Hornet[®] HP

Square Lensed Downlight/ Wall Wash



Downlight



Features

Hornet Lensed Downlights are the perfect choice for all general lighting needs. Available in Round or Square apertures, these fixtures meet the needs of commercial and hospitality markets. Optional Solite lensing provides whisper quiet aesthetics. Also available in knife-edge trimless, remodeler or millwork. Complementing Hornet Lens Wall Wash fixture available.

Product Overview

Type: Recessed Square Lensed Downlight/Wall Wash

Wattage: 9, 12, 16, 23, 27, 30

Color Temp: 2200K, 2700K, 3000K, 3500K, 4000K CRI: 83 typ. (2700K, 3000K, 3500K, 4000K)

90+ typ. (2200K, 2700K, 3000K, 3500K, 4000K)

CrispWhite & 3K Class A available

Dimming: TRIAC & ELV (120/277VAC) - 5% Dim

Lutron LDE1 Hi-lume® 1% Soft-On/Fade-to-Black (120/277VAC)

0-10V (120/277VAC) - 1% Dim DALI (120/277VAC) - 1% Dim

PROJECT:



Trimless version



Millwork version



Wall Wash







TYPE:

Performance Chart

	HDL-HP-SLD			HD	L-HP-SL	.W	
Watts	Delivered Lumens	LPW	СВСР	Color Temp	Delivered Lumens	LPW	Color Temp
9	832	92.4	1179	3000K-83	798	88.6	3000K-83
12	1109	92.4	1572	3000K-83	1063	88.6	3000K-83
16	1471	91.9	2085	3000K-83	1411	88.2	3000K-83
23	2133	94.5	3023	3000K-83	2045	90.6	3000K-83
27	2496	92.4	3537	3000K-83	2454	90.9	3000K-83
30	2773	92.4	3930	3000K-83	2659	88.6	3000K-83

Data is based on 3000K-83 IES files available on website

Data is based on 50SOL optic.

All wattage and LPW includes 2W thermal protector

Electrical Data

	9W		12W		16W	
	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	9.8	0.08	11.9	0.10	15.2	0.13
277V	9.8	0.04	11.9	0.04	15.2	0.06
	23W		27W		30W	
	System Watts	Amps	System Watts	Amps	System Watts	Amps
120V	22.8	0.19	27.3	0.23	32	0.27

Electronic constant current LED driver

Includes thermal protector, 2W power consumption





PROJECT:

Housing/Frame Ordering Information

1 2 3 4 6 5

<u>Model</u>

For New Construction

HDL-HP-S-NC-A17[†] (New Construction)

HDL-HP-S-CP-A17[†] (Chicago Plenum (CCEA) housing)

HDL-HP-S-IC-A17^{†T24} (Insulated Ceiling/air tight, 16W max)

For Existing Ceilings

HDL-HP-S-REM-A17[†] (Remodeler)

<u>Style</u> 2

T - trimmed

TL - trimless

MWKRT - millwork (for 1/2" - 11/16" ceiling thickness)

^R Not available for use with Remodeler model

[†] For SLD Trim consult factory for use in ceilings thicker than 11/16"; For SLW Trim max ceiling thickness is 11/16"

<u>Wattage</u>

9

12

16^{⊤24} 23^{††}

27^{††}

30^{††}

** Not available for use with IC housing

Voltage

120

277

120/277 (for use with IC housing only)

Driver (for non-dimming, select LE/TE option)

LE/TE^{T24} - TRIAC/ELV dimming

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

Fade-to-Black

0-10V^{T24} - 0-10V dimming, 1% dim

DALI - DALI dimming, 1% dim

Options/Accessories

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)

Trim Ordering Information

1 2 3 4 5 6

Model

HDL-HP-SLD-A17[†] (lensed downlight)

HDL-HP-SLW-A17[†] (lensed wall wash)

<u>Style</u>

T - trimmed

TL - trimless

MWK - millwork (SLW trim max 3/4" thick millwork)

<u>Finish</u> 3

Trimmed

Trimless/Millwork

MBW - matte black, white flange MWW - matte white, white flange MB - matte black MW - matte white SLV - matte silver

