supply current: 250 mA
 - Athena wireless node supports 1 to 5 DALI drivers depending on the driver's supply current. The sum of bus supply currents of all attached LED drivers should not exceed 250 mA.

0-10 V===

- ANSI C137.1 0–10 V=== drivers with integrated power supply
- Auxiliary output voltage range: 12 V=== to 24 V===
- Minimum output power: 750 mW

Note: For DALI-2 and 0-10 V== drivers that do not have an integrated power supply, or one that does not meet the above specifications, the Lutron DFC-OEM-DBI can be used to power the Athena wireless node.

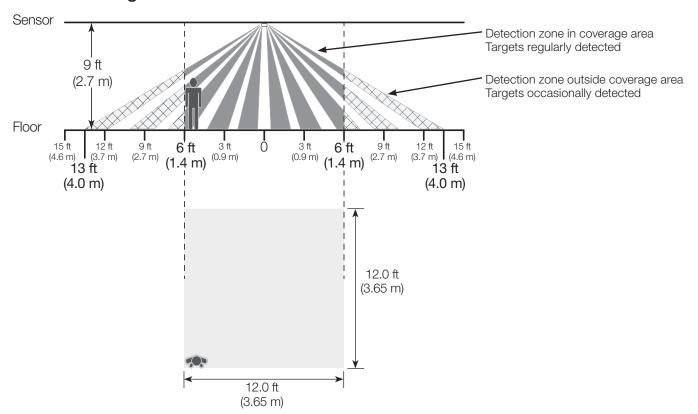
Job Number:

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Lutron does not evaluate performance or quality of third-party drivers. Lutron recommends that the customer evaluate the entire system (driver, light engine, fixture, etc.) together with actual samples to determine if dimming and other performance metrics of the driver meets the customer's needs.

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Sensor Coverage



Major motion:

Movement of a person entering or passing through an area.

- 12 ft x 12 ft (144 ft²)(3.65 m x 3.65 m [13.3 m²])^{1,2}

Sensor Coverage vs. Height

12 ft (3.7 m) is the maximum recommended mounting height

Sensor Height	Motion Coverage Area
8 ft (2.4 m)	114 ft ² (10.6 m ²)
9 ft (2.7 m)	144 ft ² (13.3 m ²)
10 ft (3.0 m)	178 ft ² (16.5 m ²)
12 ft (3.7 m)	256 ft ² (23.8 m ²)

Minor motion:

Movement of a person occupying an area and engaging in small activities (e.g., reaching for a telephone, turning the pages of a book, picking up a coffee cup, etc.)

- 12 ft x 12 ft (144 ft²)(3.65 m x 3.65 m [13.3 m²]) 1,2

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Job	Name:	Model Numbers:
Job	Number:	

 $^{^{\}mbox{\tiny 1}}$ Note that this is for the high sensitivity setting.

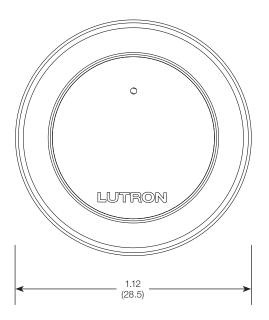
² Lights may turn on outside the coverage area.

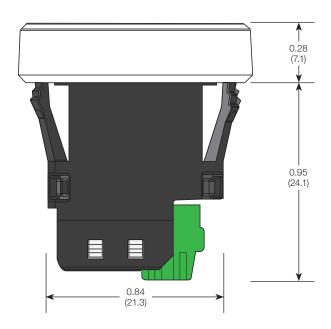
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Dimensions

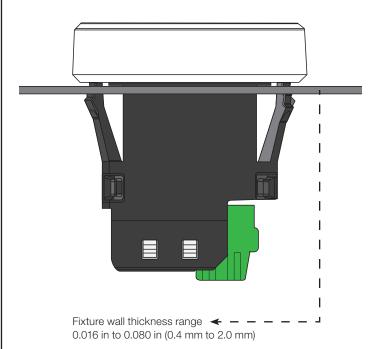
Shown as: in (mm)

