# Quad Series | QDL-24-D

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Project	

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Notes

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# Features

Fully welded, extruded aluminum housing. LED optimized optics for smooth illumination end-to-end. Programmable driver for custom lumen packages. 0-10V standard. High efficacy LEDs in 80 or 90 CRI; tunable white and tunable color. BIOS SkyBlue, RGB, RGBW and Advanced Color (125mm pixels) available. A **Declare** Red List Approved product.

# Ordering Guide

- 2 3/4" -

V PER ORDERING GUIDE

MODEL	OPTICS	CCT <sup>1</sup>	LUMENS	SIZE <sup>4</sup>	<b>MOUNTING<sup>5</sup></b>	FINISH	OPTIONS
QDL-24-D	FL						
QDL-24-D Direct	STANDARD FL = Flush Opal Acrylic (snap-in)	STATIC WHITE' 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 2PSQ = for Lutron 2ESN = for Philips 2CAS = for Casambi RGB + WHITE <sup>3</sup> RGB = RGB RGBW = RGBW 125mm incremental pixel color control for chases and animated effects.	LO = Low Output SO = Stanard Output HO = High Output See page 5 for Lumens, Watts & LPW for all sizes.	14 = 14* 20 = 20* 25 = 25* 31 = 31* 36 = 36* 42 = 42* 47 = 47*	AC = Aircraft Cable PD = Pendant Stem S = Surface Mount	W = White CC = Custom Color AMW = Anti-Microbial White	DIMMING DRIVERS DIM10 = 0-10V (1%) - Standard DIMSR = 0-10V (5.0%) Sensor Ready DIMSR = 0 Standard DIMSR = 0 Standard DIMSR = 0 Standard DIMSR = 0 Standard DIMSR = Step Dimming (40%/100%) DALI = DALI (5.0%) DMX = DALI (5.0%) DMX = DALI (5.0%) DMX = DALI (5.0%) DMX = Standard SENSORS & SENSORS LDE1 = Hi-Lume™ 1% EcoSystem™ L3DA3W = Hi-Lume™ 1% 3-Wire VDO = Vive Sensor by Lutron AWNR = Athena RF/Node AWNS = Athena RF/Node AWNS = Athena RF/Node AWNS = Athena Wireless Sensor SENSORS & CONTROLS ESN = PhilipsTM EasySense DAY = Daylight Harvesting OCC = Occupancy Sensor CAS = Casambis Bluetooth OTR = Other (specify) EMERGENCY EMC = Emergency Circuit GTD = Generator Transfer Device EPC4 = 4W Emergency Battery Pack EPC7 = 7W Emergency Battery Pack EPC10 = 10W Emergency Battery Pack EPC12 = 12W Emergency Battery Pack EPC12 = 12W Emergency Battery Pack Please consult factory.

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

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

 $^{\mathrm{3}}\textsc{Tunable}$  White, RGB +White and Advanced Color ordering codes page 2.

<sup>4</sup>Lumens @ 80CRI, FL lens. All photometrics page 5.

<sup>5</sup>Actual dimensions page 4.

<sup>6</sup>Mounting details page 5.



#### TUNABLE WHITE - Fixture Level Control



Day-O-Lite offers Tunable White in a range from 2700K-6500K CCT @ 80+CRI and 3SDCM color accuracy for a range of two-channel control options. Consult factory for 90CRI, electrical specifications and other details for each option below.

**2ESN** Option combines tunable white light with a fixture integrated occupancy and daylight harvesting sensor. CCT and intensity is controlled wirelessly with kinetic switches (by Illumra and others). Occupancy and daylight harvesting controlled automatically with parameters configurable with the Philips MasterConnect app available for Android and iPhone smart phones.

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

Ordering Codes:

2DIM10 = 0-10V 2DMX = DMX 2PSQ = Lutron Quantum 2CAS = Casambi Wireless 2ESN = Philips EasySense Sensor 2AWNR = Lutron Athena RF only 2AWNS = Lutron Athena RF/Sensor

## **RGB + WHITE** - Fixture Level Control



Combine RGB 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. Consult factory for 90CRI, electrical specifications and other details for each option below. May not be compatible with all fixture variations - 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

#### ADVANCED COLOR - 125mm Pixel Level Control



Day-O-Lite's Advanced Color options combine RGB or RGBW with multi-pixel control for advanced **chases**, animated **visual effects** and other programmable scenes with **125 mm pixel** granularity. Choose from a vibrant color palette with RGB or RGBW LEDs for seamless color mixing and dimming - the perfect replacement for glass neon with improved reliability and durability.

Requires configuration with a remote proprietary digital drive power supply. Auto-addressing makes setup and commissioning quick and easy. DMX (by others) required for control. May not be compatible with all fixture variations - consult factory for details when ordering.

Applications:

- Architectural Installations
- Digital Signage
- Arcades, Clubs
- Theatre & Stage
- Film & TV sets
- Indoor/Outdoor (IP66)

Ordering Codes:

 ACRGB
 = RGB only

 AC27
 = RGB w/2700K

 AC30
 = RGB w/3000K

 AC40
 = RGB w/4000K

## **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

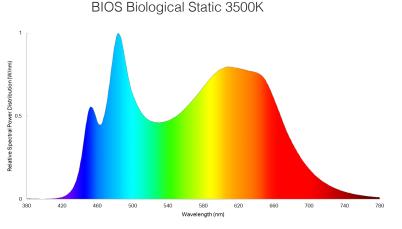
BIOS Biological Static solutions are designed for daytime applications. BIOS Static Biological LED features key BIOS SkyBlue™ (490nm) for maximum daytime circadian impact. BIOS Static Biological LED Light Engines are available in 3000K, 3500K, and 4000K. Lighting controls are easy; simply switch the 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<sup>™</sup> (490nm) for maximum daytime circadian impact, while the evening spectrum removes BIOS SkyBlue<sup>™</sup> 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).

