

**ALW**

ILLUMINATE THE SOUL™



**ALW**

ILLUMINATE THE SOUL™

+

**bios**  
ILLUMINATED

**THE WELLNESS COLLECTION**



**CIRCADIAN LIGHTING WITHOUT COMPROMISE**

[ALWUSA.COM/BIOS](http://ALWUSA.COM/BIOS)



## ALW + BIOS®

ALW has partnered with BIOS®, giving you access to a full suite of circadian lighting solutions, designed around human biology. ALW's BIOS Illuminated® products integrate the robust and versatile options available within ALW's product portfolio with BIOS' revolutionary SkyBlue® technology, **without the need for harsh CCTs or extreme light levels.**

## BENEFITS



Regulate healthy sleeping patterns



Improved sleep quality



Increased productivity



Promote physical, mental, and emotional well-being



Enhanced short- and long-term health

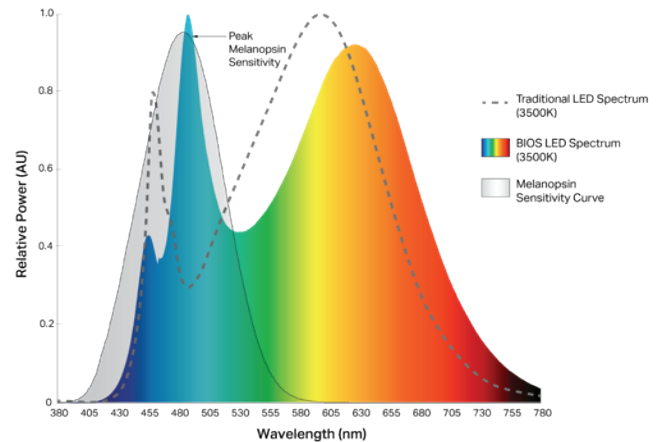
## BIOS SKYBLUE® TECHNOLOGY

### Background

- ▶ **Circadian rhythm** plays a vital role in our health and well-being, influencing key factors of our health and overall cognitive abilities. It's directly affected by our melatonin levels.
- ▶ **Melanopsin** is a photopigment in our eyes that is responsive to the "sky blue" range of light as shown by the *melanopsin sensitivity curve* in the graph. Melanopsin works to suppress melatonin production when our eyes are exposed to light in this range, which increases alertness, awareness, & cognition.

### BIOS SkyBlue Lighting Solutions

As shown, BIOS SkyBlue® technology features a distinct peak in the "sky blue" region at 490nm, surpassing traditional (and tunable) white LEDs in terms of melanopic content - regardless of CCT.



- ▶ Traditional LEDs have a significant drop in this "sky blue" range, rendering it ineffective for any meaningful circadian response.
- ▶ BIOS SkyBlue® makes it possible to achieve high EML and M/P ratios without harsh CCTs or glare-inducing light levels.

## KEY APPLICATIONS



### HEALTHCARE

Improve output from staff - and outcomes for patients



### WORKPLACES

Create a healthier, more productive workforce



### SENIOR LIVING

Reduce depression, agitation, sundowners syndrome, and nighttime wandering



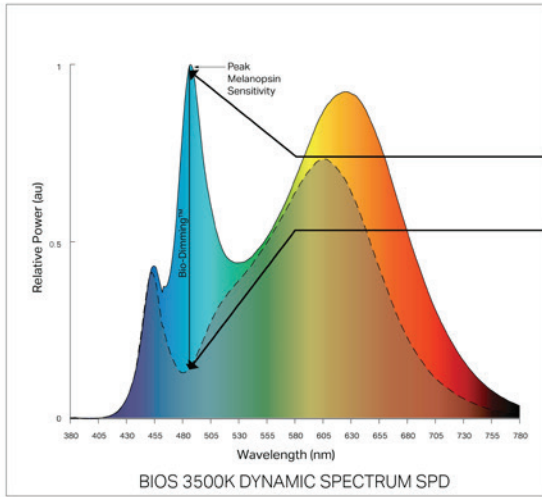
### EDUCATION

Bring energy and focus back to the classroom

# STATIC & DYNAMIC WITH BIO-DIMMING™

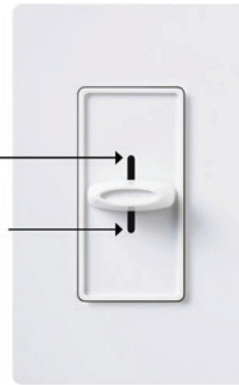
BIOS Illuminated® ALW luminaires are available with both **Static** and **Dynamic** light engines. **Static** light engines feature a constant SkyBlue® signal, whereas **Dynamic** enables the ability to fine-tune the signal, and remove it later in the day (as described below).

## SIMPLE SINGLE-CHANNEL CONTROL



Day ☀

Night 🌙



Daytime - BIOS 3500K with SkyBlue®

Nighttime - BIOS 3500K with Bio-Dimming™

### BIO-DIMMING™ COMPATIBILITY

- Works with most single channel drivers.
- Works with standard dimming protocols (0-10V, DMX, ELV, etc.)

### PRIMARY APPLICATIONS

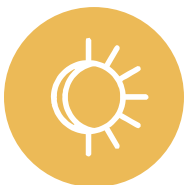
- Residences
- Assisted Living Centers
- Hospitals
- Hospitality
- Offices
- Schools

**Bio-Dimming™** is a proprietary module that pairs with BIOS SkyBlue® Dynamic light engines, adding the ability to fine-tune the melanopic lux (i.e. the 'sky blue' signal), while keeping the photopic lux (the visual signal/brightness) at a constant. The Bio-Dimming controller is compatible with most single-channel drivers and standard dimming protocols (e.g. 0-10V, DMX, ELV, etc.).

