LIGHTSHAPES HEXA
LS2H | SUSPENDED

SPECIFICATIONS

PROFILE	2" Aperture
SIZES	4' - 7' Hexagons
LED OUTPUT	3,600 - 10,500 lm, custom lumen packages available.
CCT/CRI	2700K/3000K/3500K/4000K • 90+ CRI Tunable White (2700K – 6500K) • RGB and RGB+W
DIMMING/ DRIVER	Remote Driver: 0-10V, DALI, DMX, eldoLED, Lutron®, PoE (Molex, Igor, NuLEDS). Dimming to 0% for select models.
POWER	32.5W - 94.8W per ft
INPUT	120VAC, 277VAC, or 347VAC
OPTICS	Lambertian distribution, Reveal Lens
FINISHES	16 powder coat finishes Custom finishes also available
MATERIAL	6061 Extruded Aluminum
ENVIRONMENT	Dry or damp locations
WELL/UGR	See ALW WELL and BIOS pages for recommended options that contribute to meeting the WELL Building Standard™

*Safety and Performance information available on last page. Output and other specifications available on page 6.

DISTRIBUTIONS & PROFILES

INDIRECT LAMBERTIAN

DIRECT LAMBERTIAN

A	A	A	A
4' HEXAGON	**5' HEXAGON**	**6' HEXAGON**	**7' HEXAGON**

2 ¾"   2 ¼"

SUSPENDED DIRECT

2 ¾"   2 ¼"

SUSPENDED INDIRECT
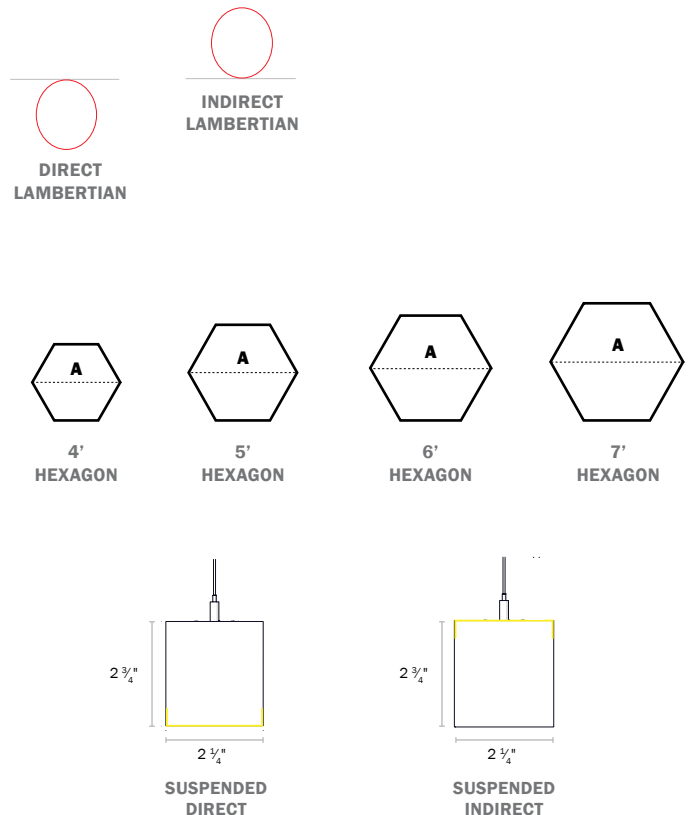
Not to scale. Dimensions are nominal. Consult factory for CAD drawing

ETL Intertek · enlighted · nLight · vive by LUTRON · PoE Ready · COOPER Lighting Solutions · molex · igor · NuLEDs · bios ILLUMINATED