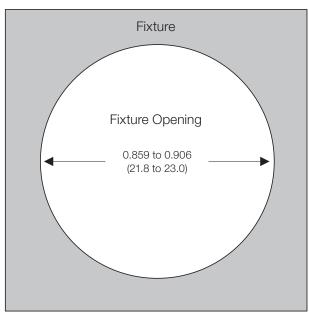
Athena Wireless Node (RF only)





Fixture Mounting Considerations





Compatible with fixture openings meeting Zhaga Book 20 or standard ½ in trade size knockout (0.875 in [22.5 mm] diameter knockout nominal)

LUTRON SPECIFICATION SUBMITTAL

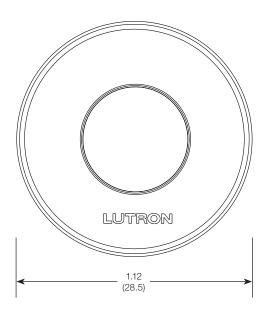
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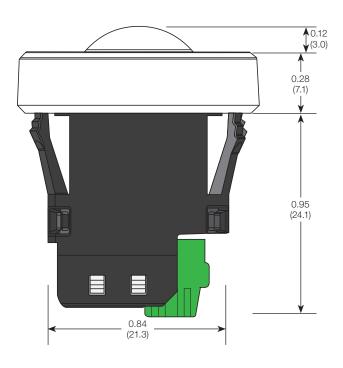
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Dimensions (continued)

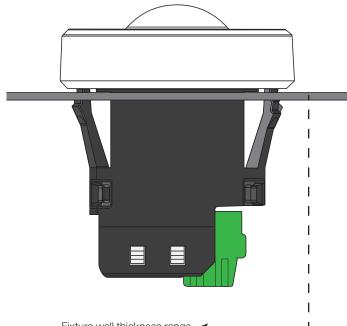
Shown as: in (mm)

Athena Wireless Node with Sensor

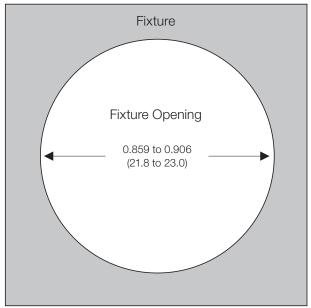




Fixture Mounting Considerations



Fixture wall thickness range ← − − 0.016 in to 0.080 in (0.4 mm to 2.0 mm)



Compatible with fixture openings meeting Zhaga Book 20 or standard ½ in trade size knockout (0.875 in [22.5 mm] diameter knockout nominal)

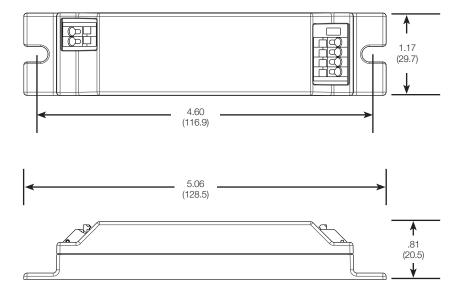
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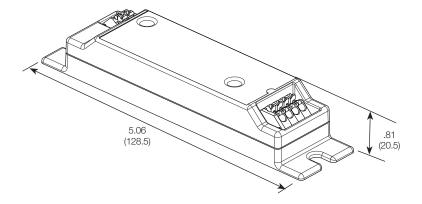
Job Name:	Model Numbers:
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Dimensions (continued) Shown as: in (mm)

DFC-OEM-DBI





LUTRON SPECIFICATION SUBMITTAL

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Job Number:	

