

Hornet® HP Select

Square Adjustable Downlight



PROJECT:

TYPE:

Features

The Hornet HP Select square adjustable series provides powerful yet comfortable accent lighting for retail and commercial spaces without compromising on budget or design. It delivers over 2000 lumens in a variety of beam distributions and features quiet optics for visually pleasing aesthetics. The Hornet HP Select offers trimmed, trimless, or millwork trim options and is perfect for both retrofit and new construction projects.



Product Overview

Type: Recessed Square Adjustable Downlight
Wattage: 10W, 12W, 16W, 21W
Color Temp: 2700K, 3000K, 3500K, 4000K
CRI: 90+ typ.
Dimming: Wired: TRIAC & ELV, Hi-lume®, 0-10V, DALI
Wireless: Lutron Athena RF node, BubblyNet Bluetooth
UGR: <5 overall (see pg 6 for detailed values)

Certifications



Fixture Summary

Performance Data

Watts	Delivered Lumens	LPW	CBCP	Color Temp-CRI
10	945	94.5	3415	3000K-90+
12	1166	97.2	4214	3000K-90+
16	1609	100.6	5812	3000K-90+
21	2011	96.6	7265	3000K-90+

Data is based on Medium Flood optic, 3000K-90+ 120V IES files available on website.
All wattages and LPW's include 2W for thermal protector.

Electrical Data

	10W		12W		16W		21W	
Voltage	System Watts	Amps	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	10	0.08	12	0.10	16	0.13	21	0.18
277V	10	0.04	12	0.04	16	0.06	21	0.08

Electronic constant current LED driver.

Includes thermal protector, 2W power consumption.

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Ordering Information - Housing/Frame

1	2	3	4	5	6
1 Model	2 Style	3 Wattage	4 Voltage	5 Driver (for non-dimming, select LE/TE option)	6 Options/Accessories
<u>For New Construction</u> HSE-S-NC (New Construction) HSE-S-CP (Chicago Plenum (CCEA) housing) HSE-S-IC (Insulated Ceiling/air tight, 16W max) <u>For Existing Ceilings</u> HSE-S-REM (Remodeler)	T trimmed TL trimless MWK^R millwork (for 1/2" - 1 1/16" ceiling thickness) MWK1^R millwork (for 3/4" - 1 1/2" ceiling thickness) MWK2^R millwork (for 1 1/2" - 2" ceiling thickness) ^RNot available for use with Remodeler model	10 12 16 21* <i>* Not available for use with IC housing</i>	120 277 120/277 (for use with IC housing only)	<u>Wired</u> LE/TE TRIAC/ELV dimming HILUME-H-ECO - Lutron LDE1 Hi-lume® 1% dim Soft-On/Fade-to-Black 0-10V 0-10V dimming, 1% dim DALI DALI dimming, 1% dim <u>Wireless</u> AWN-R-010* Lutron Athena wireless node, RF only, 0-10V BN-BT-010* BubblyNet Bluetooth node, 0-10V <i>* Consult factory for lead time.</i>	EM - emergency battery pack with remote test switch (not available for use with REM, CP or IC options) HB49 - hanger bars from min 29" to max 49" (not available for use with REM options) Note: 26" hanger bars are included as standard. Choose HB49 option above for larger mounting spaces only.

Ordering Information - Trim

1	2	3	4	5	6
1 Model	2 Style	3 Finish	4 Beam Spread	5 Color Temp	6 Options/Accessories
HSE-SA (adjustable downlight)	T trimmed TL trimless MWK millwork	<u>Trimmed</u> MBW matte black, white flange MWW matte white, white flange SLVW matte silver, white flange MBB matte black, black flange SLVS matte silver, silver flange <u>Trimless/Millwork</u> MB matte black MW matte white SLV matte silver	20D narrow flood 20° 30D medium flood 30° 40D flood 40° 50D wide flood 50° For 10° super narrow spot distribution, see HSE-SA-SNSP spec sheet.	279 2700K-90+ 309 3000K-90+ 359 3500K-90+ 409 4000K-90+	HEX hexcell louver SOL solite beam softening lens