SLVW - matte silver, white flange MBB - matte black, black flange

SLVS - matte silver, silver flange

Color Temp

83 CRI 90+ CRI^{T24}

30SOL - 30° beam with solite lens

50SOL - 50° beam with solite lens 65SOL - 65° beam with solite lens 75SAT - 75° beam with satin ice lens

27 - 2700K-83 229 - 2200K-90+ **30** - 3000K-83

Beam Spreads (not required with SLW version)

CRISP* - CrispWhite 3CLA* - 3K Class A 279 - 2700K-90+

35 - 3500K-83 309 - 3000K-90+

40 - 4000K-83 359 - 3500K-90+

409 - 4000K-90+

* Not available for 27W & 30W

Options/Accessories

WET - wet location (only available for use with trimmed style)

T24 JA8/Title 24 Compliant

[†] 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.



PROJECT: TYPE:

Specifications

Application

Retail and commercial ambient or wall wash 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

Lens Options (for SLD version):

<u>Satin Ice lens</u> for maximum source concealment and wide distribution with a visually "hotter" aperture. <u>Solite lens</u> for maximum efficacy and a visually quieter aperture. 30°, 50° and 65° beam spread options. Visually best with SLV reflector finish.

Beam spreads (for SLD version):

30SOL - 30° beam with solite lens

50SOL - 50° beam with solite lens

65SOL - 65° beam with solite lens

75SAT - 75° beam with satin ice lens

Wall Wash:

Engineered nano technology lens provides high transmission while concealing LED image

LED

Color Temp Options:

2200K, 2700K, 3000K, 3500K, 4000K

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

90+ typ. (2200K, 2700K, 3000K, 3500K, 4000K) CrispWhite* and Class A** 3000K LEDs available

R9 Values: 11 (83 CRI), 55 (92 CRI) Binning: 3 MacAdam (SDCM)

Life: 50,000+ hrs, > 70% of initial lumens at 50,000 hrs

*CrispWhite: CrispWhite Technology delivers the warmth of colors expected from a high 90 CRI solution but also creates the natural crisp white color that is pleasing to the eye. It creates the most impactful lighting ever available, by revealing the richest whites and vibrant colors that pop.

**Class A LED: Class A LED's have a CRI > 80 and a GAI > 80. CRI defines color "Naturalness" and GAI defines color "Saturation." Both being high delivers rich colors and pure whites.

Electrical

Wattage: 9, 12, 16, 23, 27, 30

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" max (1" max for SLW trims) 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.

For **SLD** trim - ceiling thickness 1/2"-11/16", consult factory for use in thicker ceilings.

For **SLW** trim - max ceiling thickness is 11/16".

Not available for use with Remodeler model

Certifications

CSA damp as tested to UL 1598 standards

CP - Chicago Plenum (CCEA) option

IC/AT rated (optional, 16W only)

JA8/Title 24 Compliant (see ordering page for options that apply)

Damp location

Wet location option

Warranty

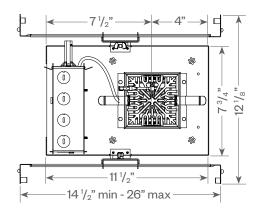
5 year limited warranty

Emergency Battery Pack (EM)

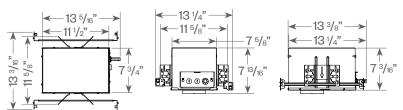
Powers fixture at 5.1 watts (approx. 400 Lm) for 90 minutes (not for use with REM, CP or IC/AT versions)



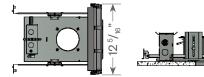




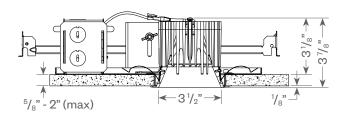
Optional CP or IC/AT housing

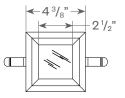


Emergency Battery Pack (EM) option



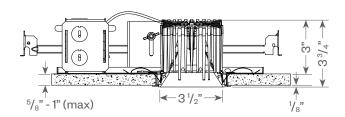
Hornet HP Square Lensed Downlight:

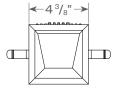




Ceiling cut out: 4" sq.