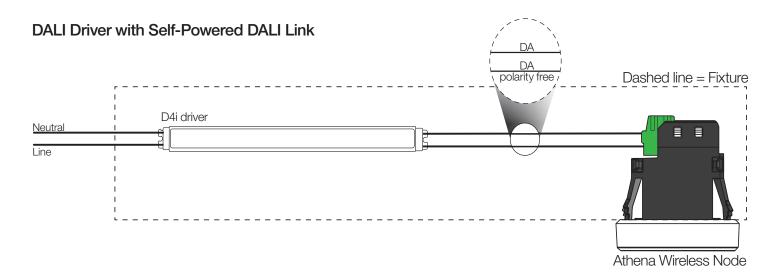
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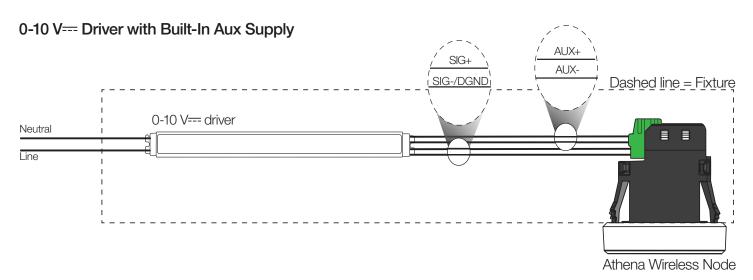
Wiring/System Diagram

Wiring Guide



Connector Position	DALI Function	0-10 V Function
1	DA	AUX+
2	DA	AUX-
3	N/C	SIG+
4	N/C	SIG-/DGND



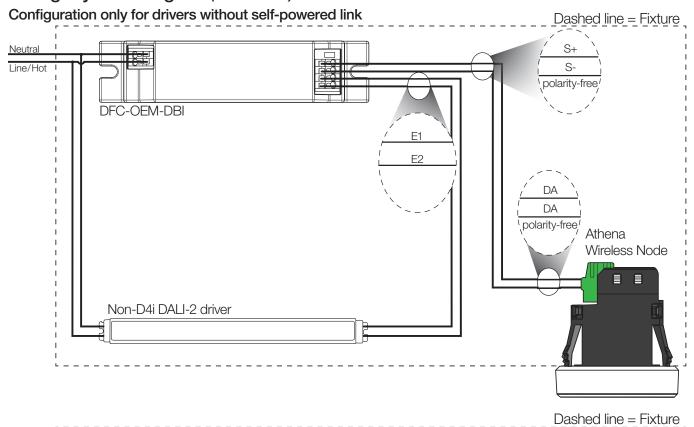


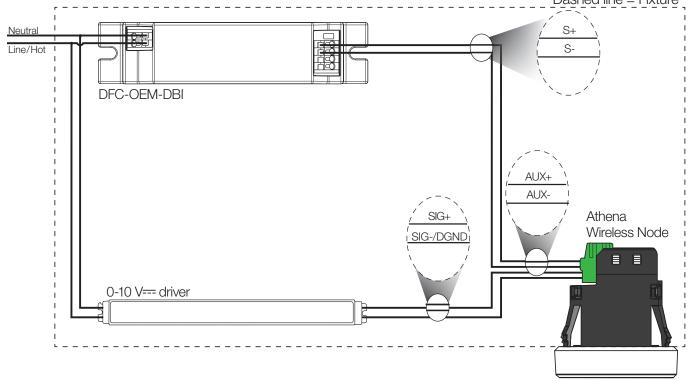
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Job Name:	Model Numbers:
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Wiring/System Diagram (continued)





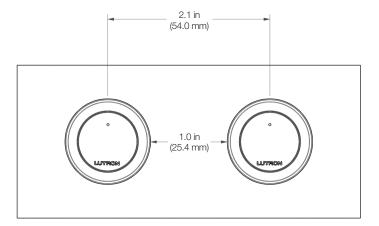
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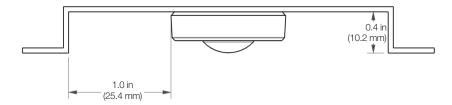
Node-to-Node Spacing

- 2.1 in (54.0 mm) center-to-center spacing for knockout.
- 1.0 in (25.4 mm) spacing for edge-to-edge of nodes.



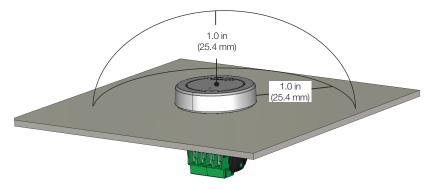
Metal Clearance

- The node must be installed external to metal enclosures.
- 1.0 in (25.4 mm) spacing from metal features.
- Maximum recess of 0.4 in (10.2 mm).