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Specifications

Application

Retail and commercial accent lighting

Construction

20 ga. galvanized steel frame
18 ga. galvanized steel splice housing and hanger brackets (*not for Remodeler version*)
Cast aluminum plaster frame with perforated face (*for trimless version only*)
Die-cast optical housing and trim
Die-cast heat sink

Optical

Beam Spreads: 20°, 30°, 40°, 50°

LED

Color Temp Options: 2700K, 3000K, 3500K, 4000K
CRI: 90+ typ.
R9 Values: 55 (92 CRI)
Binning: 3 MacAdam (SDCM)
Life: 50,000+ hrs, > 70% of initial lumens at 50,000 hrs

Electrical

Wattage: 10W, 12W, 16W, 21W
Electronic constant current LED driver, 120/277VAC input
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 over voltage damage is not covered under warranty.
Note: Drivers are universal but thermal protector is voltage specific

Drivers

LE/TE - Leading Edge, TRIAC, forward phase/Trailing Edge, ELV, reverse phase
0-10V, Lutron and DALI systems available
See pages 10-12 for more dimming information

Finish

Powder coat paint/wet paint
Consult factory for custom finishes

Mounting

26" Hanger bars included (*except for Remodeler versions*)
Optional **HB49** - hanger bars from min 29" to max 49" available
Trimmed Fixture:
For use in grid or sheetrock ceilings, 5/8" - 2" standard
Trimless Fixture:
For use in sheetrock ceilings, max ceiling thickness 5/8"
Millwork Fixture:
Millwork extension collars are based on ceiling material specifications and thickness. Provides flush trim appearance level with ceiling material.
Max thickness 2"
Not available for use with Remodeler model

Certifications

CSA damp as tested to UL 1598 standards
CP - Chicago Plenum (CCEA) option
IC/AT rated (16W max)
Damp location

Warranty

5 year limited warranty

Emergency Battery Pack (EM)

Powers fixture at 5.1 watts (*approx. 400 lm*) for 90 minutes (*not for use with CP, IC or REM versions*)

Optional 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, the most advanced digital wireless communication available today. Integrated into Amerlux products.



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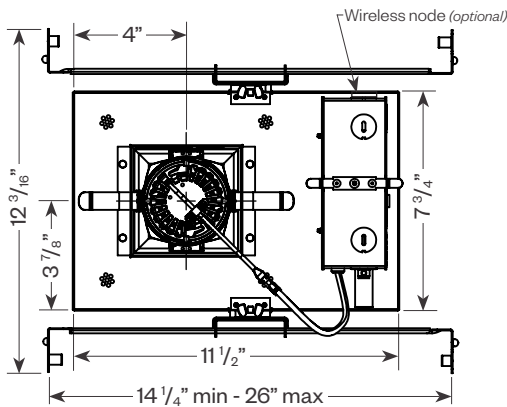
Square Adjustable Downlight



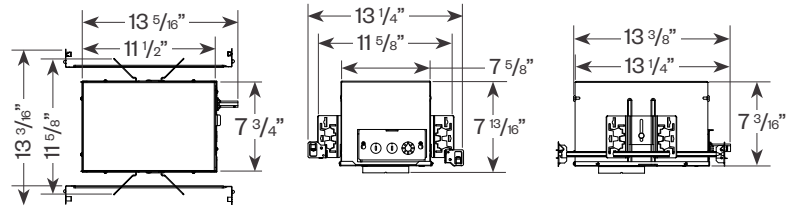
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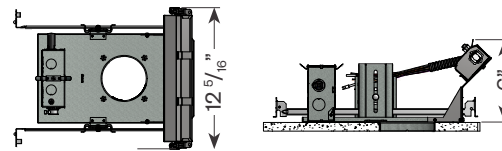
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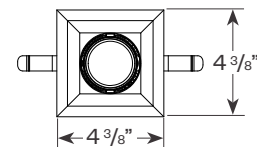
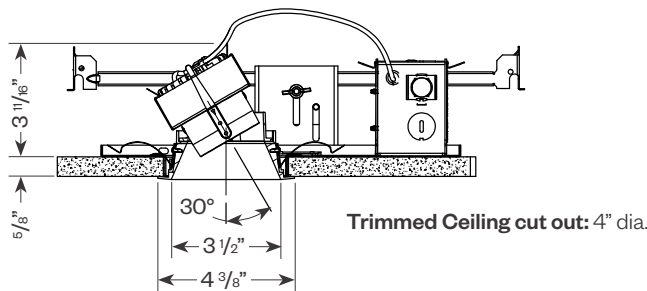
Optional CP or IC/AT housing



