Linea[®] 3.5" Linear Direct LFD





Features

The Linea® 3.5" Direct LED ambient system is a small-scale 3.5" extruded profile that provides well-controlled ambient lighting. Engineered around the latest LED, in a choice of 5W/ft or 10W/ft LED boards. Excellent for commercial and retail ambient applications. Downlight component available with acrylic lens or parabolic louver options.

Product Overview

Type: Cable Suspended, Wall or Surface Direct 5W/ft, 10W/ft (other wattages available see p2) Wattage:

2700K, 3000K, 3500K, 4000K; Tunable White (2700K-5700K) Color Temp:

83 or 90+ typ. (2700K, 3000K, 3500K, 4000K) CRI:

90+ (Tunable White)

Dimming (wired): Static White Tunable White

0-10V, 1% dimming (standard) 0-10V TW, 1% dimming Lutron LDE1 Hi-lume® 1% DALI DT8, 1% digital dimming

Soft-On/Fade-to-Black DALI dimming, 1% dim

Enlighted Sensor TW Dimming (wireless): Enlighted Sensor

> Lutron Athena (integral Lutron Athena TW (integral wireless RF node)

wireless RF node)

PROJECT:

TYPE:

Fixture Summary (see following pages for more information)

Performance Chart (4' Fixture)

Nominal Wattage/Foot	Delivered Lumens	LPW	Color Temp-CRI
5	2343	121.3	3500K-83
10	4401	115.1	3500K-83

Data is based on 3500K-83 IES files available on website Data is based on 4' fixture with Performance Lens

Individual Runs: 2' - 8' (whole foot standard)

Continuous Runs: Available (whole foot standard)

Custom: Made to measure available (nearest 1/8" of field dimensions). Requires approval drawings. Added cost & lead time.

Electrical Data

		4'		8	·
Wattage Per Foot		System Watts	Amps	System Watts	Amps
5	120V	19.3	0.16	38.6	0.32
0	277V	19.3	0.07	38.6	0.14
10	120V	38	0.32	76.5	0.64
10	277V	38	0.14	76.5	0.28

Electronic multi-volt (120-277VAC), constant current LED driver

Standard Patterns

""	""	"[_]"	"	""	Wall to Ceiling	Custom*
Yes	Yes	Yes	Yes	Yes	No	Yes

^{*} Submit drawing, consult factory









Linea® 3.5" Direct

Linear Direct LED



PROJECT:

Ordering Information

LIN3.5D-A16. 120/277 3 4 5 6 8 9 2 10 11 1 7 Model Length 8 LIN3.5D-A161 (Length A) (Length C) (Length B) Optics Length A (used for) Length B (used for) Length C (used for) PL - performance lens (standard) - all patterns all patterns PU DL - designer lens - IND PR - 2 lengths P7

SLDW - straight blade louver, white aluminum, solid blades w/overlay

SLDB - straight blade louver, black, solid blades w/overlay

SLDS - straight blade louver, silver, solid blades w/overlay

Mounting

Pendant Mounting (aircraft cable suspension)

ASW10 - through ceiling tile or gyp board, white, 10' ASW20 - through ceiling tile or gyp board, white, 20' ASB10 - through ceiling tile or gyp board, black, 10' ASB20 - through ceiling tile or gyp board, black, 20'

ASW10T - over ceiling tee, white, 10' ASW20T - over ceiling tee, white, 20' ASBIOT - over ceiling tee, black, 10' ASB20T - over ceiling tee, black, 20

Wall Mount

WM - wall mount

Surface Mount

SM - surface mount

Wattage (per foot)

Standard: **5** - 5W/ft

10 - 10W/ft

Optional:

3 - 3W/ft (4' minimum length required)

4 - 4W/ft (4' minimum length required)

6 - 6W/ft

7 - 7W/ft

8 - 8W/ft

9 - 9W/ft

Color Temp-CRI

Static White:

27 - 2700K-83 279 - 2700K-90+ **30** - 3000K-83 309 - 3000K-90+

35 - 3500K-83 **40** - 4000K-83 **409** - 4000K-90+

359 - 3500K-90+

Tunable White:

white, 90 CRI

(2700K-5700K)