Exclusion Zone

- No metal should be placed in the front of the node.
- Ensure that all wiring and other obstructions are at least 1.0 in (25.4 mm) away.



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LUTRON SPECIFICATION SUBMITTAL

Job Name:	Model Numbers:
Job Number:	



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LED Driver

Xitanium

XI075C200V054PST1



The Advance Xitanium range of linear LED drivers is designed to provide OEMs with ultimate flexibility. These models are compatible with standard 0-10V dimming systems to deliver reliably smooth dimming performance down to a minimum of 1%. Enabled with SimpleSet technology, these drivers offer the needed flexibility and performance for the application with precise tuning of drive currents, selectable dimming curves and adjustable minimum dimming levels. With wide operating windows, slim profile and simple current adjustability, the drivers make it easy for luminaire manufacturers to design linear fixtures with desired lumen levels to suit the application.

Specifications

Input Volt. (Vac)	Output Power (W)	Output Volt. (V)*	Output Current (A)	Efficiency@ Max. Load and 75°C Case	Max. Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max. Load (%)	Power Factor @ Max. Load	Surge Protection (Combi- Wave, KV)	Envir. Protect. Rating	Dim	Dimming Range (with specified dimmers)	Min. Output Current (A)	Other Notes
120			0.1 -	87.5%	Life 80°C	0.7		<10%			UL	0-10V Suitable for	1% ~		Dimming
277	75	10 - 54	2.0	89.5%	UL 85°C	0.3	87.5	<15%	>0.95	>0.95	damp & dry	Class 1 or Class 2 Wiring	100%	0.007	current: 150 µA

Enclosure

	In. (mm)
Case Length (L2)	16.7 (424)
Case Width (W)	1.19 (30.2)
Case Height (H)	1.02 (25.8)
Mounting Length (M)	16.34 (415)
Overall Length (L1)	16.7 (424)

Wiring Diagram



WARNING:

Install in accordance with national and local electrical codes. Use 18 AWG solid copper wire.

Rated >= 300V/90°C.

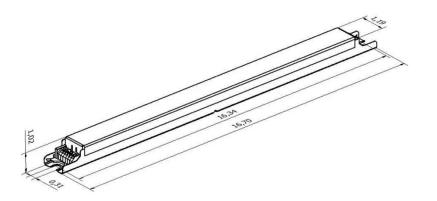
Strip wire 3/8".

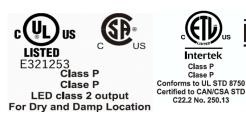
WARNING:

Risk of fire and electric shock. Do not interconncect output terminations

GROUNDING:

Driver case must be grounded.











75W 0.1-2A 54V 0-10V INT (1% dim) with SimpleSet and auxiliary power supply selectable

Features

- 50,000+ hour lifetime1
- · SimpleSet programmable
- · Large operating window
- 1% minimum dim level
- 12V 100mA/24V 50mA auxilliary power supply selectable

Benefits

- Slim profile housing enables easy design-in with excellent thermal performance
- Enables simple, fast, flexible application-specific configurations
- Enables fixture designs with comprehensive application coverage for various

Application

- · Troffers and pendant fixtures
- · Office
- · Healthcare
- Education
- · Retail
- · Big box stores

Electrical Specifications

All the specifications are typical and at 25°C Ta unless specified otherwise.