Rev 122624

PRODUCT SPECIFICATION SHEET

—	—				—		—		—		—		—	—			—		—
1	2	3a	3b	3c	4		5		6		7	8a			8b			8c	

EXAMPLE: LS2HD — 4 — HI/90/3500 — V05 — EXT/R — SW — UNV — EMC/1 — MLX — SB

        1   2   3   4   5   6   7   8a   8b   8c

---

1. BASE MODEL (CHOOSE 1)

LS2HD	2" Lightshape Hexa Direct
LS2HI	2" Lightshape Hexa Indirect

2. SIZE (CHOOSE 1)

4	4ft Hexagon
5	5ft Hexagon
6	6ft Hexagon
7	7ft Hexagon

3. LED LAMPING* (CHOOSE 1 FOR EACH)

A. OUTPUT

- **LOW** (300 lm/ft)
- **HI** (500 lm/ft)
- **RGB** (140 lm/ft)
- **TUNE** (2700K-6500K, 90 CRI, 460/500 lm/ft)
- **RGBW** (3500K, White, 80 CRI, 250 lm/ft)
- **____** [5] (Custom. Enter lumens in product code above. Ex: 0100=100lm/ft)

B. CRI[1]

- **NO CRI/CCT**[2]
- **90**
- **BIOS**[3] (STATIC BIOS)
- **BIOSD**[3] (DYNAMIC BIOS)

C. CCT[1]

- **2700K**[4]
- **3000K**
- **3500K**
- **4000K**

*For delivered lumens and watts, see 'Performance Details'
[1] CRI/CCT options not applicable for TUNE, RGB, or RGBW lamping
[2] Choose when TUNE, RGB, or RGBW is desired output
[3] Static BIOS SkyBlue® 490nm LED is always on. Dynamic BIOS SkyBlue® 490nm LED can be tuned out with most LED driver and dimmer combinations. See pages 7-8 for details.
[4] 90 CRI only. 2700K is not available in BIOS options
[5] Consult ALW for custom lumen packages.

4. DRIVER* (CHOOSE 1)

V00 (0-10V, dim to 0%)	**POEI** (POE IGOR)
V01 (0-10V, dim to 1%)	**POEN** (POE Nuleds)
V05 (0-10V, dim to 5%)	**POE**[6] (POE Ready)
P01 (ELV/TRIAC phase dim to 1%)	
LDE1 (Lutron ECOSYS1, 0-10V, dim to 1%)	
TSERIES (Lutron tuneable white)	
ELDV0 (eldoLED, 0-10V, dim to 0%)	
ELDDW (eldoLED dim to warm)	
DALI (DALI, dim to 0%)	
DMX (DMX, dim to 0%)	
POEM (POE Molex)	

*See 'Driver', 'Sensor' and lamping charts for driver details and sensor compatibility.
*Remote drivers only.
[6] Choose desired PoE solution not listed. Contact customer service to review and confirm the PoE system of your choice.

---

5. LENS

EXT/R	Diffuse reveal lens

6. FINISH - FIXTURE* (CHOOSE 1)

STANDARD FINISHES

SW ☐	Satin White
SB ■	Satin Black
AS ☐	Aluminum Silver Anodized Effect
TB ■	Textured Black

PREMIUM FINISHES

__ See chart on page 5 for premium finishes. Manually type in the finish code (Ex: OB = Oil-Rubbed Bronze)

SPECIAL ORDER FINISHES*

RAL____	Specify RAL Classic Color (Ex: RAL 3003)
CCM____	Custom Color Match

*Manually type in the finish code for special order finishes types

7. VOLTAGE (CHOOSE 1)

UNV	Universal Voltage (120VAC-277VAC)
347	347 Volt (Driver options may be limited. Not available with EMB)

8a. EMERGENCY OPTIONS (OPTIONAL)

EMC/__[7]	Emergency Circuit (indicate QTY of 4ft sections to be illuminated by emergency circuit)

*For Emergency Battery (EMB) refer to ALW's LP2 fixture.
[7] For fixtures under 4ft in length, entire fixture will be illuminated with a proportional lumen output. Consult ALW for more details.