## THE BIOS® DIFFERENCE

Spectrum	BIOS SkyBlue®	Traditional LED	Competitor #1	Competitor #2
M/P > 0.9 @ 4000K	• (0.92 @ 4000K)	✗ (0.57 @ 4000K)	✗ (0.75 @ 4000K)	✗ (0.92 @ 5000K)
Limitless design options	•	•	•	✗
Multiple CCT options	•	•	•	✗
Medical Evaluation Compliant	•	✗	•	✗
R9 > 90	•	✗	•	✗
Peak blue emission at 490nm	•	✗	✗	✗
Ideal Applications	Offices, Education, Healthcare, Shiftwork <i>Places that promote health and wellness</i>	Places where energy efficiency is the only consideration	Museums & Retail	Places where people prefer 5000K

## WELL BUILDING STANDARD™



ALW products embedded with BIOS SkyBlue® technology contribute to satisfying **Circadian Lighting Design Feature 54** under the WELL Building Standard™ v1 and **Feature L03** under the Well Building Standard™ v2. BIOS SkyBlue® also meets other features within the WELL™ Light Concept, including **coloring quality offering 83+ CRI and R9 values greater than 80**, visual comfort metrics, and higher M/P ratios than traditional LED lighting.

ALW has a full range of solutions that contribute to satisfying the lighting and acoustic standards set forth in the WELL™ v1 and v2 Standards. See [alwusa.com/WELL](http://alwusa.com/WELL) for more details.

# FEATURED ALW + BIOS® PRODUCTS

## SUPERPLANE 2.5



**SuperPlane 2.5** is the 2.5"-aperture version of ALW's flagship SuperPlane family of high-performance linear direct/indirect luminaires. SuperPlane features seamless illumination up to 250 linear feet, along with an optional 120° indirect batwing lens (*for suspended models*), providing a wider ceiling distribution.

**LENGTH** — 2ft. to 250ft. (*customizable - with seamless/continuous ControlRoll Optics*)

**MOUNTING** — Suspended, Wall, Surface (Back), or Recessed (*incl. Trim/Trimless, Drywall, T-Grid & Armstrong*)

**LED LAMPING** — Direct and/or Indirect — 3000K/3500K/4000K

Output Options: BIOS Static or Dynamic (300 — 1,450 lm/ft). *Custom lumen outputs available*

**INTEGRATED DRIVER** — 0-10V to 5/1/0%; DALI & DMX to 0%; Lutron EcoSystem LDE5 (5%), LDE1 (1%)

**ACOUSTICS** — Available with 10 acoustic color options and a material NRC of 0.85

**WELL™** — SP2.5 contributes to satisfying WELL Building Standard™ V1 Features: 54, 55, 58, 60, 78, and 80, as well as V2 Features: L03, L04, L07, and S04.

## SUPERPLANE 4

**SuperPlane 4** is the wider, 4"-aperture version of ALW's flagship SuperPlane family of high-performance linear direct/indirect luminaires. SP4 features all of the same options and performance as the SP2.5, as well as optional downlights (with outputs between 800 - 1500lm, and beam angles of 25° or 40°).

**LENGTH** — 2ft. to 250ft. (*customizable - with seamless/continuous ControlRoll Optics*)

**MOUNTING** — Suspended, Wall, Surface (Back), or Recessed (*incl. Trim/Trimless, Drywall, T-Grid & Armstrong*)

**LED LAMPING** — Direct and/or Indirect — 3000K/3500K/4000K - Optional downlights available (*non-BIOS*)

Output Options: BIOS Static or Dynamic (300 — 1,450 lm/ft). *Custom lumen outputs available*

**INTEGRATED DRIVER** — 0-10V to 5/1/0%; DALI & DMX to 0%; Lutron EcoSystem LDE5 (5%), LDE1 (1%)

**ACOUSTICS** — Available with 10 acoustic color options and a material NRC of 0.85

**WELL™** — SP4 contributes to satisfying WELL Building Standard™ V1 Features: 54, 55, 58, 60, 78, and 80, as well as V2 Features: L03, L04, L07, and S04.



## CORE



**CORE** is ALW's flagship cylinder product line, featuring a trio of models (CX/LX/SX) and a pair of available sizes (300/400) available with BIOS. CORE CX is available with shell cutout options for added design flexibility. Standard cutout options include round, square (as shown), and dual — or submit your own custom design.

**SIZE** — Diameter: 4.5" (300) or 6" (400) — Height (SX): 5.5" or 6.1" — Height (CX/LX): 12.2" or 16.4"

**MOUNTING** — Suspended (Pendant), Sconce, Surface Mount, Yoke, or Catenary

**LED LAMPING** — Direct — 3000K/3500K/4000K — Output: BIOS Dynamic (700 — 2,000 lm)

Field-Replaceable Reflector Options: Baffle, 20° / 40° / 60° (300) -or- 11° / 25° / 41° / 51° (400)

**DRIVER** — 0-10V or Phase Dimming to 10% — Integrated or Deep Canopy — Other driver options (including Lutron and eldoLED) are available with Deep Canopy only.

**WELL™** — CORE contributes to satisfying WELL Building Standard™ V1 Features: 54, 55, and 58, as well as V2 Features: L03, L04, and L07.