Date		Notes
Project		
Туре	Qty	

### **Features**

DLC V5.1 Standard Listed up to 121LPW.

Compatible with Armstrong® ceiling systems.

Unique three lens design w/specular aluminum inserts.

3 3/4" low profile housing fits shallow plenum spaces.

LED optimized optics for smooth, even illumination.

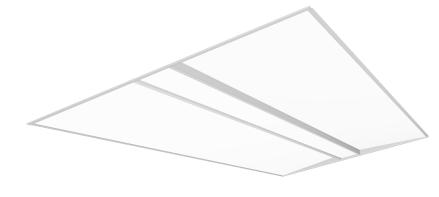
High efficiency driver for custom lumen packages.

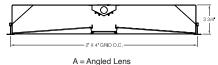
0-10V dimming to 1% standard or Dim-to-Off.

Options for 90CRI, Tunable White, RGB, RGBW, and RGBWW.

Bios SkyBlue™ circadian solutions available.

Declare Red List Approved.







F = Flat Lens

# **Ordering Guide**













	(C)	
3	W	

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MODEL	OPTICS	ССТ	LUMENS	SIZE	MOUNTING <sup>6</sup>	FINISH	OPTIONS
				24			
HML-A Angled Lens HML-F Flat Lens	SI =Satin Ice Acrylic Lenses  Decorative Sky panel and other graphic lenses available.  Consult factory.	STATIC WHITE <sup>1</sup> 27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K  BIOS SkyBlue <sup>2</sup> Spectrally optimized circadian solutions.  TUNABLE WHITE <sup>3</sup> (2700K-6500K) 2DIM10 = for 0-10V 2DMX = for DMX 2ESN = for Philips 2CAS = for Casambi  DIM-TO-WARM <sup>3</sup> (2700K-6500K) DTW = Dim-to-Warm  RGB & WHITE  RGB = RGB  RGBW = RGBWW (2700K-6500K) .	STANDARD  VVLO = 3020L (27W, 112LPW)  LO = 5430L (41W, 111LPW)  SO = 6040L (54W, 110LPW)  HO = 7550L (68W, 110LPW)  VHO = 9050L (81W, 109LPW)  CUSTOM  For custom lumens please specify any value < VHO.  DLC LUMENS <sup>5</sup> V5.1 Standard 3500K S3D = 6213L (53W, 118LPW)  @4000K S4D = 6416L (53W, 121LPW)	24 = 2x4	G = Grid 15/16" T-Bar MG = Mini Grid 9/16" T-Bar SG = Slot Grid SGF = Slot Grid Flush XG = Interlude XGF = Interlude Flush TGF = Tegular Flush 15/16" T-Bar XGF = Tegular Flush 9/16" T-Bar ACY = Aircraft "Y" Cable S = Surface F = Flanged	W = White CC = Custom Color AMW = Anti-Microbial White	DIMMING DRIVERS DIM10 = 0-10V (1%) Standard DTO = 0-10V (Dim-to-Off) DIMST = 0-10V (Step Dimming 347 = 0-10V (347V) DIMSR = DALI Sensor Ready (5.0%) DALI = DALI (5.0%) DMX = DMX  LUTRON™ DIMMING DRIVERS LDE1 = Hi-Lume™ 1% EcoSystem™ L3DA3W = Hi-Lume™ 1% 3-Wire  SENSORS & CONTROLS <sup>7</sup> ESN = EasySense Sensor AWNS = Lutron Athena Sensor AWNR = Lutron Athena Node CAS = Casambi Wireless Control  EMERGENCY & OTHER <sup>8</sup> EMC = Emergency Circuit EPC4 = 4W Emergency Battery Pack EPC7 = 6.5W Emergency Battery Pack EPC10 = 10W Emergency Battery Pack EPC12 = 12W Emergency Battery Pack WIRING & OTHER FWH = Flexible Wiring Harness DWH <sup>9</sup> = DMX Wiring Harness FK24 = Flange Kit

1CCT @ 80+CRI, 3SDCM. For 90CRI add prefix "9"; ex: 935 = 3500K, 90CRI.

<sup>2</sup>BIOS SkyBlue Biological Static & Dynamic circadian lighting page 3.

<sup>3</sup>Tunable White, Dim-to-Warm and RGBW ordering codes page 2.

<sup>4</sup>Add white CCT to RGBW; ex: RGB35 = RGB w/3500K white.

<sup>5</sup>DLC options are limited to FL optics, static white 35/40K CCT @ 80CRI, SO lumens, all mounting, all finishes, and all options excluding DIMST.

<sup>6</sup>See page 4 for mounting option details.

<sup>7</sup>Sensors and control options to be commissioned wirelessly in the field using applicable Smart Phone apps by qualified personnel; page 5.

<sup>8</sup>EPC6 is standard unless otherwise specified. EPC not for DMX drivers.

<sup>9</sup>DMX driver leads and through wiring with RJ-45 connectors.