8b. SENSOR OPTIONS* (OPTIONAL, CHOOSE 1)

- **N** (None)
- **WLNX** (Cooper Wavelinx, remote)
- **ENLGHT** (Enlighted, remote)
- **FCJS** (Lutron, remote)
- **FCJS/S** (Lutron, remote + occ/daylight sensor)
- **MLX** (Molex POE, remote)
- **NLT** (nLight wired remote connection)
- **NLTAIR** (nLight AIR, remote connection)
- **OS/PH/HV** (Hubbel WASP remote occ/daylight sensor)

*Quickship availability on occupancy and photocell/daylight sensors may vary. Contact ALW for more information.
*Not all sensors are compatible with all drivers. See 'Driver', 'Sensor' and lamping charts for driver details and sensor compatibility.

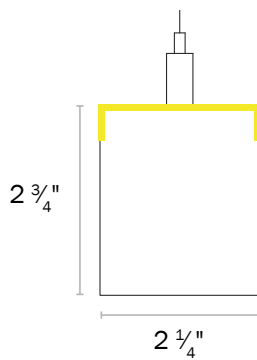### 8c. ADDITIONAL OPTIONS (OPTIONAL)

SB	Seismic Bracing

![ALW logo]

MECHANICAL DIAGRAMS

NOMINAL DIMMENSIONS
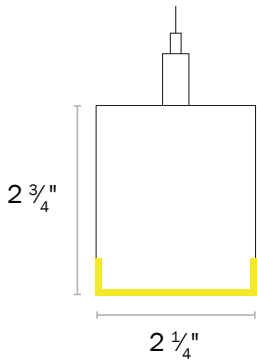
2 ¾"   2 ¼"
LP2CD
SUSPENDED, DIRECT

2 ¾"   2 ¼"
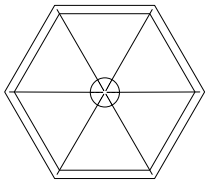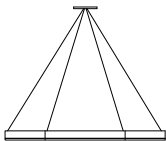**LP2CI**
SUSPENDED, INDIRECT

MOUNTING OPTIONS

Plan View

Elevation View

CENTRAL AXIS SUSPENSION (CAS)

- 4.5" white central axis canopy per fixture that all aircraft cables/power feeds route into, as shown.
- 8' aircraft cable. 18" minimum distance from ceiling to fixture.

CEILING HARDWARE

- 4.5" canopy per power feed location. Canopy finish is always white. Contact ALW for alternate colors.
- Bullet mount,
- 2" canopy (for use with T-bar mounting) per suspension point

Eye Bolt
(By Others)

Gripper
w/Hook

2-Cable
Clamp
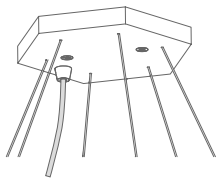
Aircraft
Cable

SEISMIC BRACING (SB)

Add-on hardware includes cable gripper with hook, 2-cable clamp and specified length of aircraft cable per suspension point.
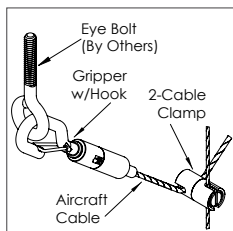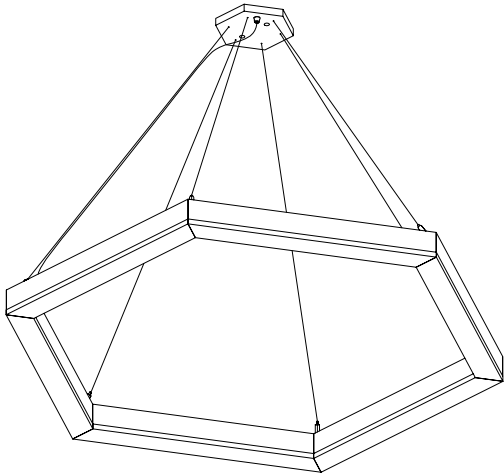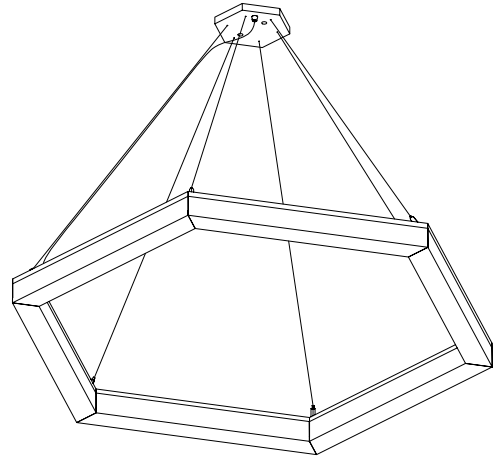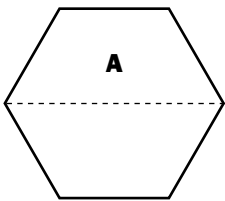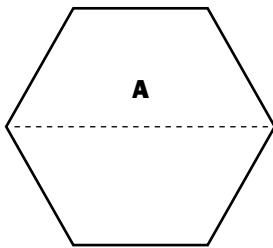
Rev 122624

