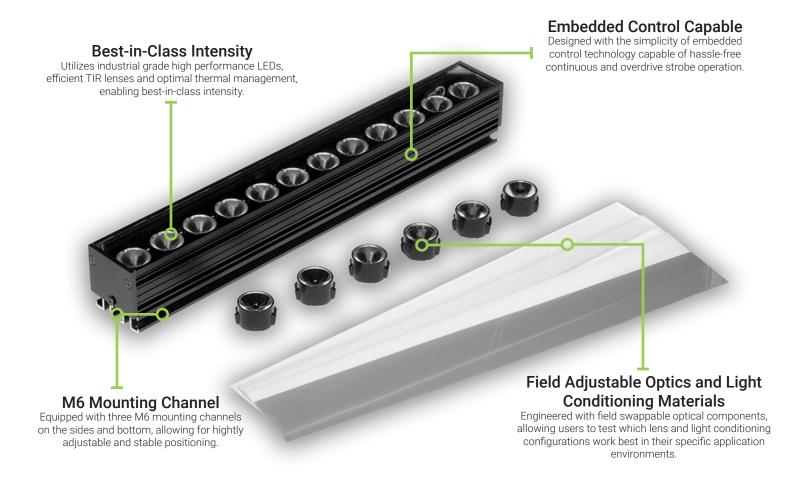
# **AL325 Series**

# Modular Bar Light | Product Datasheet





# **AL325 Series Description**

Solve your unique machine vision lighting challenges with the AL325 Modular Bar Light Series. This innovative modular system offers best-in-class performance and unmatched flexibility through its user-swappable efficient optical components. Eliminate the guesswork of selecting the correct optics.

Easily transition between narrow and wide beam angles, or experiment with different light conditioning materials, directly in the field. Embedded control options provide hassle-free continuous and overdrive strobe functionality. The AL325 adapts to your evolving needs, delivering optimal illumination for applications ranging from detailed component gauging to logistics scan tunnel lighting, all with industry-leading build-to-order lead times of one to two weeks.



**High Intensity** 



Scalable Design



16 Wavelengths Available



Polarization and Oblique Films Available



1-2 Week BTO Lead Times

# **AL325 Series**

# **Product Datasheet**

# Modular Bar Lights



# **General Information**

				General Specifications			
Category	Specification			Detail			
	Available Wav	elengths		White, 365 nm, 375 nm, 385 nm, 395 nm, 405 nm, 455 nm, 470 nm, 505 nm, 530 nm, 590 nm, 625 nm, 660 nm, 730 nm, 850 nm, 940 nm			
Optical	Available Lens	sing Options		Narrow (14°), Medium (25°), Wide (36°), Extra Wide (55°), Elliptical (45°+15°), Non Lensed			
	Available Ligh	t Conditioning		Homogenizer, Diffuser, Polarizer, Transversal Ob	olique, Longtitudinal Oblique		
	Power Consu	mption Info		See Page 11 for Details			
Electrical	Cable Info	Cable Info		Cable not included for EC/ES and 24V Variants All others: 80" -0/+6" Long (2 m -0/+150 mm), 105 °C Rated, Foil Shield w/ Drain, 24V			
			Length	6.27" (159.3 mm) to 84.53" (2147.1 mm)			
		Standard	Width	1.57" (39.8 mm)			
	Sizing Info		Height	1.78" (45.2 mm)	See Page 9 for Details		
	Sizing imo	Sealed	Length	TBD	300 · ago / · · · · · 201a3		
Mechanical			Width	TBD			
			Height	TBD			
	Weight Info (S	Standard)		~ 1.16 lbs (~526 g) per 300mm Unit Length			
	Mounting Info	)		M6 Mounting Nut Channel			
	Material Info			Anodized Aluminum Housing, Acrylic Window, Nylon Strain Relief, PVC Cable Jacket, Steel Black Oxide & Zinc Plated Steel Fasteners, Optional Silicone Sealant, Optional Neoprene Gasket/ Nylon Washers			
Theymal	Operating Cas	se Temperatur	es	25 °C to 60 °C			
Thermal	Operating Am	bient Tempera	atures	0 °C to 35 °C			
	Compliance			CE, RoHS, IEC 62471			
Certification	IP Rating			TBD			
	Lumen Maintenance - White Only			L70 (50,000 Hours)			