Hornet HP Square Lensed Wall Wash:





Ceiling cut out: 4" sq.

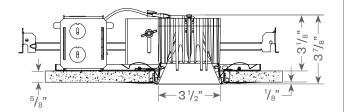


thicker ceilings)

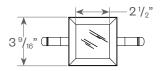
PROJECT:

Hornet HP Square Lensed Downlight:

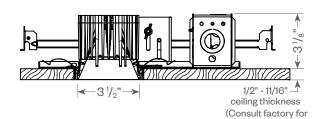
Trimless



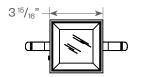
Trimless Ceiling cut out: 4 1/2" sq.



Millwork

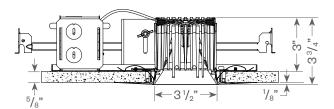


Millwork Ceiling cut out: 4" sq.

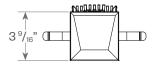


Hornet HP Square Lensed Wall Wash:

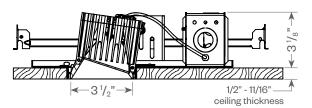
Trimless



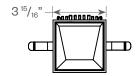
Trimless Ceiling cut out: 4 1/2" sq.



Millwork

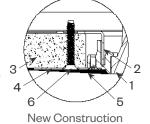


Millwork Ceiling cut out: 4" sq.



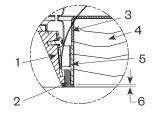
Plaster Frame Installation Detail (for trimless fixture only)

- 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



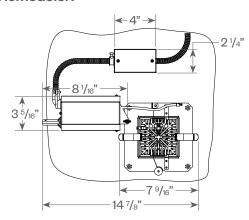
Millwork Detail

- 1. Reflector Trim
- 2. Millwork Ring
- 3. Aperture Plate
- 4. Wood Ceiling 2" Max
- 5. Extension collar (see ordering information for ceiling thicknesses)
- 6.1/16" required for trim to be flush with ceiling

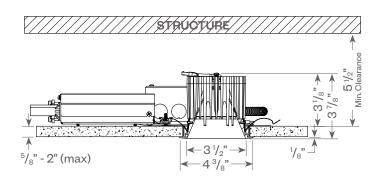


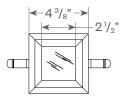


Remodeler:



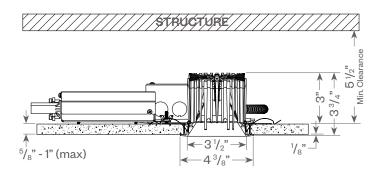
Hornet HP Square Lensed Downlight Remodeler:

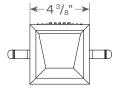




Ceiling cut out: 4" sq.

Hornet HP Square Lensed Wall Wash Remodeler:



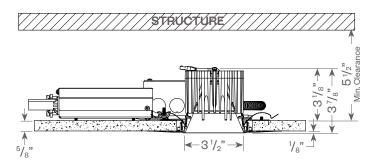


Ceiling cut out: 4" sq.

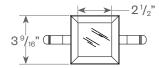


Hornet HP Square Lensed Downlight Remodeler:

Trimless

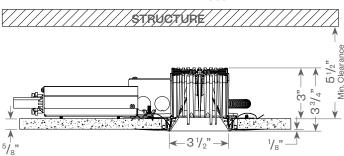


Trimless Ceiling cut out: 4 1/2" sq.

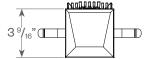


Hornet HP Square Lensed Wall Wash Remodeler:

Trimless

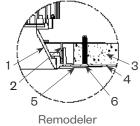


Trimless Ceiling cut out: 4 1/2" sq.