ISOMETRIC VIEW - DIRECT

ISOMETRIC VIEW - INDIRECT

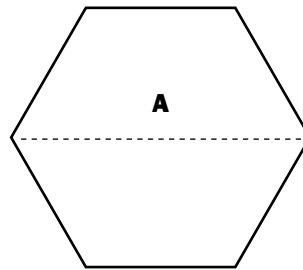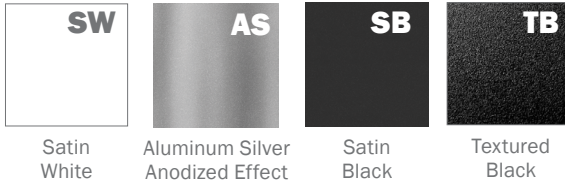## TOP (PLAN) VIEW

A

4'
HEXAGON

A

5'
HEXAGON

A

6'
HEXAGON

A

7'
HEXAGON

Rev 122624

ALW
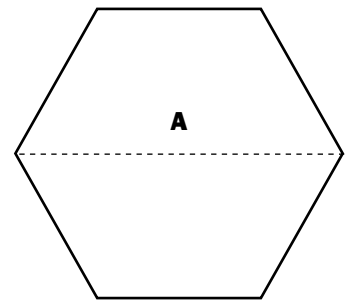
FINISHES

Standard finishes are available at no additional charge.

STANDARD FINISHES

SW	AS	SB	TB
Satin White	Aluminum Silver Anodized Effect	Satin Black	Textured Black

PREMIUM FINISHES

BASIC POWDER COAT

GW	AW	TW
Gloss White	Antimicrobial Gloss White	Textured Matte White

METALLIC POWDER COAT

CG	CU	BR
Charcoal Gray	Copper	Brass
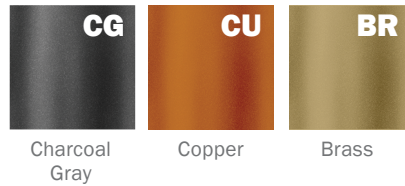
SATIN ANODIZED EFFECT POWDER COAT

OB	DB
Oil-Rubbed Bronze	Dark Bronze

GLOSS POWDER COAT (80-95% GLOSS)

GO	GR	GM	GB
Orange RAL 2003	Red RAL 3020	Magenta RAL 4010	Blue RAL 5015
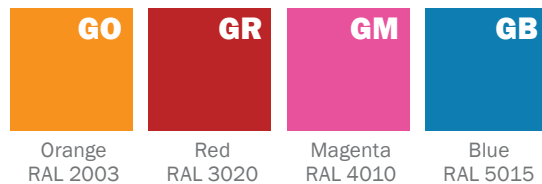
Contact ALW Quotes for sample paint finish swatches.

SPECIAL ORDER FINISHES*

RAL CLASSIC COLORS (80-95% GLOSS): RAL_ _ _ _
Most RAL Classic Colors are available for a minimum setup fee. On your specification submittal choose your RAL color by entering the 4-digit RAL code (Ex: RAL 3003).
See www.alw-inc.com/resources/finishes

CUSTOM COLOR MATCH: CCM_ _ _ _
Custom powder coat color matching is available for a premium setup fee. Consult ALW for additional information.