# Product Datasheet



## **General Information - Continued**

# Part Number Key

Model	Lens	Emitting Length (mm)	-	Peak Wavelength (nm)	Connector/ Control	-	Window Material	Light Conditioning 1 (Optional)	Light Conditioning 2 (Optional)	-	IP Rating (Optional)
AL325	X	XXXX	-	XXX	XX	-	Χ	Χ	Χ	-	
AL325	N (Narrow)	0150 to 2100		365 <sup>4</sup>	EC		A (Clear)	P (Polarizer) <sup>3</sup>	T (Transversal Oblique)		W (IP65) <sup>2,3</sup>
	M (Medium)	(scalable		375 <sup>4</sup>	ES		H (Homogenizer) <sup>2</sup>		L (Longtitudinal Oblique)		
	W (Wide)	in 150 mm		385 4	24		D (Diffuser) <sup>1</sup>				
	Z (Extra Wide)	increments)		395 4	C1						
	E (Elliptical)			405 4	C5						
	X (No Lens)			455							
				470							
				505							
				530							
				590							
				625							
				660							
				730							
				850							
				940							
				WHI							
more info	ormation on page	10		5	11			6			

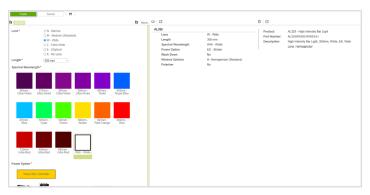
Example Part Numbers: AL325M0300-WHIES-H AL325N0600-660EC-APT

<sup>1</sup> The diffuser is available up to 900 mm in emitting length <sup>2</sup> The homogenizer is available up to 600 mm in emitting length when configured with the IP65 rating <sup>3</sup> The polarizer is available up to 900mm in emitting length when configured with the IP65 rating <sup>4</sup> Only available with narrow, medium, wide or no lensing

# **Lead Times**

Build-to-Order products ship within one to two weeks.

# Configurator

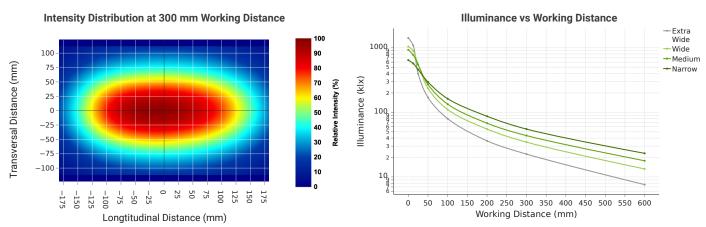


Need a build-to-order custom lighting solution in 2 weeks or less? Advanced Illumination's online configurator helps you tailor our AL325 Modular Bar Light Series to your specific needs. For a guided configuration, **visit our online configurator**.



# **Optical Information**

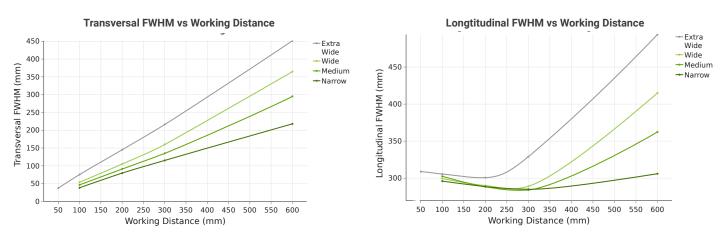
## Intensity Characteristics



Intensity distribution sample image above taken with a 300 mm white medium lensed AL325 unit w/ a homogenizer.