### **TUNABLE WHITE** - Fixture Level Control



Tunable White available in a range of 2700K-6500K CCT @ 80+CRI and 3SDCM color accuracy. Control via two 0-10V dimmers (one CCT, one intensity) controllers. Consult factory for 90CRI, electrical specifications and other details for each option below.

#### Applications:

- Spaces occupied overnight (~ 7pm to 7am)
- 24-hour spaces
- Shiftwork & Hospitals
- Senior Living, Alzheimer's Dementia & Assisted Living
- Higher Education, including student and staff
- Workplaces, including areas occupied after 7pm

#### Ordering Codes:

**2DIM10** = 0-10V

2DMX = DMX

2CAS = Casambi Wireless

**2ESN** = Philips EasySense Wireless

(Occupancy/Daylight Harvesting and Tunable White)

#### **DIM-to-WARM** - Fixture Level Control



Dim-to-Warm mimics incandescent dimming by warming the CCT from 6500K to 2700K as light levels are dimmed. 0-10V driver is standard.

#### Applications:

- Hospitality
- Entertainment
- Living Facilities

#### Ordering Code:

**DTW** = Dim-to-Warm

### RGBW & RGBWW<sup>1</sup> - Fixture Level Control























For color effects with LO/SO/HO white CCT's for **general illumination** in a host of applications. All options require DMX control (by others). 80CRI w/3SDCM color accuracy is standard. May not be compatible with all diameters of COML-24. Consult factory for details when ordering.

#### Applications:

- **Entertainment Spaces**
- Hospitality & Banquet
- Theatre & Stage
- Seasonal Applications
- Branding
- Wayfinding

Ordering Codes:

RGB = RGB only

**RGB27** = RGB w/2700K

**RGB30** = RGB w/3000K

**RGB35** = RGB W/3500K **RGB40** = RGB w/4000K

**RGB50** = RGB w/5000K

**RGBWW** = RGB w/2700K-6500K

RGBW, RGBWW and Advanced Color options must be addressed and commissioned by knowledgeable controls/DMX professionals. Fixture integral DMX wiring harnesses (DWH) available. Consult factory for details.



# **BIOS SkyBlue**

BIOS SkyBlue biological technology brings the benefits of blue skies inside. BIOS SkyBlue is the only spectrally optimized circadian solution to pinpoint the region that drives wellness benefits including: increased alertness, enhanced productivity, better mood, and better sleep. More information may be found at www.bioslighting.com or by contacting Day-O-Lite directly.

### **BIOS Biological Static** - Daytime Solution

BIOS Biological Static solutions are designed for daytime applications. BIOS Static Biological LED features key BIOS SkyBlue™ (490nm) for maximum daytime circadian impact. BIOS Static Biological LED Light Engines are available in 3000K, 3500K, and 4000K. Lighting controls are easy; simply switch the lights on/off or the lights can be dimmed using a single-channel constant current (CC) LED driver with any standard dimming interface.

#### Applications:

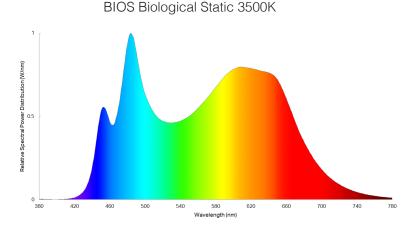
- Spaces occupied during the daytime ~7am 7pm
- K-12 Schools / Higher Education
- Offices
- Daytime Adult Care Facilities
- Medical Offices

**BIOS Biological Static** Ordering Codes:

**B30** = 3000K

**B35** = 3500K

**B40** = 4000K



# BIOS Biological Dynamic - Day & Night Solution A

BIOS Biological Dynamic solutions are designed to transition from daytime to evening in a dim-to-warm protocol. The daytime CCT includes full BIOS SkyBlue™ (490nm) for maximum daytime circadian impact, while the evening spectrum removes BIOS SkyBlue™ altogether, providing a minimal circadian stimulus after hours. Available in 3000K-2700K, 3500K-3000K and 4000K-3500K. Simply dim the lights in the evening to remove the daytime SkyBlue wavelengths (490nm) and convert your lights from day mode to night mode via a single controller (0-10V, ELV, DMX, Wireless).

### BIOS Biological Tunable White - Day & Night Solution B

BIOS Biological Tunable solutions are designed to transition from daytime to evening in a dim-to-warm protocol. The daytime CCT includes full BIOS SkyBlueTM (490nm) for maximum daytime circadian impact, while the evening spectrum removes BIOS SkyBlueTM altogether, providing a minimal circadian stimulus after hours. Available in 3000K-2700K, 3500K-3000K and 4000K-3500K. Simply dim the lights in the evening to remove the daytime SkyBlue wavelengths (490nm) and convert your lights from day mode to night mode via a single controller (0-10V, ELV, DMX, Wireless).

BIOS Biological Tunable is also compatible with two-channel color tuning systems. Simply dim the lights in the evening to convert your lights from day mode to night mode via a multi-channel controller (0-10V, ELV, DMX, Wireless). 3000K, 3500K and 4000K CCTs all dim to 2700K.