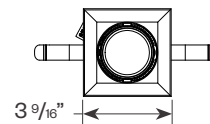
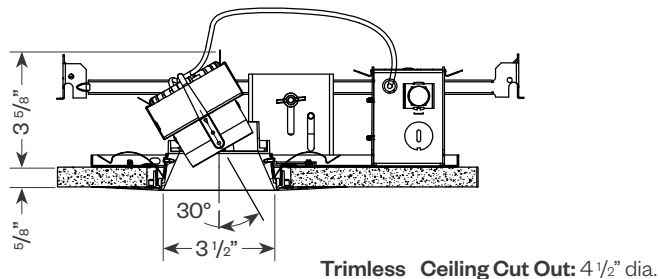
Emergency Battery Pack (EM) option



Trimmed

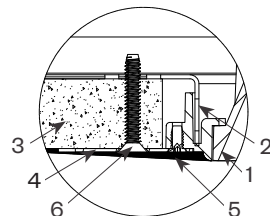


Trimless



Plaster Frame Installation Detail (for trimless fixture only)

1. Reflector Trim
2. Aperture plate
3. Ceiling 5/8"
4. Cast Aluminum Plaster Frame
5. Plaster Skim Coat (by others)
6. 6-32 Type F Thread Cutting Screw



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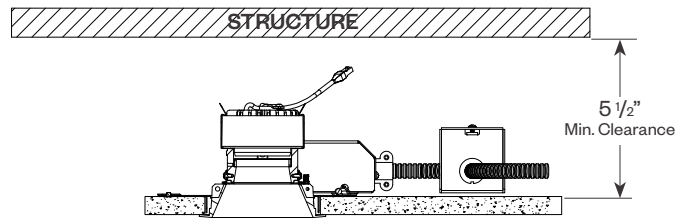
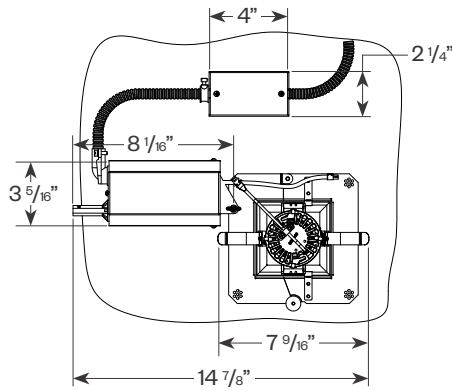
Square Adjustable Downlight



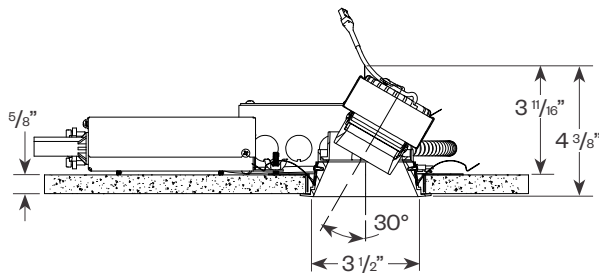
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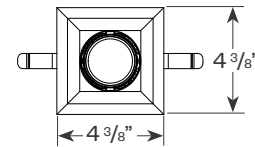
Product Details - Remodeler