TW9-2757 - tunable

HW - high reflectance matte white

BT - black texture

ST - silver texture

For other RAL color, consult factory

Voltage 120/277

Configuration

- CON

- CUS

IND1 - individual fixture, 2' to 8' in 1' increments

CON - continuous run > than 8', specify to nearest foot

of 2

CUS - custom made to measure, +/- 1/8" of customer supplied field dimensions

Standard Patterns (see page 7 for details):

PLL - L left, (2) straights + (1) 90° corner, leg right

PLR - L right, (2) straights + (1) 90° corner, leg left

PU - U shape, (3) straight lengths + (2) 90° corners

PR - Rectangle, (4) straight lengths + (4) 90° corners

PZ - Z shape, (3) straight lengths + (2) 90° corners

Custom Patterns:

PC - please provide drawings and consult factory

10 Drivers/Controls

Wired - Static White:

0-10V - 1% analogue dimming, 120-277VAC, Dim to off when selected with wireless dimming control

HILUME-H-ECO - Lutron LDE1 Hi-lume® 1% Soft-On/ Fade-to-Black

DALI - DALI Dimming 120-277VAC, 1% dim

Wired - Tunable White:

0-10V TW - 1% dimming, multi-volt (120V-277V) constant current

DALI DT8 - 1% digital dimming, CCT control per DALI DT8, (120V-277V)

Wireless - Static White:

ENLS-SR - Enlighted sensor, energy metering

ENLS-010 - Enlighted sensor with controller unit

AWNR-WH-SR - Lutron Athena wireless node, RF only, white, D4i/DALI-2

AWNR-BL-SR - Lutron Athena wireless node, RF only, black, D4i/DALI-2

AWNR-WH-010 - Lutron Athena wireless node, RF only, white, O-10V

AWNR-BL-010 - Lutron Athena wireless node, RF only, black, 0-10V

AWNS-OCC-WH-SR - Lutron Athena wireless node, Occupancy & Daylight sensor, white, D4i/DALI-2

AWNS-OCC-BL-SR - Lutron Athena wireless node, Occupancy & Daylight

sensor, black, D4i/DALI-2

Wireless - Tunable White:

ENLS-SR-TW - Enlighted sensor, energy metering

AWNR-WH-SR-TW - Lutron Athena wireless node, RF only, white, D4i/DALI-2 AWNR-BL-SR-TW - Lutron Athena wireless node, RF only, black, D4i/DALI-2

AWNS-OCC-WH-SR-TW - Lutron Athena wireless node, Occupancy &

Daylight sensor, white, D4i/DALI-2

AWNS-OCC-BL-SR-TW - Lutron Athena wireless node, Occupancy & Daylight sensor, black, D4i/DALI-2

Options/Accessories

EMC-PF² - emergency circuit requires power feed located in last fixture section (for other locations consult factory)

PF² - Extra power feed for additional circuiting

EMB - emergency battery pack (not available for lengths under 4')

^{1 -} Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options.

^{2 -} Not available with IND (individual) configuration.

[†]The "A" refers to the sequential revision in a year and "XX" refers to the year of update. Updates coincide with improved performance while not changing the overall fixture aesthetic and are reflected in the published performance data. Please contact your Amerlux representative for explanations of changes

Linear Direct LED



PROJECT: TYPE:

Specifications

Application

Open office plan, conference rooms, corridors or any indoor space where the higher light levels of a direct ambient lighting system are required.

Construction

One piece extruded aluminum housing. Die-cast End Plates match fixture body finish. Die-formed, cold-rolled steel internal components are protected against rust and corrosion.

Optical

All lenses are snap-in, extruded acrylic, with a maximum length of 8'. Amerlux's proprietary acrylic lens provides excellent transmission while effectively concealing source image.

PL - Performance Lens provides high efficiency with controlled lens surface brightness (standard).

 $\ensuremath{\text{DL}}$ - Designer Lens provides flat even glow on lens. Best when lens is in direct or constant view.

Straight Blade Louver, a luminum, has 34" high blades, 1-1/2" on center.