Product Data

Order Information	
Full Product Code	XI075C200V054PST1M (Mid-Pack, 12pcs/Box), 12NC = 929001758413
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108 Vac
Max. Mains Voltage Operational	305 Vac
Output Information	
Maximum Open Circuit Voltage	<60Vdc
Output Current Ripple (in CC mode) (ripple = peak to average / average)	15% max. @ max. lout 4% max @ Visible for Stroboscopic Frequency range 60Hz-3KHz
Output Current Tolerance (at maximum output current)	<5%
Protections	Short Circuit and Open Circuit Protection for LED + and LED-, mis-wiring protection
Features	
0-10V Dimming	150μA (±3%) source current from driver. See dim curve for detail.
Adjustable Output Current (AOC)	0.1A-2.0A via SimpleSet programming (refer to graph and notes below)
Additional SimpleSet Configurable Features	Adjustable minimum dimming level, Dimming curve selection (Linear or Logarithmic) Adjustable Output level, Adjustable Output Min, OEM Write Protection, Dim to off function Aux output voltage selectable
Environment & Approbation	
Operating Ambient Temp. Range	-20°C to +50°C
Max. Case Temperature (Tcase)	85°C
Agency Approbations	UL8750, CSA-C22.2 No. 250.13, NOM, Class P (ETL, CSA, UL)
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	0.79 Lbs / 0.36 kgs

Advance Xitanium LED drivers are manufactured to engineering standards correlating to a designed and average life expectancy of 50,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTTF modeling.

75W 0.1-2A 54V 0-10V INT (1% dim) with SimpleSet and auxiliary power supply selectable

Electrical Specifications

All the specifications are typical and at 25°C Ta unless specified otherwise.

0-10V Dimming Curve

Dimming source current from the driver: $150\mu A$ (@ 0<Vdim<8V)

Minimum dim level: 1% (minimum 5mA)

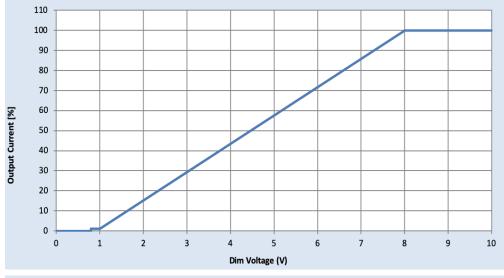
Maximum output voltage on the dimming wires: 12V

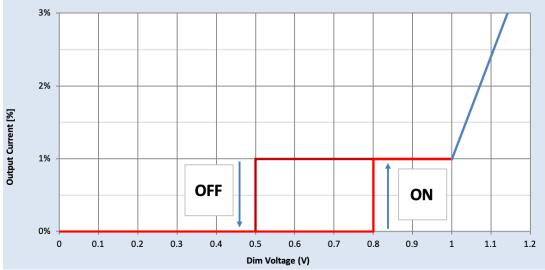
Approved Dimmer List

Manufacturer	Manufacturer Part Number
Lutron	Visit www.lutron.com/ advance for a list of dimmers (Mark VII) that will work with this driver
Leviton	IllumaTech IP7 series
Philips	Sunrise - SR1200ZTUNV

Dim-to-Off Function

Symbol	Parameter	Min	Typical	Max	Unit
Von	Turn on threshold	0.7	0.8	0.9	V
Voff	Turn off threshold	0.4	0.5	0.6	V
Ton	Turn on time			250	mS
Toff	Turn off time			1000	mS





75W 0.1-2A 54V 0-10V INT (1% dim) with SimpleSet and auxiliary power supply selectable

Electrical Specifications

All the specifications are typical and at 25°C Ta unless specified otherwise.

12V/24V Auxilliary Power Supply

Symbol	Parameter	Condition	Min	Typical	Max	Unit
	Aux Power supply	Steady state and	10.8	12	13.2	V
Vaux Nominal output voltage (programmab	voltage (programmable)	during pulse current	21.6	24	26.4	
laux i	Steady state	12V	0		100	mA
	Average output current	24V	0		50	