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)
- $6.\,6\text{-}32\,\mathsf{Type}\,\mathsf{F}\,\mathsf{Thread}\,\mathsf{Cutting}\,\mathsf{Screw}$







PROJECT: TYPE:

Hornet HP Square Lensed Downlight:

FIXTURE DATA: (Complete photometric data (.ies format) available upon request)

MULTIPLYING FACTORS: (Multiplying Factor is based on 3000K-83 120V IES file on website)

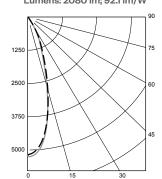
Wattage:	9W	12W	16W	23W	27W	30W
Factor:	0.39	0.52	0.69	1.0	1.2	1.3

CCT:	2700K-83	3000K-83	3500K-83	4000K-83
Factor:	0.96	1.0	1.02	1.04

CCT:	2200K-90+	2700K-90+	3000K-90+	3500K-90+	4000K-90+	CRISP	3CLA
Factor:	0.66	0.83	0.86	0.90	0.93	0.65	0.70

23W LED, 3000K-83

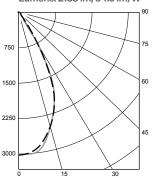
30° Solite Lens LTL # 13408034.06 Lumens: 2080 lm; 92.1 lm/W



Cand	lelas	at	Nadi	r
Deg		C	ande	la

Deg	Candela
0	5191
5	4959
15	2524
25	955
35	141
45	58

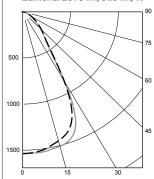
50° Solite Lens LTL # 13408034.07 Lumens: 2133 lm; 94.5 lm/W



Candelas at Nadir

Deg	Candela
0	3023
5	3010
15	2495
25	1604
35	180
45	66

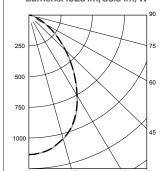
65° Solite Lens LTL # 13408034.08 Lumens: 2073 lm; 91.9 lm/W



Candelas at Nadir

Oaliucias at Hauli					
Deg	Candela				
0	1537				
5	1535				
15	1509				
25	1305				
35	479				
45	267				

75° Satin Ice Lens LTL # 13408034.09 Lumens: 1925 lm; 85.9 lm/W



Candelas at Nadir

Deg	Candela
0	1135
5	1125
15	1043
25	880
35	636
45	410

Application Data:

Notes and Definitions:

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

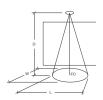
D=Distance to floor or wall.

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

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

 $\textbf{W=} \\ \textbf{Effective Visual Beam width in feet (50\% of maximum footcandle level)}.$

CB=Distance across or down to center beam location.



30° Solite Lens

0° Aiming Angle Horizontal Footcandles

\leftarrow	7	rootcan	ales
D	FC	L	W
5.0'	208	2.6	2.6
7.5'	93	3.7	3.8
10.0'	52	5.0	5.2
12.5'	34	6.3	6.4

50° Solite Lens

0° Aiming Angle Horizontal Footcandles W 122 4.1 5.0 4.1 7.5 54 6.1 6.1 10.0' 31 8.2 8.2 12.5 20 10.3 10.2

65° Solite Lens

0° Aiming Angle Horizontal Footcandles

D	FC	L	W
5.0'	62	5.2	5.1
7.5'	28	7.9	7.7
10.0'	16	10.6	10.4
12.5'	10	13.4	13.2

75° Satin Ice Lens

O° Aiming Angle
Horizontal
Footcandles

\leftarrow	3	Footcandles		
D	FC	L	W	
5.0'	44	5.5	5.5	
7.5'	20	8.1	8.1	
10.0'	12	10.9	10.9	
12.5'	8	14.1	14.0	



Hornet HP Square Lensed Wall Wash:

FIXTURE DATA: (Complete photometric data (.ies format) available upon request)

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

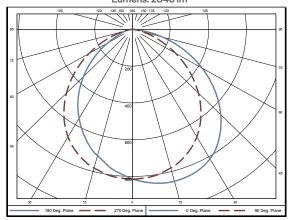
Wattage:	9W	12W	16W	23W	27W	30W
Factor:	0.39	0.52	0.69	1.0	1.2	1.3