*An individual setup fee will apply to each unique Special Order Finish per purchase order.
(ex: RAL 5023 and RAL 2008 are specified for multiple line items on a purchase order. 2x setup fees will apply)

*Printed or on-screen colors are only approximations - consult actual Color Chip Set before specifying

PERFORMANCE DETAILS

SHAPE DIAMETER	OUTPUT TYPE	DELIVERED LUMENS (LM)[8] direct OR indirect	TOTAL WATTS (W)[8] direct OR indirect	EFFICACY (LM/W) direct OR indirect	SUSPENSION POINTS	POWER DROPS	APPROX WEIGHT (LBS)
4'	LOW[9]	3600	32.5	Up to ~110.8			24
	HI[9]	6000	54.2				
	RGB/RGBW[9,10]	1680/3000	71				
	TUNEABLE	WW: 5520 CW: 6000	56				
5'	LOW[9]	4500	40.6	Up to ~110.8			30
	HI[9]	7500	67.7				
	RGB/RGBW[10,11]	2100/3750	88				
	TUNEABLE	WW: 6900 CW: 7500	70		6	1	
6'	LOW[9]	5400	48.8	Up to ~110.7			36
	HI[9]	9000	81.3				
	RGB/RGBW[10,11]	2520/4500	106				
	TUNEABLE	WW: 8280 CW: 9000	84				
7'	LOW[9]	6300	56.9	Up to ~110.8			42
	HI[9]	10500	94.8				
	RGB/RGBW[10,11]	2940/5250	124				
	TUNEABLE	WW: 9660 CW: 15000	98				

[8]Lumens and Watts have been calculated assuming a driver efficiency of 85%. Depending on field conditions, actual measured values may fluctuate by 5-8%.

[9]Performance calculations are based on LM-79 test of HI output at 80 CRI and 4000K. LOW and MED calculations are extrapolated values.

[10]Performance calculations are derived from LM-79 test with all RGB LEDs illuminated (Red, Green, Blue).

[11]Performance calculations are derived from the following LM-79 tests: 1) RGB LEDs illuminated, 2) RGB+W LEDs illuminated, 3) White LED only illuminated.
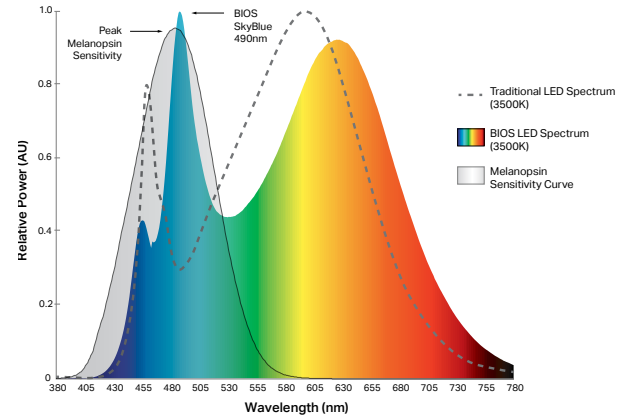
BIOS OVERVIEW

![bios ILLUMINATED logo]

BIOS SkyBlue® technology is designed to provide the specific circadian stimulus required to improve overall sleep by featuring a distinct peak in the 'skyblue' spectral power at 490nm. Unlike traditional white LEDs, BIOS SkyBlue® makes it possible to achieve high EML (Equivalent Melanopic Lux) and Melanopic/Photopic ratios without harsh CCTs or high, glare-inducing light levels.

BIOS light engines are available in Static or Dynamic options for use with a variety of applications. In Static light engines, the SkyBlue 490nm signal always remains on while the fixture is powered. Dynamic options include a dynamic board and Bio-Dimmer module to allow the user to dim-out the SkyBlue 490nm signal during night time hours.