SLDW - White Aluminum (light gray, appears white when lit)

SLDB - Black

SLDS - Silver

LED

Amerlux's boards and patented connector design with brand name LEDs enables Amerlux fixtures to have excellent thermal management and offer a 5 year warranty. Our LED binning is within 3 MacAdam ellipse. Boards are configured for maximum flexibility resulting in even illumination no matter what the fixture layout. LED boards are easily replaced in the field with just a Phillips screw driver.

	Static White	Tunable White
CCT:	2700K, 3000K, 3500K, 4000K	2700K-5700K
CRI:	83 or 90+ typical	90+ (92 typ)
R9:	16 @ CRI 83; >50 @ CRI 90+	>50

Life: 50,000+ hr., > 70% of initial lumens (L70)

Electrical

Wiring: Individual and "Beginning of Run" (BOR) fixtures are prewired with power cord. All configurations have quick connect power harnesses for row connections.

Standard Wattage: 5W/ft, 10W/ft.

Optional Wattages: 3W/ft, 4W/ft, 6W/ft, 7W/ft, 8W/ft, 9W/ft. (3W & 4W have a minimum length of 4'). For other wattages consult factory. Emergency circuit via remote inverter or auxiliary emergency power supply (by others).

This product complies with IEEE C62.41 for surge endurance up to 2.5KV. Amerlux® recommends using additional surge protection with this unit (supplied by others), surge and ove voltage damage is not covered under warranty.

EMC-PF - Emergency circuit requires power feed to be located in last fixture section for continuous runs. For other locations consult factory. Not available for individual (IND) configuration.

PF - Extra power feed for additional circuiting. Not available for individual (IND) configuration.

Finish

All painted surfaces are premium powder coated baked on for maximum durability and color stability.

HW - High reflective matte White

BT - Black Texture

ST - Silver Texture

For special paint colors supply RAL and/or actual paint chip for factory consultation

Configurations/Lengths

 $\mbox{\bf IND}$ - Individual fixtures are made of single standard lengths of 2 ft to 8 ft (in 1' increments). These are stand alone fixtures with matching End Caps, supplied with the mounting hardware. Lengths less than 4' may have restrictions based upon wattage, lengths, drivers or other options. $\mbox{\bf CON}$ - Continuous runs, >8', specified to nearest whole foot length in 1' increments. Runs made from standard lengths have End Caps at the beginning and end of run. Runs >60' may require second power feed. Each Housing has factory installed alignment pins. Mating fixtures are easily aligned and joined with "catch and latch" mechanism out of sight, on top of the Housing. Wiring is made fast and positive with molded quick connectors.

CUS - Custom made to measure runs are made to nearest 1/8" of customer supplied field measurements or drawings. Custom lengths use the same hardware for hairline joining.

PXX- Standard Patterns consist of 90° corners with standard lengths (4' to 8' in 1' increments), continuous runs or made to measure lengths. Depending upon complexity of the pattern drawings may be required from the Customer. If ordering please give overall lengths.

A'-B'-PLL - L Left - (1) 90° Corner 2 segments. Specify overall segments: A' & B'

 $\mbox{\sc A'-B'-PLR}$ - L Right - (1) 90° Corner 2 segments. Specify overall segments: A' & B'

 $\mbox{A'-B'-PR}$ - Rectangle - (4) 90° Corners joining 4 segments. Specify overall segments: A' & B'

A'-B'-C'-PU - U shape - (2) 90° Corners joining 3 segments. Specify overall segments: A', B', & C'

A'-B'-C'-PZ - Z shape - (2) 90° Corners joining 3 segments. Specify overall segments: A', B', & O'

See page 6 for layouts.

 ${\bf PC}$ - Custom Patterns may use standard lengths, Made To Measure, 90° or other corners (some limitations). Please provide drawing and consult factory.