CCT:	2700K-83	3000K-83	3500K-83	4000K-83
Factor:	0.96	1.0	1.02	1.04

CCT:	2200K-90+	2700K-90+	3000K-90+	3500K-90+	4000K-90+	CRISP	3CLA
Factor:	0.66	0.83	0.86	0.90	0.93	0.65	0.70

23W 3000K-83

Wall Wash LTL # 13408034.10 Lumens: 2045 lm



ZONAL LUMEN SUMMARY

<u>Lumens</u>	%Fixt
1029	50.3
1739	85.0
2045	100.0
0	0.0
	1029 1739 2045

Luminaire Efficacy: 90.6 Lm/W

Application Data:

Footcandles on Wall

1.5 Feet from Wall

			← 1.5	\rightarrow	1.5′ →	
Ø	0.5'	105	109	110	109	105
ceiling	1.5'	170	180	183	180	170
	2.5'	116	127	130	127	117
0.0	3.5'	69	76	78	76	70
e fr	4.5'	42	45	48	47	43
ů	5.5'	29	31	32	31	29
Distance from	6.5'	21	22	23	22	21
Ö	7.5'	16	17	17	17	16

Footcandles are average and rounded off.

Data for multiple units are based on a minimum of five units.

1.5	Feet	from	Wall	
				Ø0

0.0	0.5'	78	87	79	88	77	87	77
ceiling	1.5'	131	141	137	143	136	142	130
	2.5'	92	99	101	103	101	99	93
from	3.5'	55	61	63	64	63	61	57
	4.5'	35	38	40	41	41	39	36
istance	5.5'	24	27	28	28	28	27	25
sta	6.5'	18	20	20	21	21	20	19
Ö	7.5'	14	15	16	16	16	16	15

2 Feet from Wall

			—	-2'-	→ <	-2'-	>	
0.0	0.5'	44	50	48	51	49	50	46
illing	1.5'	96	104	104	107	105	105	97
ce	2.5'	88	95	98	99	98	96	88
from	3.5'	61	66	69	70	69	67	61
-Ju	4.5'	41	45	47	48	47	45	41
Distance	5.5'	29	32	33	34	33	32	29
sta	6.5'	22	23	25	25	25	23	22
Ö	7.5'	17	18	19	19	19	18	17



PROJECT: TYPE:

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.

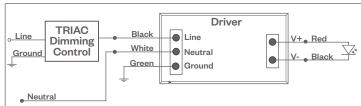
Notes:

- 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

Compatible Dimmers[†]:

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

TRIAC Wiring Diagram



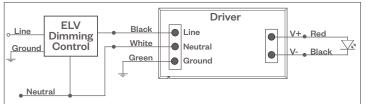
ELV - Electronic Low Voltage (Reverse Phase) DIMMING (Standard)

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

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 manufacturer 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: TYPE:

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 ---

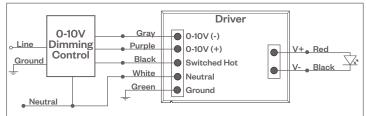
0-10V DIMMING

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	Leviton Renoir II 0-10V	Lutron Grafik Eye with GRX-TVI Interface		

LUTRON LDE1 DIMMING

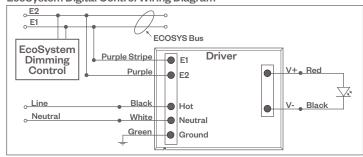
Integrates into Lutron EcoSystem building management

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!

Lutron LDE1 (HILUME-H-ECO)

EcoSystem Digital Control Wiring Diagram



Compatible Dimmers[†]:

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

DALI DIMMING

Digital control protocol allows individual fixture control

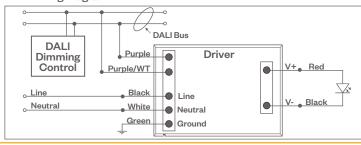
Notes:

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

Compatible Dimmers[†]:

Wall Box (3-Wire Fluorescent)	Central System
Leviton CD250 Controller	Dynalite
	Fifth Light

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 manufacturer 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.



EMERGENCY DIMMING (-EM OPTION)

Wiring Diagram