	BIOS STATIC (BIOS)	BIOS DYNAMIC + BIO-DIMMING™ (BIOSD)
DESCRIPTION	490nm SkyBlue light signal always remains on while the fixture is powered.	Dynamic light engine with Bio-Dimming add the ability to fine-tune and dim-out the 490nm SkyBlue signal during night time hours or as desired.
TYPICAL APPLICATIONS	Environments typically occupied only during daylight hours (6am - 8pm) such as offices and schools.	Environments occupied for a 24-hour period such as hospitals, security facilities, behavioral health facilities, factories, etc.
CONTROLS & DIMMING*	Works with any standard dimming controls (0-10V, Dali, EcoSystem, ELV, Triac, DMX, Wireless, etc.). BIOS melanopic ratio remains constant as you dim down the light intensity.	Works with any standard dimming controls (0-10V, Dali, EcoSystem, ELV, Triac, DMX, Wireless, etc.). BIOS SkyBlue® LED can be dimmed-out using a standard control/dimmer.

*No unique wiring instructions required. However, Dynamic + Bio-Dimming™ option must be set up properly during initial startup to the desired light level setpoint. See installation guide for details.

BIOS LED LAMPING DETAILS (STATIC OR DYNAMIC)

SHAPE DIAMETER	OUTPUT[12]	DELIVERED LUMENS (LM)	WATTS (W)	EFFICACY (LM/W)	CRI OPTIONS
4'	LOW	**3600**	32.5		
	HI	**6000**	54.2		
5'	LOW	4500	40.6		
	HI	7500	67.7	Up to ~110.8	82+
6'	LOW	5400	48.8		
	HI	9000	81.3		
7'	LOW	6300	56.9		
	HI	10500	94.8		

BIOS LED PERFORMANCE DETAILS

CCT	CRI (Ra) Static BIOS / Dynamic BIOS	CRI (R9) Static BIOS / Dynamic BIOS	DAYTIME M/P RATIO[13] Static BIOS / Dynamic BIOS	NIGHTTIME M/P RATIO[14] Static BIOS / Dynamic BIOS	COI[15] Static BIOS / Dynamic BIOS
3000K	82 / 83	94 / 90	0.70 / 0.73	0.70 / 0.45	3.0 / 3.3
3500K	83 / 83	91 / 90	0.80 / 0.84	0.80 / 0.50	3.1 / 3.1
4000K	83 / 83	91 / 90	0.90 / 0.95	0.90 / 0.55	3.1 / 3.1

[12]Performance calculations are based on LM-79 test of BIOS 4000K, HI output. LOW is an extrapolated value.

[13]Melanopic to photopic (M/P) ratios are used to help calculate equivalent melanopic lux (EML) values which is the metric used for circadian lighting in the WELL™ Building Standard.

[14]Static LED nighttime M/P ratios remain the same as daytime M/P ratios as BIOS SkyBlue® always remains at full output.

[15]BIOS SkyBlue® meets the Cyanosis Observation Index (COI) requirements for visual assessment of cyanosis, providing a COI up to 3.3.
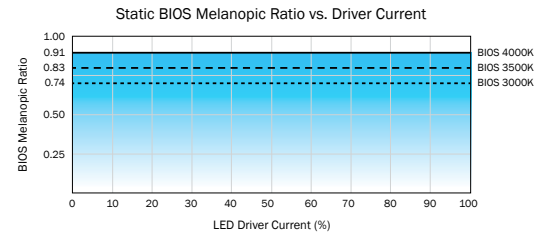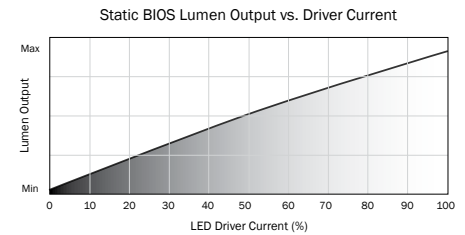
BIOS STATIC DIMMING CONTROL CHARACTERISTICS

	DIMMER SETTING	LIGHT OUTPUT* (BIOS SKYBLUE® + WHITE LED)	
	100%* (Full On)	100%	BIOS + White LED Intensity Dimming
	99% - 51%	Linear Dimming 99% - 51%	
	50%	Linear Dimming 50%	
	49% - 0%	Linear Dimming 49% - 0%	

BIOS SkyBlue® LED and White LED dim with a 1-to-1 ratio.