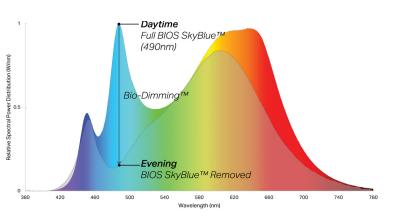
BIOS Biological Tunable is also compatible with two-channel color tuning systems. Simply dim the lights in the evening to convert your lights from day mode to night mode via a multi-channel controller (0-10V, ELV, DMX, Wireless). 3000K, 3500K and 4000K CCTs all dim to 2700K.

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

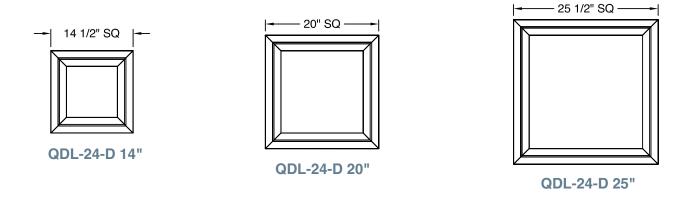
BIOS Biological	BIOS Biological
Dynamic White	Tunable White
Ordering Codes:	Ordering Codes:
<b>B30D</b> = 3000K-2700K	<b>B30T</b> = 3000K-2700K
<b>B35D</b> = 3500K-3000K	<b>B35T</b> = 3500K-2700K
<b>B40D</b> = 4000K-3500K	<b>B40T</b> = 4000K-2700K

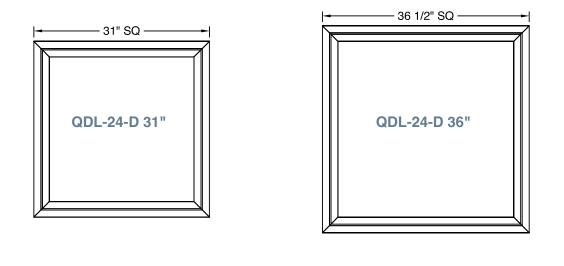
#### BIOS Biological Dynamic 3500K

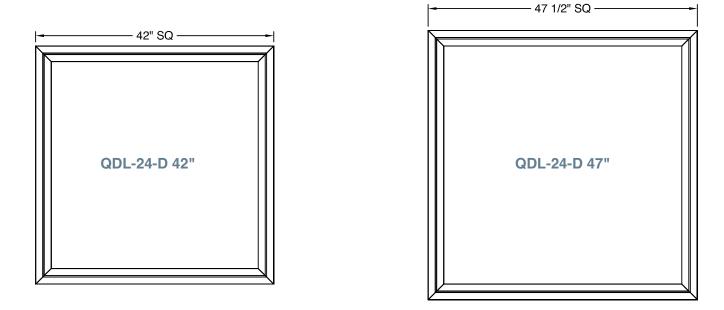


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#### **Dimensions**







#### Photometry

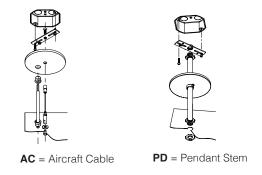
_	SIZE	LO LUMENS	LO WATTS	LO LPW	SO LUMENS	SO WATTS	SO LPW	HO LUMENS	HO WATTS	HO LPW
	14"	2005	20	100	2669	26	103	3338	32	105
	20"	3007	30	100	4005	39	103	5015	48	105
<u>)</u>	25"	4045	40	101	5401	52	104	6755	63	107
1	31"	5049	50	101	6738	65	104	8409	79	106
	36"	6063	60	101	8083	77	104	10,102	95	106
	42"	7074	70	101	9423	91	104	11,792	111	106
	47"	8100	80	101	10,823	103	105	13,517	127	106

3500K @ 80CRI, 100% direct distribution, FL lens (download IES files @ www.dayolite.com)

#### **Standard Suspensions**

Standard suspension options include adjustable self-locking aircraft cables (AC) and rigid pendant stems (PD). AC assembly is 48" x 1/16" with a 5" feed canopy and 2" suspension canopies. 60" 18 gauge power and 22 gauge dimming control SJT power feed.

PD assemblies are 5/8" dia. (or 3/8" IP) hollow stem for power feed by others, 24" is standard. Consult factory for longer suspension lengths and other mounting options.



#### **Specifications**

CONSTRUCTION Extruded aluminum housing w/aluminum end caps. Steel internal components.

REFLECTOR Die-formed steel finished in highly reflective baked white enamel with pre-finished reflective LED tray.

**OPTICS** LED optimized snap-in opal acrylic flush lens (FL) Direct.

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, Tunable White and Advanced Color options available. Field replaceable.

**DRIVER** Standard driver is Class 2 AOC 0-10V to 1%, 120/277V input, PF > 90%, THD < 20 @ 120V. Additional dimming protocols available. Drivers prewired from factory for connection to control system (by others); field replaceable.

**MOUNTING** Standard options include adjustable self-locking aircraft cables (AC), and rigid pendant stems (PD). AC assembly is 48" x 1/16" with a 5" feed canopy and 2" suspension canopies. 18 gauge power and 22 gauge dimming control SJT feed. PD assemblies are 5/8" dia. (or 3/8" IP) hollow stem for power feed by others, 24" is standard.

FINISH Housing and components finished in baked white enamel. Canopies and pendant stems are white enamel unless otherwise specified.

**CERTIFICATION** Luminaires are 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 compliant. DLC V5.1 listed. Declare Red List Approved.

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