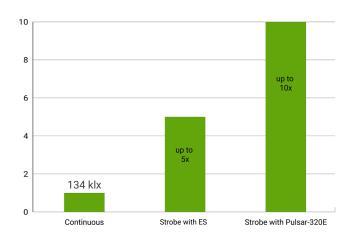
Data shown above have been collected using a 300 mm white AL325 unit  $\,$  W/  $\,$ a homogenizer.

# **FWHM vs Working Distance**



Both Full Width Half Maximum (FWHM) vs Working Distance plots shown above have been measured using a 300 mm white AL325 unit w/a homogenizer.

# Continuous vs Pulsed Intensity



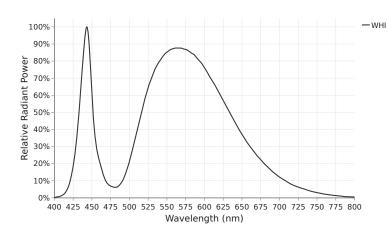
Under continuous operation, a 300 mm white medium lensed AL325 unit with a homogenizer will output an **illuminance of 134 klx** and **an irradiance of 427 W/m2** at a 100 mm working distance. For applications that require higher output, the AL325 Series has been engineered to be overdrive strobe capable. When configured with Al's strobe enabled embedded control option (ES), the AL325 is capable of outputting up-to 5X continuous levels. When configured with a C5 connector, compatible with Al's Pulsar 320E, an AL325 can be **strobed up-to 10X continuous intensity levels.** 

**Product Datasheet** 



# **Optical Information - Continued**

## White Spectral Profile

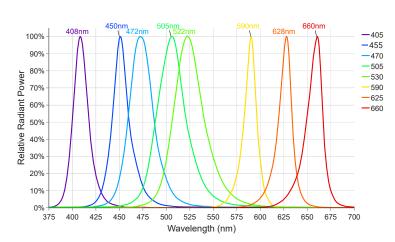


White LED illumination is the most commonly used machine vision lighting configuration. It is often the default choice when specific features of interest do not require color-based highlighting. However, white LEDs can vary in color temperature, which can impact machine vision systems, specifically when matching white light sources.

The AL325 Series white LEDs have a relatively neutral color correlated temperature (CCT) of **5500k**.

For a more detailed look at the white spectral data, download the csv file of the raw spectral values and refer to our Product Spectra Distribution Charts PDF.

## Visible Spectral Profiles

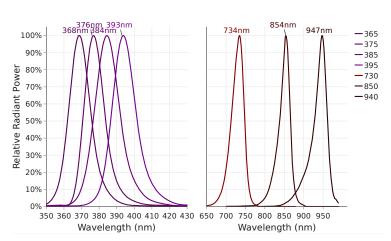


Visible color illumination consists of using wavelengths between 400-700 nm to either create or eliminate contrast on an inspection subject based on differences in a features color hue. When referring to a color wheel, simply remember the following; like colors reflect and brighten surfaces; conversely, opposing colors absorb and darken surfaces.

The A325 is available in **405 nm, 455 nm, 470 nm, 505 nm, 530 nm, 590nm, 625 nm, and 660 nm** visible color configurations.

For a more detailed look at the visible color spectral data, download the **csv file of the raw spectral values** and refer to our **Product Spectra Distribution Charts PDF**.

# Non-Visible Spectral Profiles



Near-infrared (NIR) and ultraviolet A (UVA) imaging are machine vision techniques that utilize wavelengths outside the visible spectrum. NIR light, with wavelengths between 700-1000 nm, can penetrate certain materials opaque to visible light, making it ideal for circuit board analysis, food safety inspection, and medical imaging. In contrast, UVA light, typically ranging between 315-400 nm, interacts with specific materials to induce fluorescence or highlight surface features, useful in applications like counterfeit detection, leak detection, and contamination detection.