Static BIOS Lumen Output vs. Driver Current

Static BIOS Melanopic Ratio vs. Driver Current

BIOS 4000K
BIOS 3500K
BIOS 3000K

*While melanopic ratio remains constant, dimming/reducing light output will have an overall impact on Equivalent Melanopic Lux (EML). That is because EML = Vertical Lux * melanopic ratio. Therefore, if you reduce light levels by dimming the LEDs, you will reduce your effective EML, even when the melanopic ratio stays constant.

BIOS DYNAMIC + BIO-DIMMING™ DIMMING CONTROL CHARACTERISTICS

|	DIMMER SETTING	BIOS SKYBLUE® LED	WHITE LED	LIGHT OUTPUT	
	100%* (Full On)	100%	100%	100%	Bio-Dimming
	99% - 51%	100% - 0%	100%	100% - 90%	
	50%	NO BIOS	100%	~90%	White LED Intensity Dimming
	49% - 0%	NO BIOS	100% - 0%	Linear Dimming 90% - 0%	

BIOS SkyBlue® maintained for maximum circadian impact.

Light output remains relatively constant.

BIOS SkyBlue® removed to provide minimal circadian impact.

White LED output dims linearly.

*No unique wiring instructions required. However, Dynamic + Bio-Dimming™ option must be set up properly during initial startup to the desired light level setpoint. See installation guide for details.

Dynamic BIOS Lumen Output vs. Driver Current

Dynamic BIOS SkyBlue vs. Driver Current

BIOS + Bio-Dimming™
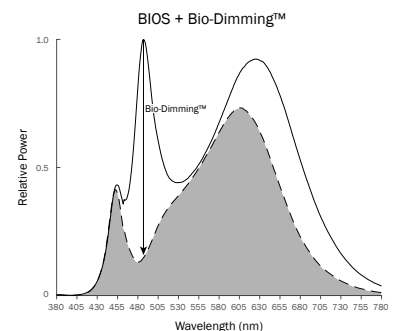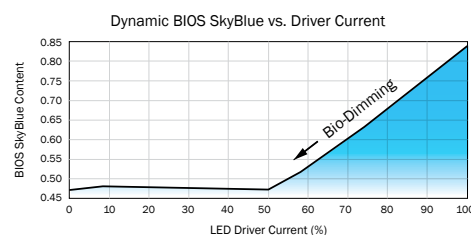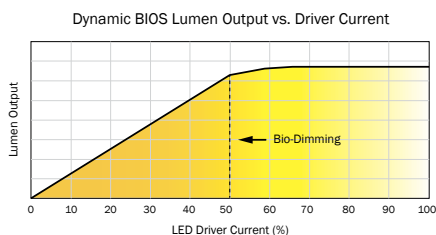
PRODUCT CODE	DESCRIPTION
N	None. Choose when indirect lamping is not desired.
V00	0-10V dimming down to 0% (dim to off).
V01	0-10V dimming down to 1%.
V05	0-10V dimming down to 5% (Down to 10% for TUNE lamping).
LDE1	(LDE1) Lutron Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology.
ELDV0	eldoLED 0/10V dimming down to 0% (when choosing nLight Air integral sensors a compatible eldoLED LEDcode version will be specified)
P01	Driver supports both TRIAC Forward Phase 2-Wire and ELV Reverse Phase 3-Wire dimming controls.
TSERIES	Lutron T-Series Tunable White Class 2 LED Driver (For use with Lutron Quantum Control Systems)
ELDDW	eldoLED 0/10V dim-to-warm dimming down to 0% (specify with TUNE LED lamping. Driver will be programmed with LightShape dim-to-warm setting)
DALI	DALI flicker-free dimming down to 0%.
DMX	DMX flicker-free dimming down to 0%.
POEM	Molex CoreSync PoE LED Driver. Contact ALW to assist with your project.
POEI	IGOR PoE LED Driver. Contact ALW to assist with your project.
POEN	NuLEDS PoE LED Driver. Contact ALW to assist with your project.
POE	Specify a PoE driver of your choice. Fixture comes with low voltage leads and no LED driver. Contact ALW to assist with your project

*Most drivers can be programmed to specific dimming levels if desired. Contact ALW for specific dimming level requests.
ALW lighting fixtures are intended for use with a wide range of sensors, lighting controls, LED drivers, and building management systems. If there are specific components required for your application that aren't listed on this spec sheet, please contact ALW customer support today to specify a compatible solution of your choice.