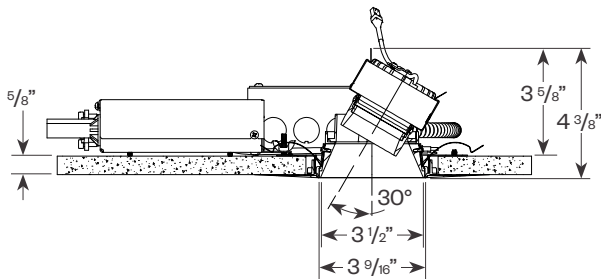
Trimmed



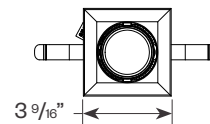
Ceiling Cut Out: 4" sq.



Trimless

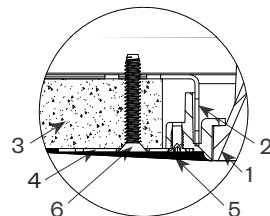


Ceiling Cut Out: 4" sq.



Plaster Frame Installation Detail (for trimless fixture only)

1. Reflector Trim
2. Aperture plate
3. Ceiling 5/8"
4. Cast Aluminum Plaster Frame
5. Plaster Skim Coat (by others)
6. 6-32 Type F Thread Cutting Screw



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Performance Data

Multiplying Factors: (Multiplying Factor is based on 3000K-90+ 120V IES file on website)

Wattage:	10W	12W	16W	21W
Factor:	0.47	0.58	0.80	1.0

Beam:	20D	30D	40D	50D
UGR:	<5	<1	<4	<5

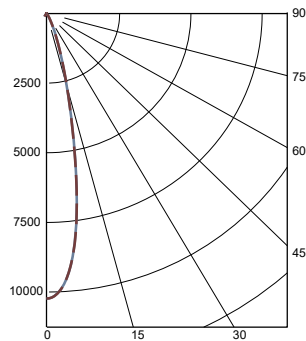
Tested with Matte White Finish.

UGR values calculated using UGR table method.

CCT:	2700K-90+	3000K-90+	3500K-90+	4000K-90+
Factor:	1.005	1.000	1.016	1.029

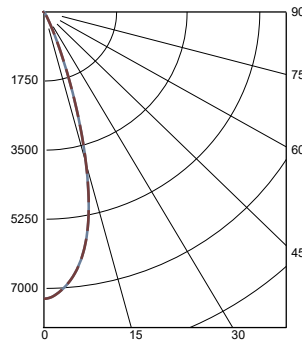
21W LED, 3000K-90+

Narrow Flood (20°)
LTL # 15432052.01
Lumens: 1779 lm; 85.5 lm/W



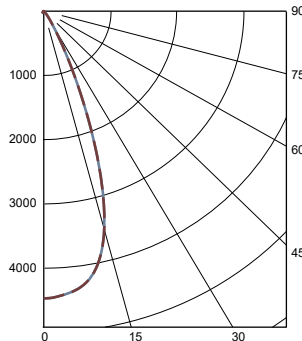
Candelas at Nadir	
Deg	Candela
0	10240
5	9128
15	2508
25	436
35	94
45	14

Medium Flood (30°)
LTL # 15432052.02
Lumens: 2011 lm; 96.6 lm/W



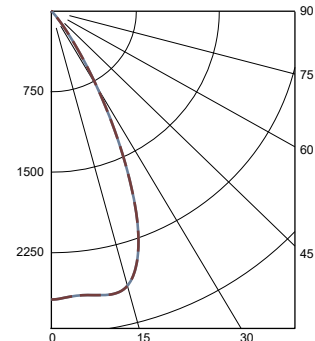
Candelas at Nadir	
Deg	Candela
0	7265
5	6885
15	3987
25	497
35	65
45	9

Flood (40°)
LTL # 15432052.03
Lumens: 1935 lm; 92.9 lm/W



Candelas at Nadir	
Deg	Candela
0	4469
5	4400
15	3481
25	990
35	133
45	14

Wide Flood (50°)
LTL # 15432052.04
Lumens: 1926 lm; 92.4 lm/W



Candelas at Nadir	
Deg	Candela
0	2686
5	2660
15	2642
25	1558
35	308
45	20

Application Data

Notes and Definitions:

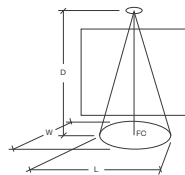
Beam spread is to 50% center beam candlepower (CBOP).