Approved Sensor List

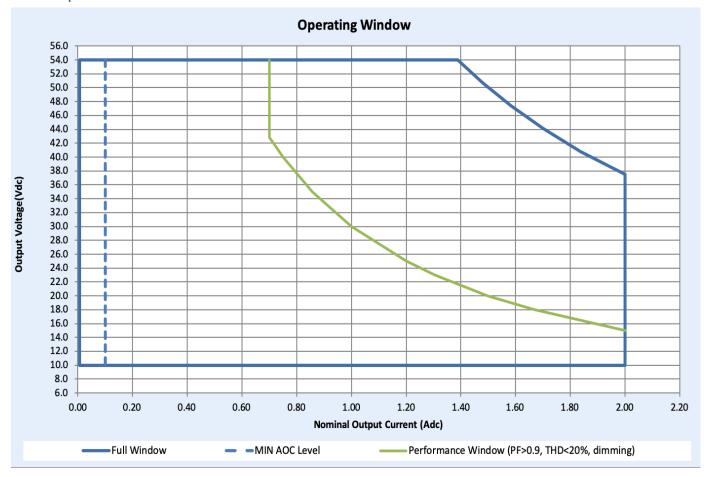
Manufacturer	Manufacturer Part Number
Enlighted INC	SU-5E
WATTSTOPPER	FSP201

75W 0.1-2A 54V 0-10V INT (1% dim) with SimpleSet and auxiliary power supply selectable

Electrical Specifications

All the specifications are typical and at 25°C Ta unless specified otherwise.

Driver Output Window



Notes

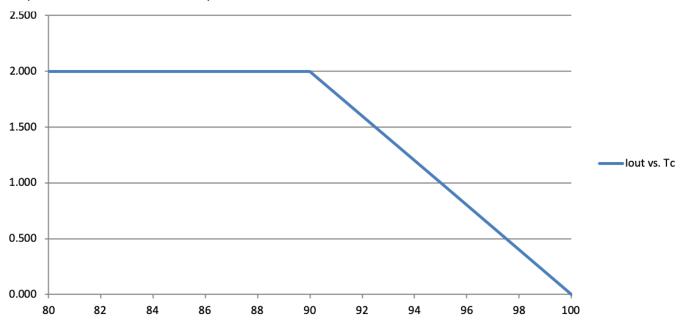
- 1. Factory default output current is 2A.
- 2. For dimming to a minimum level of 1% the output current setting through AOC should be \geq 0.7A.

75W 0.1-2A 54V 0-10V INT (1% dim) with SimpleSet and auxiliary power supply selectable

Electrical Specifications

All the specifications are typical and at 25°C Ta unless specified otherwise.

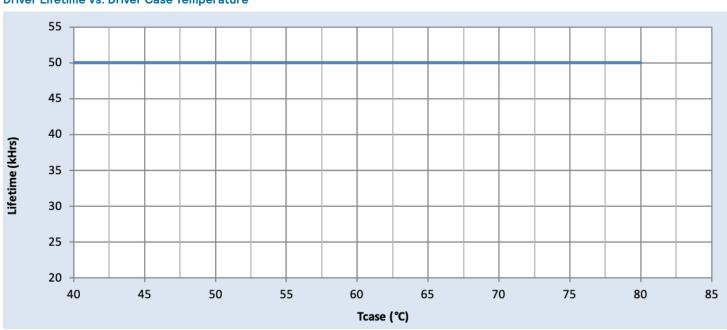
Output Current Vs. Driver Case Temperature



Note

There is ±5°C tolerance on the driver case temperature.

Driver Lifetime Vs. Driver Case Temperature

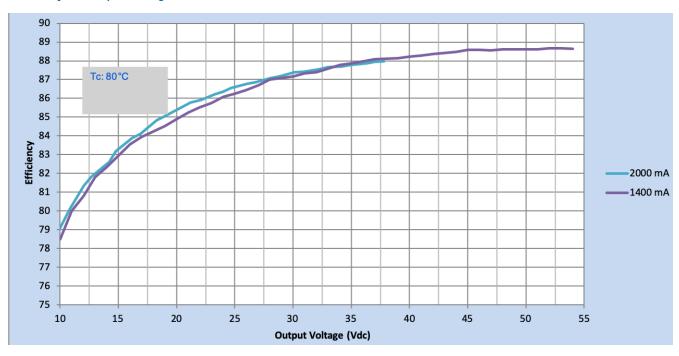


75W 0.1-2A 54V 0-10V INT (1% dim) with SimpleSet and auxiliary power supply selectable