Mounting

The Linea 3.5 Direct is intended to be pendant, wall, or surface mounted in continuous rows. Standard or custom patterns available. **LIN3.5D-A16...ASW10** - Direct pendant installed in center of ceiling tile or gypsum board ceiling, (standard) i.e. ASW10. If mounting on a Tee grid runner add, **T** i.e. ASW10T

Cable Suspension: Cable is stranded stainless steel wire. All fittings are protected against rust and corrosion. Canopies are 5" x 1/4" die formed painted steel. Adjustment mechanism allows for infinite height adjustment. Amerlux recommends the required feed and non-feed suspensions based upon length and electrical options. Options include: color of canopy and power cord (black or white), length 10' or 20', and mounting condition, in center of ceiling tile and in gypsum board ceiling (standard) i.e. ASW10. Or if canopy is installed on a grid Tee runner add, **T** i.e. ASW10.T

LIN3.5D-A16....WM - Direct Wall Mounted using steel cleat bracket attached to fixture housing and wall bracket with set screws. Two bracket assemblies are used for each length under 8'. A third center bracket may be recommended. J box required at feed locations. **LIN3.5D-A16...SM** - Direct Surface Mounted - Housing needs to be attached to solid structure above. Mounting hardware by others.

Options

EMB - Emergency battery pack - 10W output power, 90 min of illumination time, up to 1300 lm of initial light output. Illuminated test-switch/charging indicator light is provided. Wattage consumption by EM: 2.5W/ft (4ft fixture), 1.66W/ft (6ft fixture), 1.25W/ft (8ft fixture). Request can be made to light up 4ft section on 8ft unit.

Certifications

Approved to UL standards for damp locations as tested by CSA Intended for indoor use only

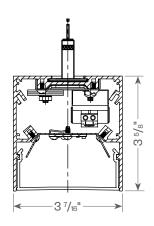
Warranty

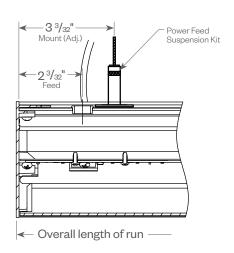
Amerlux's 5 year limited warranty. Please consult Amerlux website for details.



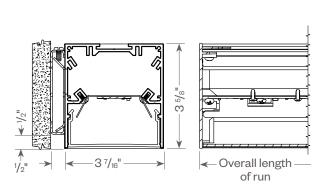
LINEA 3.5" DIRECT

Linear Direct LED

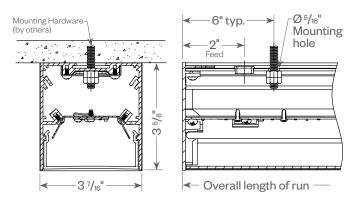




LINEA 3.5" DIRECT WALL MOUNT



LINEA 3.5" DIRECT SURFACE MOUNT

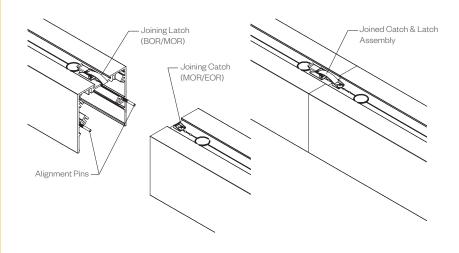


OPTIONAL LOUVER



TOOLLESS JOINING

Align fixture via alignment pins & secure fixture with catch & latch system

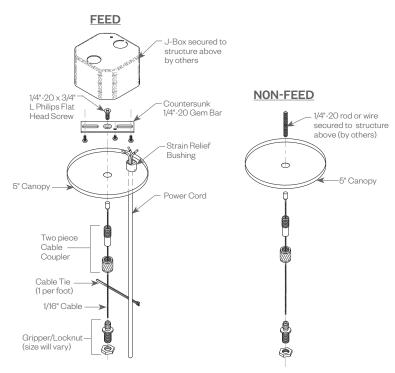




CABLE KIT SUSPENSION OPTIONS:

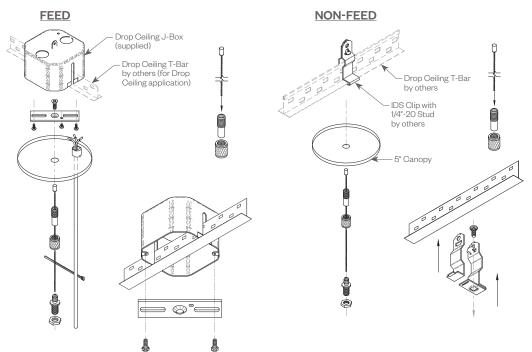
Linear Direct LED

CEILING OR GYPSUM BOARD (ASW10, ASW20, ASB10, ASB20)