D=Distance to floor or wall.

FC=Footcandles on floor or wall at center beam aiming location.

L=Effective Visual Beam length in feet (50% of maximum footcandle level).

W=Effective Visual Beam width in feet (50% of maximum footcandle level).



Narrow Flood (20°)



0° Aiming Angle
Horizontal
Footcandles

D	FC	L	W
5.0'	313	2.1	2.1
7.5'	162	3.0	3.0
10.0'	96	3.7	3.7
12.5'	63	4.7	4.7

Medium Flood (30°)



0° Aiming Angle
Horizontal
Footcandles

D	FC	L	W
5.0'	256	2.8	2.8
7.5'	122	4.0	4.0
10.0'	70	5.4	5.4
12.5'	45	6.7	6.7

Flood (40°)



0° Aiming Angle
Horizontal
Footcandles

D	FC	L	W
5.0'	169	3.3	3.3
7.5'	77	5.0	5.0
10.0'	44	6.8	6.8
12.5'	28	8.4	8.4

Wide Flood (50°)



0° Aiming Angle
Horizontal
Footcandles

D	FC	L	W
5.0'	104	4.5	4.5
7.5'	47	6.7	6.7
10.0'	27	8.9	8.9
12.5'	17	11.1	11.1



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Dimming Compatibility

Amerlux® Hornet® 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 ---

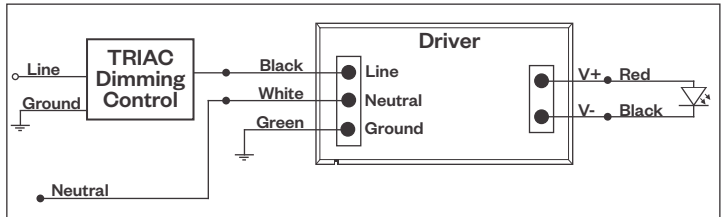
TRIAC (Forward Phase) DIMMING (Standard)

Utilizes standard TRIAC dimmers that are in wide use in installations across the US. Best for retrofit applications where TRIAC dimmers are installed.

Notes:

- 120VAC or 277VAC*
- Dims down to 5% light output (most cases)
- Consult Dimming manufacturer for installation instructions - **DO NOT SHARE NEUTRALS!**
- Must meet dimmer Minimum Load Requirements per dimming manufacturer

TRIAC Wiring Diagram



Compatible Dimmers†:

Wall Box (TRIAC 120VAC)	Central System
Lutron "Diva"	Lutron "GP" Panel
Lutron "Nova-T"	Lutron Grafik Eye QS
Lutron "Maestro"	
Lutron "Skylark"	

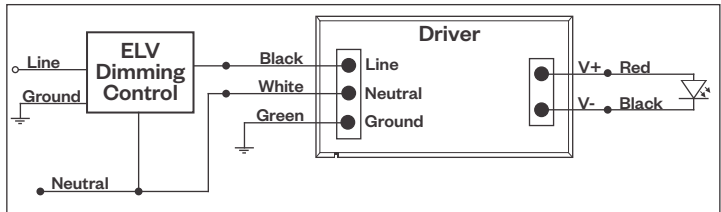
ELV - Electronic Low Voltage (Reverse Phase) DIMMING (Standard)

Utilizes specialized "ELV" dimmers.