The AL325 Series is available in **365 nm, 375 nm, 385 nm, 395 nm, 730nm, 850 nm and 940 nm** configurations.

For a more detailed look at the NIR or UVA spectral data, download the csv file of the raw spectral values and refer to our Product Spectra Distribution Charts PDF.



# **Optical Information - Continued**

### **Polarization Option Detail**

# Non-polarized







Polarization has various applications, but it is most commonly used to reduce glare on specular surfaces when imaging reflective materials like plastic, metal, glass, or wet surfaces. By placing a linear polarizer over the light source and another over the camera lens, oriented perpendicularly, reflected light that causes glare can be selectively blocked. This allows for the observation of details that would otherwise be obscured by the reflection, such as printed text on packaging. However, since polarization inherently blocks some light, you may need to increase exposure to compensate for the reduced intensity, or consider alternative lighting geometries to lessen glare without polarization.

### Photobiological Risk Factors

Group	Description	Affected Wavelengths
Exempt	No Photobiological Hazard	850 nm, 940 nm
Group 1	No Photobiological hazard under normal behavioral limitations	455 nm, 470 nm, 505 nm, 530 nm, 590 nm, 625 nm, 660 nm, 730 nm, WHI
Group 2	Does not pose a hazard due to aversion response to bright light or thermal discomfort	365 nm. 375 nm. 385 nm. 395 nm. 405 nm

Advanced Illumination's lighting products have been tested and classified to IEC standards by accredited testing services. For more information on photobiological risk factors, please view the following PDF: https://www.advancedillumination.com/wp-content/uploads/2019/04/IEC-040119.pdf

### Cleaning Guidelines



To clean our light's optics, it is best to only clean when necessary. Dusting is always the first step in cleaning your optics. Wiping a dusty optic is like cleaning it with sandpaper. So always dust with a canned air duster or compressed and filtered air before wiping any optic. If the dusted optic has no visible stains after you dust it, then remember: "If it's not dirty, don't clean it." Avoid wiping optics when possible.

If dusting did not clean the lens or the lens has stains, use only de-ionized water and mild dish soap with a low lint cloth designed for optics to avoid damage to the optic by any harsh chemicals.

Polarizers, beam splitters and collimated films should never be wiped with any type of cloth or solvent, only use the air dusting method to clean these types of optics.

The aluminum housing can be wiped down when dusting is not a sufficient means to thoroughly clean.

# **AL325 Series**Product Datasheet



# **Bar Light Comparison Matrix - Continued**

Not finding the optical specifications you are looking for with the AL325 Series? Refer to the bar light comparison matrix below to compare and contrast Advanced Illumination's comprehensive product offering:

Attributes			AL325			AL	295		LL174	
Lens Type	Narrow (N)	Medium (M)	Wide (W)	Extra Wide (Z)	Eliptical (E)	Medium (M)	Wide (W)	Narrow (N)	Medium (M)	Wide (W)
Beam Angle	14°	25°	36°	56°	45° + 15°	20°	32°	10°	25°	40°
Beam Direction		No	rmal or Oblic	lue		Nor	mal		Normal	
Intensity at	163 klx	134 klx	110 klx	80 klx	TBD	88 klx	65 klx	75 klx	57 klx	45 klx
100 mm WD	456 W/m²	427 W/m²	352 W/m²	254 W/m²	TBD	288 W/m²	208 W/m²	250 W/m²	187 W/m²	146 W/m²
Transversal FWHM at 600 mm WD	8.54 in (217 mm)	11.73 in (298 mm)	14.25 in (362 mm)	17.12 in (450 mm)	TBD	12.79 in (325 mm)	15.12 in (384 mm)	9.06 in (230 mm)	13.90 in (353 mm)	16.06 in (408 mm)
Longitudinal FWHM at 600 mm WD	12.05 in (306 mm)	14.25 in (362 mm)	16.34 in (415 mm)	19.45 in (494 mm)	TBD	15.95 in (405 mm)	17.72 in (450 mm)	13.50 in (343 mm)	16.69 in (424 mm)	18.35 in (466 mm)
Minimum Working Distance	3.94 in (100 mm)	3.94 in (100 mm)	3.94 in (100 mm)	1.97 in (50 mm)	TBD	0.98 in (25 mm)	0.79 in (20 mm)	3.94 in (100 mm)	1.97 in (50 mm)	1.46 in (37 mm)
Light Width			1.57 in (39.8 mm)			0.79 in 1.33 in (20.0 mm) (33.8 mm			1.33 in (33.8 mm)	
Light Height		1.78 in (45.2 mm)				0.79 in 1.12 in (20.1 mm) (28.4 mm)				
Longest Emitting Window Length			84.28 in (2140 mm)				51 in 7 mm)		96.72 in (2457 mm)	
Sizes Available	14	14	14	14	14	14	14	16	16	16
Visible Wavelengths Available	9	9	9	8	8	9	8	8	9	8
UV Wavelengths Available	4	4	4	0	0	4	0	0	4	0
IR Wavelengths Available	3	3	3	3	3	3	3	3	3	3
Polarization Available	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Diffusion Available	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IP Rating			TBD			IP	50		IP50	
Price	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$