Cat#	Length	Cord/Canopy	Application
ASW10	10'	white/white	ceiling tile/gypsum
ASW20	20'	white/white	ceiling tile/gypsum
ASB10	10'	black/black	ceiling tile/gypsum
ASB20	20'	black/black	ceiling tile/gypsum
ASW10T	10'	white/white	ceiling tee
ASW20T	20'	white/white	ceiling tee
ASB10T	10'	black/black	ceiling tee
ASB20T	20'	black/black	ceiling tee

TEE GRID OR SCREW SLOT (ASW10T, ASW20T, ASB10T, ASB20T)





PROJECT:

OPTIONAL SENSOR/RF NODE:

Amerlux® has partnered with control companies to create building environments that are safer, and smarter, than ever before. At the heart of our partnership is intelligent RF nodes and Smart Sensor, the most advanced digital wireless communication and sensors available today. Integrated into Amerlux products.

Minimum run length is 3' for wireless sensor and RF node.

INDIVIDUAL (MIN 3' LENGTH)



LINEA 3.5" PATTERNS:

Standard Patterns

All corners are standard 90°, standard length legs.

Use standard lengths: 4' min to 8' in 1 foot increments.

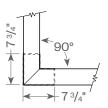
Continuous runs must be the same length in pairs for closed configuration.

Custom Patterns

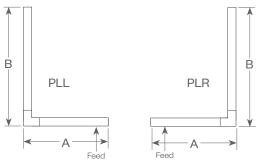
Please provide drawings of your configuration.

Made to Measure: +/- 1/8", consult factory.

PC - custom pattern, please provide drawings and consult factory



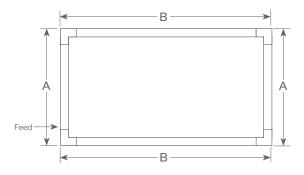
Linea 3.5 Lens Mitered Lens



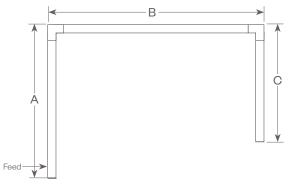
PLL - L Left, (2) straights + (1) 90° corner, leg right PLR - L Right, (2) straights + (1) 90° corner, leg left

Provide overall lengths: A' & B'

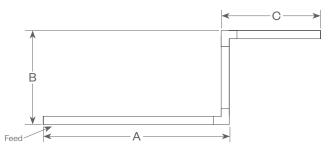
Nomenclature: A-B-PLL A-B-PLR



PR - Closed Rectangle, (4) straight lengths + (4) 90° corners Provide overall lengths: A' & B' Nomenclature: A-B-PR



PU - Open U, (3) straight lengths + (2) 90° corners Provide overall lengths: A', B' & C' Nomenclature: A-B-C-PU



PZ - Open Z, (3) straight lengths + (2) 90° corners Provide overall lengths: A', B' & C' Nomenclature: A-B-C-PZ

Linea® 3.5" Direct

Linear Direct LED



PROJECT:

FIXTURE DATA:

MULTIPLYING FACTORS: (Multiplying Factor is based on 3000K-83120V IES file on website)

Wattage:	ЗW	4W	5W	6W	7W	8W	9W	10W
Factor:	0.31	0.42	0.53	0.63	0.72	0.81	0.90	1.0

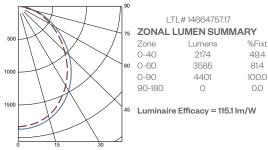
CCTF	TW9				
CRI	2700K	3000K	3500K	4000K	(@3500K)
83	0.92	0.97	1.0	1.02	-
90	0.81	0.84	0.86	0.89	0.86

	Louver		
Finish:	SLV	BLK	
Factor:	1.0	.65	

LINEA 3.5" PERFORMANCE LENS 10W 3500K 4FT

Total Watts: 38 Total Lumens: 4401

Source: 128 White LED's



COEFFICIENTS OF UTILIZATION

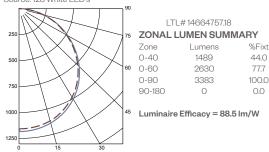
Effective Floor Cavity Reflectance 20 %						
RC		8	0			
RW	70	50	30	10		
RCR						
0	119	119	119	119		
1	109	105	100	97		
2	100	92	85	80		
3	91	81	73	67		
4	84	72	64	57		
5	77	65	56	50		
6	72	59	50	44		
7	67	53	45	39		
8	62	49	41	35		
9	58	45	37	32		
10	55	42	34	29		

Note: Values are expressed as percent of total lumen output delivered to the task surface.