Notes:

- 120VAC or 277VAC*
- Dims down to 5% light output (most cases)
- Consult Dimming manufacturer for installation instructions - **DO NOT SHARE NEUTRALS!**
- Must meet dimmer Minimum Load Requirements per dimming manufacturer

ELV Wiring Diagram



Compatible Dimmers†:

Wall Box (ELV 120VAC)	Wall Box (ELV 277VAC)	Central System
Lutron "Diva"	Leviton Revoir II AWSMT-E	Lutron "GP" Panel with PHPM-PA 120/277VAC
Lutron "Nova-T"		Lutron Grafik Eye QS with PHPM-PA 120/277VAC
Lutron "Maestro"		
Lutron "Skylark"		
Leviton "Surslide"		
Leviton "Vizio"		

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.



Delta Intelligent Building Technologies

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Amerlux reserves the right to change details that do not affect overall function and performance.
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Dimming Compatibility *(continued)*

Amerlux® Hornet® 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 ---

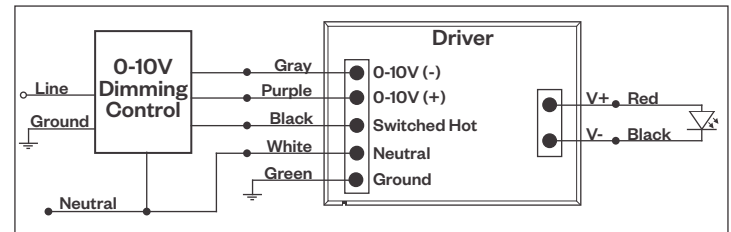
0-10V DIMMING

Integrates into a variety of building management and daylighting controls

Notes:

- 120VAC or 277VAC*
- Dims down to 1% light output
- Requires interface to turn off power to driver
- Consult Dimming manufacturer for installation instructions - **DO NOT SHARE NEUTRALS!**

0-10V Wiring Diagram



Compatible Dimmers*:

Wall Box	Central System
Lutron "Diva" - DVSTV	Lutron Grafik Eye with GRX-TVI Interface
Leviton Renoir II 0-10V	

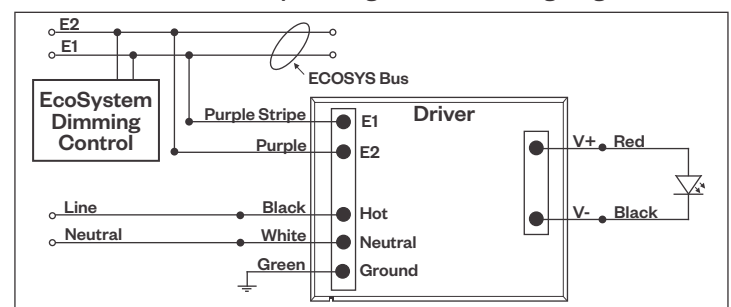
LUTRON LDE1 DIMMING

Integrates into Lutron EcoSystem building management

Notes:

- 120VAC or 277VAC*
- Dims down to 1% light output
- EcoSystem Control
- Consult Dimming manufacturer for installation instructions - **DO NOT SHARE NEUTRALS!**

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



Compatible Dimmers*:

Lutron ECO System	Central System
Pow Pak Dimming Modules	Lutron EcoSystem compatible controls
Energj Savr Node	
Grafik Eye QS/Homeworks	
QS Control Unit	
Quantum Hub	
Homeworks QS/My Room	

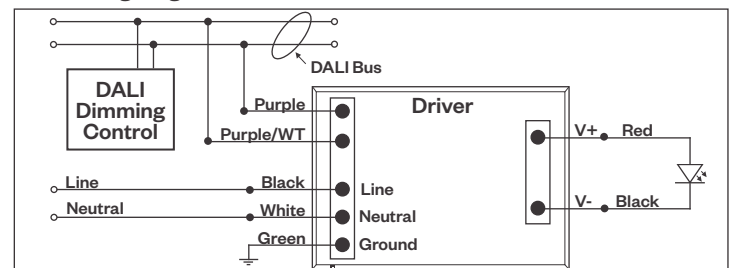
DALI DIMMING

Digital control protocol allows individual fixture control

Notes:

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

DALI 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.

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Emergency Battery Pack

Wiring Diagram