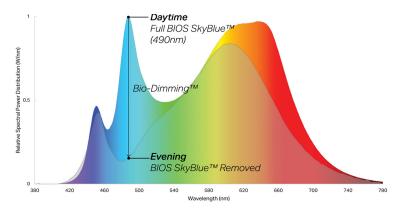
### Applications:

- Spaces occupied overnight (~ 7pm to 7am)
- 24-hour spaces
- Shiftwork & Hospitals
- Senior Living, Alzheimer's Dementia & Assisted Living
- Higher Education, including student and staff
- Workplace, including areas occupied after 7pm

**BIOS Biological BIOS Biological** Dynamic White Tunable White Ordering Codes: Ordering Codes:

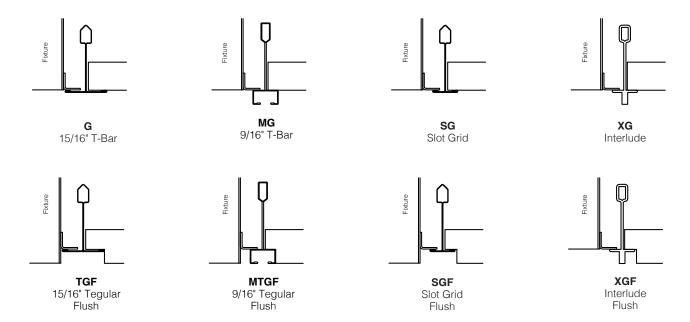
B30D = 3000K-2700KB30T = 3000K-2700KB35D = 3500K-3000KB35T = 3500K-2700KB40D = 4000K-3500KB40T = 4000K-2700K

# BIOS Biological Dynamic 3500K



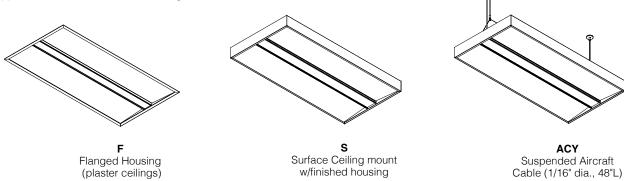


## **Grid Ceiling Mounting Options**



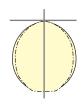
# **Additional Mounting Options**

In addition to recessed mounting in grid ceilings Harmony may also be installed in plaster and sheetrock ceilings, surface mounted to ceilings, or suspended. Surface and suspended options are supplied with a finished exterior housing.



FK-22 Flange Kit availble for grid to plaster ceiling conversion

# **Photometry**



HML-A-D-SI-40-**VLO**-24 CCT: 4000K WATTS: 27 LUMENS: 3020 LPW: 112

HML-A-D-SI-40-**HO**-24 CCT: 4000K WATTS: 68 LUMENS: 7550 LPW: 110 HML-A-D-DP-SI-**LO**-24 CCT: 4000K WATTS: 41 LUMENS: 5430 LPW: 111

HML-A-D-SI-40-VHO-**24** CCT: 4000K WATTS: 81 LUMENS: 9050 LPW: 109 HML-A-D-SI-40-**SO**-24 CCT: 4000K WATTS: 54 LUMENS: 6040 HML-A-D-SI-35-**\$3D**-24 **DLC** V5.1 Standard CCT: 3500K WATTS: 53 LUMENS: 6213 LPW: 118 HML-A-D-SI-40-**\$4D**-24

HML-A-D-SI-40-**S4D**-24 **DLC** V5.1 Standard CCT: 3500K

CCT: 3500K WATTS: 53 LUMENS: 6410 LPW: 121

LPW: 110



### **Specifications**

CONSTRUCTION: 20 gauge CRS housing and internal components. Extruded Aluminum divider rails with specular aluminum inserts.

REFLECTOR: 20 gauge CRS finished in highly reflective baked white enamel with pre-finished reflective LED tray.

**OPTICS:** LED optimized Satin Ice (SI) acrylic lay-in lenses.

**LED:** Static white LED modules in 30/35/40 & 50K CCT, 80/90CRI. Lumen maintenance minimum L<sub>70</sub>= 50,000 hours. 3 SDCM color consistency. BIOS SkyBlue, RGB, RGBW, RGBWW. Tunable White and Dim-to-Warm options available; field replaceable.

**DRIVER:** Standard driver is Class 2 AOC 0-10V to 1%, Dim-to-Off available. 120/277V input, PF > 90%, THD < 20 @ 120V. DMX, DALI & Lutron protocols available. All drivers prewired for connection to control system (by others); field replaceable.

**MOUNTING:** Standard installation is in an exposed inverted T-bar ceiling. Fixtures are supplied with four T-bar brackets for additional support. May also be surface mounted, flanged for installation in plaster ceilings and suspended with aircraft cables.

FINISH: Housing and components finished in baked white enamel.

**CERTIFICATION:** cETLus listed conforming to UL STD. 1598 and certified to CSA STD C22.2 NO. 250.0. Suitable for dry & damp locations. Union Made in the United States of America. I.B.E.W. RoHS and BAA compliant. Declare Red List Approved.

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WEIGHT: Consult Factory.