To ensure consistent comparisons, all data presented above is based on 12-inch white LED models unless explicitly stated otherwise. Additionally, all measurements provided above are derived from "standard" configurations, excluding sealed models if available as optional.

If you are still not finding the optical specifications needed for your application, **inquire** about our semi-custom and full-custom capabilities.

# Modular Bar Lights



# **Bar Light Comparison Matrix - Continued**

Not finding the optical specifications you are looking for with the AL325 Series? Refer to the continued bar light comparison matrix below to compare and contrast Advanced Illumination's comprehensive product offering:

Attributes		AL247		AL116	AL126	AL150
Lens Type	Narrow (N)	Medium (M)	Wide (W)	No Lenses	No Lenses	Aimed
Beam Angle	10°	25°	40°	70°	60°	N/A
Beam Direction		Normal		Normal	Normal	Oblique
Intensity at	84 klx	67 klx	48 klx	32 klx	14 klx	2.2 klx
100 mm WD	277 W/m²	218 W/m²	155 W/m²	110 W/m²	48 W/m²	8.5 W/m²
Transversal FWHM at 600 mm WD	9.57 in (243 mm)	11.38 in (289 mm)	15.87 in (403 mm)	31.54 in (801 mm)	23.31 in (592 mm)	N/A
Longitudinal FWHM at 600 mm WD	13.58 in (345 mm)	14.65 in (372 mm)	18.03 in (458 mm)	46.34 in (1177 mm)	31.26 in (794 mm)	N/A
Minimum Working Distance	3.94 in (100 mm)	1.97 in (50 mm)	1.46 in (37 mm)	0.47 in (12 mm)	0.47 in (12 mm)	0.47 in (12 mm)
Light Width		1.69 in (42.9 mm)		0.79 in (20 mm)	1.27 in (32 mm)	1.33 in (34 mm)
Light Height		0.95 in (24.0 mm)		0.79 in (20 mm)	0.79 in (20 mm)	1.12 in (28 mm)
Longest Emitting Window Length		24 in (610 mm)		20.27 in (515 mm)	41.42 in (1052 mm)	82.12 in (2086 mm)
Sizes Available	4	4	4	10	20	80
Visible Wavelengths Available	8	8	8	8	8	4
UV Wavelengths Available	0	0	0	4	4	1
IR Wavelengths Available	3	3	3	2	2	1
Polarization Available	No	No	No	Yes	Yes	Yes
Diffusion Available	No	No	No	Yes	Yes	Yes
IP Rating		IP69K		IP50	IP50	IP50
Price	\$\$\$	\$\$\$	\$\$\$	\$\$	\$	\$\$\$\$

To ensure consistent comparisons, all data presented above is based on 12-inch white LED models unless explicitly stated otherwise. Additionally, all measurements provided above are derived from "standard" configurations, excluding sealed models if available as optional.