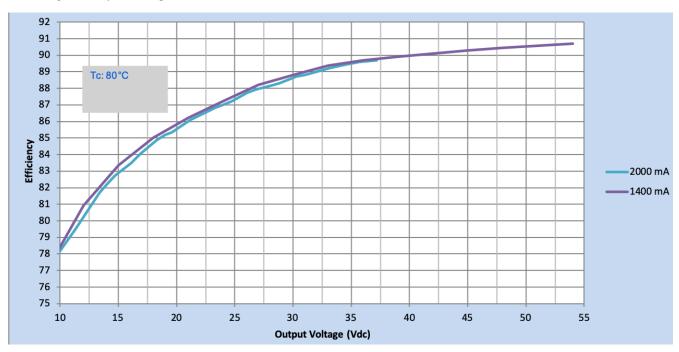
Performance Characteristics

Based on measurements on a typical sample at 75° C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Efficiency Vs. Output Voltage at 120Vac



Efficiency Vs. Output Voltage at 277Vac

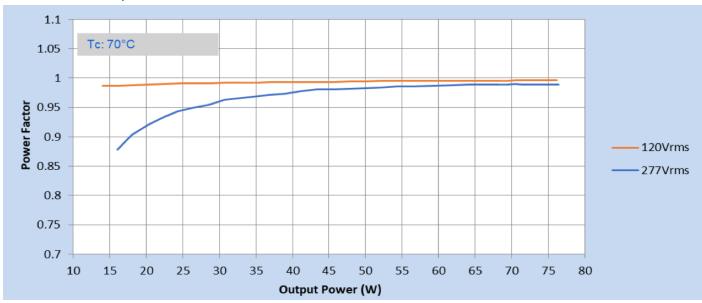


75W 0.1-2A 54V 0-10V INT (1% dim) with SimpleSet and auxiliary power supply selectable

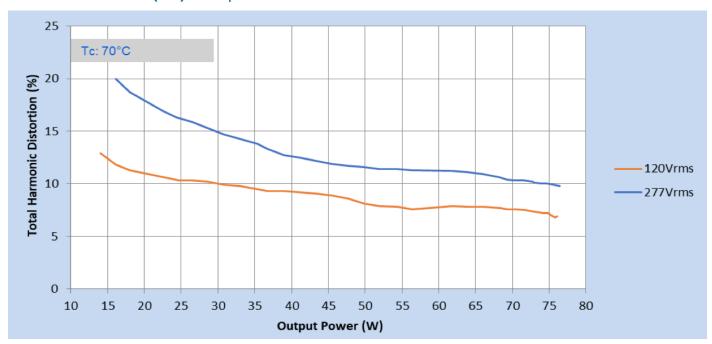
Performance Characteristics

Based on measurements on a typical sample at 75° C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Power Factor Vs. Output Power

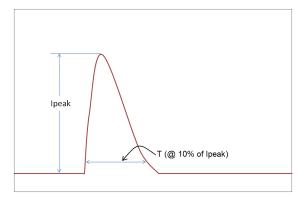


Total Harmonic Distortion (THD) Vs. Output Power



75W 0.1-2A 54V 0-10V INT (1% dim) with SimpleSet and auxiliary power supply selectable

Inrush Current Info



Vin	lpeak	T (@ 10% of Ipeak)	
120 Vrms	16.6A	180µS	
277 Vrms	55.7A	185µS	

Inrush current is measured at peak of the corresponding line voltage. Source impedance per NEMA 410.

Lightning Surge Info

ANSI Surge Type	Differential Mode (L-N)	Common Mode (L-G, N-G, L&N-G)	
100kHz Ring Wave (w/t 3Ω)	>2.5KV	>2.5KV	

Isolation

Isolation	Input	Output	0-10V	Enclosure
Input	-	2xU+1kV	2xU+1kV	2xU+1kV
Output	2xU+1kV	-	2xU+1kV	2xU+1kV
0-10V	2xU+1kV	2xU+1kV	-	2xU+1kV
Enclosure	2xU+1kV	2xU+1kV	2xU+1kV	-

U=Max. Working Voltage

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