LINEA 3.5" DESIGNER LENS 10W 3500K 4FT

Total Watts: 38 Total Lumens: 3383

Source: 128 White LED's



COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

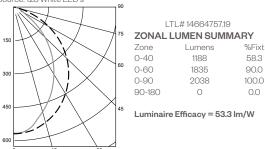
RC		8	0	
RW	70	50	30	10
RCR				
0	119	119	119	119
1	108	104	99	95
2	98	90	83	77
3	90	79	71	64
4	82	70	61	54
5	75	62	53	46
6	70	56	47	40
7	64	51	42	36
8	60	46	38	32
9	56	43	34	29
10	53	39	31	26

Note: Values are expressed as percent of total lumen output delivered to the task surface.

LINEA 3.5" STRAIGHT BLADE LOUVER 10W 3500K 4FT

Total Watts: 38 Total Lumens: 2038

Source: 128 White LED's



COEFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 20%

RC		8	0	
RW	70	50	30	10
RCR				
0	119	119	119	119
1	111	107	103	100
2	102	95	90	85
3	95	86	79	73
4	88	78	69	63
5	81	70	62	56
6	75	63	55	50
7	70	58	50	45
8	66	53	46	40
9	62	49	42	37
10	58	46	38	34

Note: Values are expressed as percent of total lumen output delivered to the task surface.



STATIC WHITE - DIMMING COMPATIBILITY:

Amerlux® Linea fixtures are compatible with all major dimming protocols prevalent in the United States. Please see below for general compatibilities and wiring diagrams. Amerlux recommends testing your unique dimming configuration as the exact full configuration (Dimmer, Fixture Quantity, Voltage, etc) may affect dimming performance.

--- NOTE: INFORMATION BELOW IS FOR WIRED DIMMERS ONLY. FOR WIRELESS DIMMERS, CONSULT FACTORY ---

0-10V - DIMMING (Standard)

Integrates into a variety of building management and daylighting controls

Notes:

• 120V or 277V*

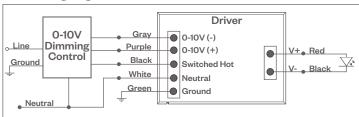
Linear Direct LED

- Dims down to 1% light output
- · Requires interface to turn off power to driver
- Consult Dimming manufacturer for installation instructions - DO NOT SHARE NEUTRALS!

Compatible Dimmers[†]:

wall Box		
Lutron:	Wattstopper:	Leviton:
Diva - DVSTV	ADF-120277	Renoir II
Maestro - MS-Z101		
Nova-T - NTSTV-DV		

0-10V Wiring Diagram



Center System

Lutron Grafixk Eye with GRX-TV1 Interface

LUTRON LDE1 DIMMING

Integrates into Lutron EcoSystem building management

Notes:

- 120VAC or 277VAC*
- Dims down to 1% Soft-On/Fade-to-Black
- EcoSystem Control
- Consult Dimming manufacturer for installation instructions DO NOT SHARE NEUTRALS!

Compatible Dimmers[†]:

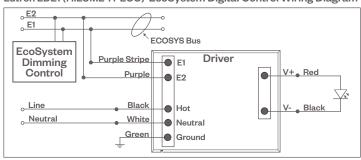
Lutron ECO System

Pow Pak Dimming Modules Energi Savr Node Grafik Eye QS/Homeworks QS Control Unit Quantum Hub Homeworks QS/My Room

Central System

Lutron EcoSystem compatible controls

Lutron LDE1 (HILUME-H-ECO) EcoSystem Digital Control Wiring Diagram



Notes:

- * Driver is 277VAC dimmable with appropriate dimmer (by others). All provided wiring diagrams show 120VAC wiring colors and method. Please refer to 277VAC dimmer installation instructions for 277VAC wiring diagrams.
- † The absence of a dimmer from the lists above does not imply incompatibility. Please consult factory for compatibility inquiries.