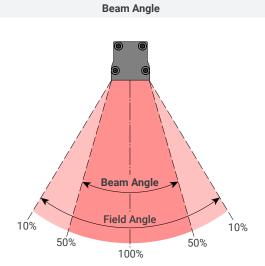
If you are still not finding the optical specifications needed for your application, inquire about our semi-custom and full-custom capabilities.



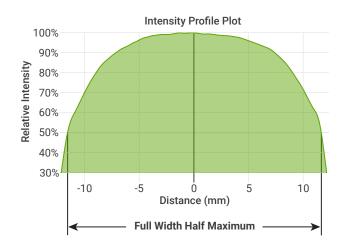
# **Bar Light Comparison Matrix - Definitions**

For definitions on the terminology used on the previous page, please refer to the table below:

Definitions



FWHM (Full Width Half Maximum)



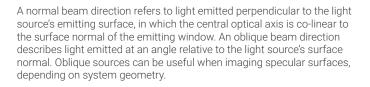
Beam Angle defines the spread of usable light from a projected machine vision light source. It's the angle where the intensity drops to 50% of its peak (FWHM). Beam angle dictates the concentrated, higher-intensity portion of the Field of View (FOV). Field angle is wider, encompassing the total spread of light down to 10% of peak intensity.

**Beam Direction** 

FWHM (Full Width Half Maximum) is a measure of the width of a light source's intensity distribution. Specifically, it defines the distance between the points on the intensity profile where the light intensity drops to 50% of its peak value. This FWHM distance is often used to determine the usable FOV (Field of View) when aiming a light at a surface for inspection.

# Surface Normal Surface Normal Centeral Axis of Beam Centeral Axis of Beam Centeral Axis of Beam

Longitudinal vs Transversal





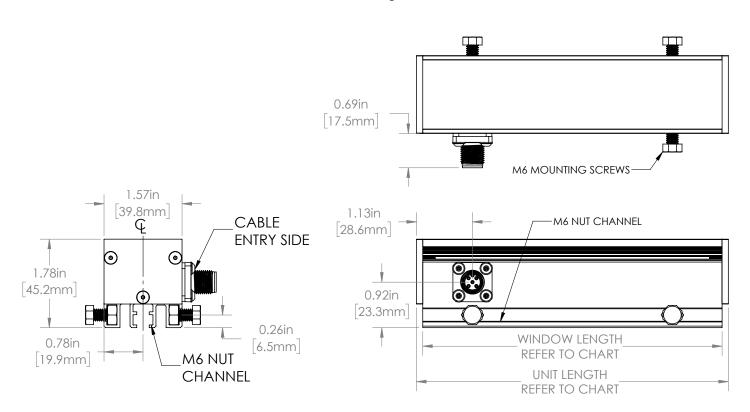
The longitudinal direction refers to the direction that runs parallel to the long axis of the light source. This is typically the longest dimension of the light source housing or emitting surface.

The transversal direction, in contrast, refers to any direction that is perpendicular to the longitudinal direction. It essentially describes any direction that "cuts across" the long axis of the light source.



# **Mechanical Information**

# Installation Drawing - Standard



For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

Sizing Chart - Standard

	Length	(Inches)	Length (Millimeters)			
Part Number	Unit	Window	Unit	Window		
AL325X0150	6.27	6.02	159.3	152.9		
AL325X0300	12.29	12.04	312.2	305.8		
AL325X0450	18.31	18.06	465.1	458.7		
AL325X0600	24.33	24.08	618.0	611.6		
AL325X0750	30.35	30.10	770.9	764.5		
AL325X0900	36.37	36.12	923.8	917.4		
AL325X1050	42.39	42.14	1076.7	1070.4		
AL325X1200	48.41	48.16	1229.6	1223.3		
AL325X1350	54.43	54.18	1382.5	1376.2		
AL325X1500	60.45	60.20	1535.4	1529.1		
AL325X1650	66.47	66.22	1688.3	1682.0		
AL325X1800	72.49	72.24	1841.2	1834.9		
AL325X1950	78.51	78.26	1994.2	1987.8		
AL325X2100	84.53	84.28	2147.1	2140.7		