DRIVER/LED LAMPING COMPATIBILITY							
	STD	STD/BIOS	TUNE	RGB	RGB(W)	CA TITLE 24 JA8/JA10[16]	IEEE P1789 & HD TV STUDIO[17]
V00	●	●	●			●	
V01	●	●	●			●	
V05	●	●	●			●	
LDE1	●	●				●	●
ELDV0	●	●	PER REQUEST			●	●
P01	●				●		
TSERIES			●			●	●
ELDDW			●			●	●
DALI	●	●	●			●	
DMX	●		●		●	PER REQUEST	PER REQUEST
POEM	PER REQUEST					●	●
POEI	PER REQUEST					●	●
POEN	PER REQUEST					●	●

● - Indicates compatibility
*Standard lamping (STD) - LOW/HI

[16] Fixtures specified with 90CRI 2700K, 3000K, 3500K, and 4000K lamping with applicable LED drivers have the ability to conform to California Title 24 JA8 and JA10 Appendices

[17] The following drivers conform to IEEE P1789 Flicker Standard: 'IEEE Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers'. These drivers may also be installed in HD TV Studio applications utilizing high frequency camera equipment.

ADDITIONAL OPTIONS & SPECIFICATIONS
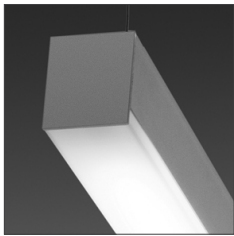
LED PERFORMANCE

> 54,000 hours at 70% lumen maintenance, LM80 / TM-21

HOUSING

100% recyclable, extruded architectural grade 6061 aluminum with a 0.08" minimum wall thickness.

LENS OPTIONS

Extruded, twin-layered, high-impact acrylic. EXT is white and extra diffuse with minimal- to no-source visibility.

REVEAL LENS – EXT/R

SAFETY & REGULATORY

Fixtures specified with 90CRI, 2700K, 3000K, 3500K, and 4000K lamping with applicable LED drivers have the ability to conform to **California Title 24 JA8 and JA10** Appendices. EldoLED drivers can conform to IEEE P1789 Flicker Standard: 'IEEE Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers .

Contact ALW customer support today and we can help you with your project requirements.

ETL Listed (U.S. & Canada). Suitable for dry or damp locations.
Conforms to UL std. 1598, Luminaires.
Certified to CSA std. C22.2#250.0:2008 Ed. 3+G1;G2.

WARRANTY

Limited 11-year warranty. Details: alw-inc.com/warranty

OPERATING TEMPERATURE

Luminaire should be installed and operated ONLY in dry environments where the ambient temperature ranges from -4°F to 122°F (-20°C to 50°C). Luminaire operation in environments outside the listed temperature range voids the warranty AND may damage the product or adversely impact lamp life, lumen output and color consistency.

POWER CABLES

Power cables come standard in a transparent sheathing to match steel aircraft suspension cables. Please contact customer support if custom cables are required for your application. Power cables cannot be swapped in the field as it will void the ETL Safety Listing and Product Warranty.

CONTROLS, SENSORS, & LED DRIVER

ALW lighting fixtures are intended for use with a wide range of sensors, lighting controls, LED drivers, and building management systems. Our component portfolio is continually expanding to adopt to the latest technologies and specification needs. We currently support integration with Lutron, Enlighted, nLight, Cooper Wavelinx, eldoLED, Molex PoE, NuLEDS PoE, Igor PoE, Osram, Philips, and more. If there's a component or system needed that you don't see on the spec sheet please contact ALW customer support today so we can review your requirements.

WEIGHT

Approximately 2 lbs. per linear foot. Weight may vary depending on fixture size.