PROJECT:

STATIC WHITE - DIMMING COMPATIBILITY:

Amerlux® Linea fixtures are compatible with all major dimming protocols prevalent in the United States. Please see below for general compatibilities and wiring diagrams. Ameriux recommends testing your unique dimming configuration as the exact full configuration (Dimmer, Fixture Quantity, Voltage, etc) may affect dimming performance.

--- NOTE: INFORMATION BELOW IS FOR WIRED DIMMERS ONLY. FOR WIRELESS DIMMERS, CONSULT FACTORY ---

DALI - DALI DIMMING 120V-277V

Digital control protocol allows individual fixture control

Notes:

- 120VAC 277VAC*
- · Dims down to 1% light output in most cases

Compatible Dimmers[†]:

Wall Box

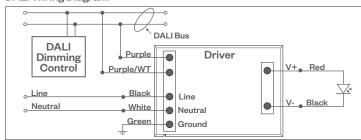
Leviton CD250 Controller

Center System

Dynalite

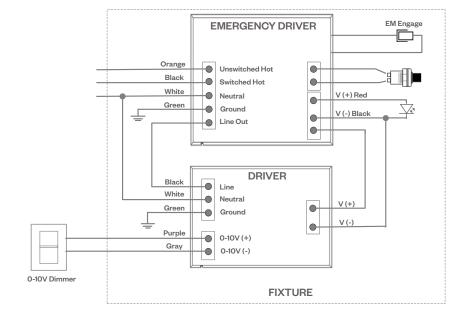
Fifth Light

DALI Wiring Diagram



EMERGENCY FIXTURE WITH BUILT-IN BATTERY PACK (EMB) WIRING:

Note: EMB not available on lengths under 4'.

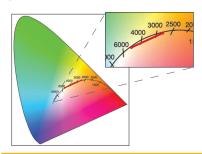


Notes:

- * Driver is 277VAC dimmable with appropriate dimmer (by others). All provided wiring diagrams show 120VAC wiring colors and method. Please refer to 277VAC dimmer installation instructions for 277VAC wiring diagrams.
- † The absence of a dimmer from the lists above does not imply incompatibility. Please consult factory for compatibility inquiries.



TUNABLE WHITE



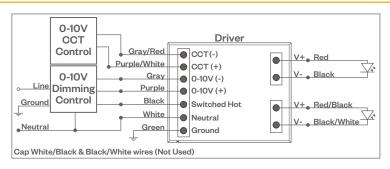
Tunable White range from 2700K-5700K, 90 CRI. See wiring diagrams below.

TUNABLE WHITE - DIMMING COMPATIBILITY:

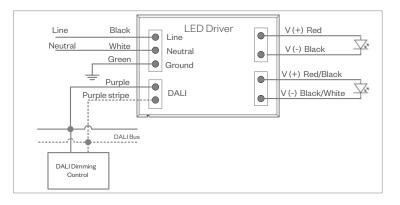
Amerlux® Linea fixtures are compatible with all major dimming protocols prevalent in the United States. Please see below for general compatibilities and wiring diagrams. Amerlux recommends testing your unique dimming configuration as the exact full configuration (Dimmer, Fixture Quantity, Voltage, etc) may affect dimming performance.

--- NOTE: INFORMATION BELOW IS FOR WIRED DIMMERS ONLY. FOR WIRELESS DIMMERS, CONSULT FACTORY ---

0-10V Wiring Diagram



DALI DT8 Wiring Diagram



Notes:

- * Driver is 277VAC dimmable with appropriate dimmer (by others). All provided wiring diagrams show 120VAC wiring colors and method. Please refer to 277VAC dimmer installation instructions for 277VAC wiring diagrams.
- † The absence of a dimmer from the lists above does not imply incompatibility. Please consult factory for compatibility inquiries.