### **Electrical Information**

# **Power Requirements**

# **Current Required for Power Supply Sizing**

Wavelengths	Configured w/ 24V Drive	Configured w/ Standard Controller (EC, ES, C1, C5)
365 nm, 375 nm, 385 nm, 395 nm, 405 nm, 455 nm, 475 nm, 505 nm, 530 nm, WHI	0.350A per 150 mm increment	0.450A per 150 mm increment
590 nm, 625 nm, 660 nm	0.250A per 150 mm increment	0.300A per 150 mm increment
730 nm, 850 nm, 940 nm	0.350A per 150 mm increment	0.450A per 150 mm increment

Note: All Advanced Illumination lights and controllers are nominally powered by 24V DC unless otherwise noted. Strobe overdriving with controller based models may require more current and voltage overhead. The values above do not include background current draw from the controller (~100 mA total).

# **Control Options**

Controller Image	Controller Details	Connector Image

# DCS Single Output Controller - Compatible with C1 Configurations PN: DCS-100E



The DCS-100E is a compact, din-rail mounted general-purpose external controller with one C1 output connector, wired with three channels. Capable of providing single channel control or multi-channel control for RGB compatible lights.

Output Power: 90 W Max Continuous, 540 W Max Pulsed (Overdrive Strobe)

Output Current: 4.5A Max Continuous, 15 A Max Pulsed

I/Os: 3 External Trigger Inputs

Interface: 10/100 Ethernet with Software and browser-based GUIs. SDKs are also available.

For more information about our DCS-100E, please visit the controller product page.

# DCS Triple Output Controller - Compatible with C1 Configurations PN: DCS-103E



The DCS-103E is a din-rail mounted general-purpose multi-light controller with three C1 output connectors. Capable of driving three lights in sync or asynchronously.

Output Power: 30 W Max Continuous / Output, 180 W Max Pulsed / Output Output Current: 1.5A Max Continuous / Output, 5 A Max Pulsed / Output

**I/Os:** 3 External Trigger Inputs

Interface: 10/100 Ethernet with Software and browser-based GUIs. SDKs are also available.

For more information about our DCS-103E, please visit the controller product page.





The EC is an embedded controller (within the light head) engineered for continuous or gated continuous operation. Allows for analog dimming functionality.

 $\mbox{\sc I/O:}\ \mbox{0 V} \mbox{-}\ \mbox{10 V}\ (\mbox{10\% to 100\% intensity})$  Analog Dimming Input

2.5V Min - 30V Max, <=5mA Gating Signal Input for Gated Continous Operation

Modes: Continuous and Gated Continuous

Interface: Bulkhead Connector (M12 5-pin Male, A-Code)



# Modular Bar Lights



### **Electrical Information - Continued**

# **Control Options - Continued**

Controller Image **Controller Details** Connector Image

> Embedded Controller - Continuous and Strobe - ES Configurations PN: N/A

The ES is an embedded controller (within the light head) engineered for overdrive strobe or continous operation. Allows for analog dimming functionality.

I/O: 0 V - 10 V (10% to 100% intensity) Analog Dimming Input

2.5V Min - 30V Max, <=5mA Gating Signal Input for Gated Overdrive Strobe Operation

Modes: Continuous and Gated Overdrive Strobe

Interface: Bulkhead Connector (M12 5-pin Male, A-Code)





# 24V Driver - Continuous Only - 24 Configurations

PN: N/A

24V option allows lights to operate continuous output with 24V connection and no additional

Modes: Continuous, can be wired to some 3rd party controllers or external relays for gated operation Interface: Bulkhead Connector (M12 5-pin Male, A-Code)



# **Embedded Control Option Wiring Information**

# M12 Bulkhead Connector Pinout Functions and Optional Cable Flying Lead Functions

Pin (M12)	Wire Color	24V Functions	EC/ES Functions	M12 Pinout
1	BROWN	24V DC	24 V DC	<u>(4)</u>
2	WHITE	N/A	N/A	(1) $(5)$ $(3)$
3	BLUE	DC GND	DC GND	
4	BLACK	N/A	PNP / Active High Trigger	5-Position Male Connector,
5	GRAY	N/A	0 - 10 V Analog Dimming	A-Code

The functions above are only applicable when ordering an EC, ES or 24 power configuration.

**Product Datasheet** 

# Modular Bar Lights



# **Accessories - Continued**

**Accessory Detail** 

**24 Volt DC Power Supply** PN: PS24-TL, up to 600mm PN: PS24-4, up to 2100mm

**Power Supply** 

Category



Accessory Image

This convenient power source is a universal AC input switching power supply with a regulated output DC current. The power supply comes with an LED Power Indicator, tinned leads marked Positive (+) and Negative (-) and 2 WAGO connectors for simplified assembly.

For more information about our 24 Volt DC Power Supply, please visit this webpage.

Cable



Embedded Controller Bulkhead Connector Cable - EC, ES and 24V Configurations PN: LC2-M12-5-MX

This cable connects directly to the bulkhead connector on any EC, ES or 24V configured AL325 with it's M12, 5-pos, A-Coded, female connector on one end and four flying leads on it's opposite end. The AL325 is compatible with three M12 flying lead cable options: LC2-M12-5-MX (2 meters), LC5-M12-5-MX (5 meters), and LC10-M12-5-MX (10 meters). Please note this is purchased separately.

For wiring information on this cable, please see the function chart on page 12.

DCS-100E/103E Extension Cable, Single Light Power Cable - C1 Configuration PN: LC5-M12-5-MX

Extension Cable



This extension cable was designed for applications requiring power cables longer than the standard 2 meters provided with Ai lights. This single light cable features a single male and single female 7 pin locking connector (C1) and can be purchased in 3 - 15-meter lengths.

For more information about our DCS-100E/103E Extension Cable, Single Output, please visit this webpage.

Extension Cable



DCS-100E/103E Extension Cable, Dual Light Power Cable - C1 Configuration PN: LC10-M12-5-MX

This extension cable was designed for applications requiring two identical lights to be powered through a single controller. These Y cables feature a single male and dual female 7 pin locking connectors (C1) and can be purchased in 3 - 15-meter lengths. See attached spec sheet for compatible light configuration.

For more information about our DCS-100E/103E Extension Cable, Split Output, please visit this webpage.

Camera Lens Band Pass Filters PN: BPXXX-YYY

Filters



Eliminating all but a narrow band of light (+/- 40nm) centered on the specified wavelength, band pass filters are used to enhance colors, or to stop unwanted ambient light from reaching the camera. Filtering can replace existing shrouds, simplifying the physical set up of an inspection site. Ai offers 635nm and 660nm band pass filters to fit several different lens sizes.

For more information about our Camera Lens Band Pass Filters, please visit this webpage.

## **AL325 Series**

Product Datasheet

# Modular Bar Lights



### Additional Information

### Warranty

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty. No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

### Compliancy

Our lighting products are designed and tested to meet CE, RoHS, and IEC standards. As a global ISO 9001 certified company, we understand the importance of compliance and perform accelerated testing on every product before shipment. For more information on our compliance standards, please see our compliancy documentation here: <a href="https://www.advancedillumination.com/services/compliance-statements/">https://www.advancedillumination.com/services/compliance-statements/</a>

# **Electromagnetic Compatibility**

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#### **Customer Service**

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

### Company Information

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