

### Product Highlights

- Providing a broad area of illumination with controlled fall off for machine vision applications.



### General Specifications

	Color	24V Current	All Other Controls
Electrical Specifications	625, 660	0.10 A	0.04 A
	395, 470, 520, WHI	0.08 A	0.06 A
	880	0.09 A	0.03 A
Normal Operating Temperature	0 - 60°C		
Weight	Varies by size		
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C RATED PVC JACKET, FOIL SHIELD WITH DRAIN.		
Photobiological Risk Factor	EXEMPT APPLICABLE WAVELENGTHS: 880 GROUP 1 (LOW-RISK) APPLICABLE WAVELENGTHS: 470, 520, 625, 660, WHI GROUP 2 (MODERATE-RISK) APPLICABLE WAVELENGTHS: 395		
Compliance	CE, RoHS, IEC 62471		
IP Rating	IP50		
Lumen Maintenance	L70 = 50,000 Hours		

## Part Number Key

Model	Model Extension	Number of LEDs	-	Peak Wavelength	Connector/Control	Light Conditioning Option	-	Alternative Connector
AL	XXXXX	XX	-	XXX	XX	X	-	XXX
AL	150	Refer to Emitting Length Chart <sup>4</sup>		395 (UV) <sup>2</sup>	C1	D (Diffuser)		M8 <sup>1</sup>
	4424			470 (blue)	C5	P <sup>3</sup> (Polarizer)		M12 <sup>1</sup>
	4554			520 (green)	IC			
	46120			625 (red orange)	I3			
				660 (red)	I3S			
				880 (IR)	I4			
				WHI (white)	24			

EX:  
AL15012-660C1  
AL15084-66024

<sup>1</sup>Available with IC, I3, I3S, I4, and I4 options only

<sup>2</sup>Not available with 24 V or IC options

<sup>3</sup>470 (blue) will reduce the life of the polarizer

<sup>4</sup>Only applicable for model extension AL150

## Change Notice

PCN No: 166

Date Issued: May 5, 2023

Notice Type: Product Change

Product Type: 660nm Wavelength on traditional 5mm Lights Discontinuation

## Change Notification Summary

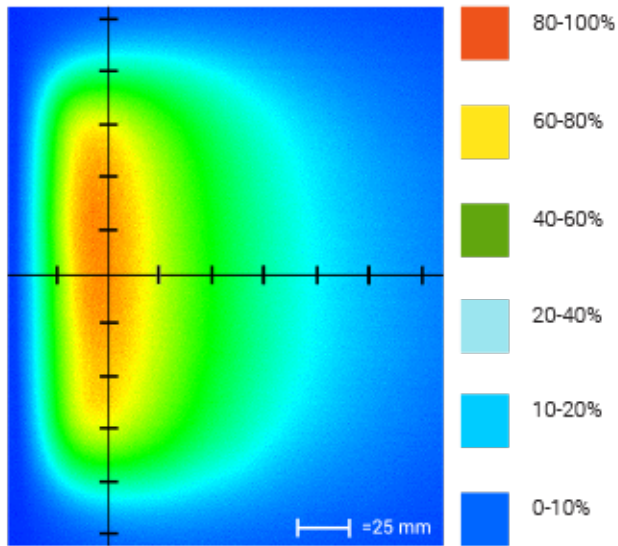
Advanced illumination (Ai) will be ending the manufacture of the 660nm color option on our classic aimed lights due to the LEDs being discontinued from the manufacturer. We expect to have six months of inventory to fulfill orders, after that we suggest purchasing the same light but with the 625nm wavelength.

Please contact your Ai Sales Representative if you have any questions.

PCN 166

## Optical Specs

### Intensity Distribution

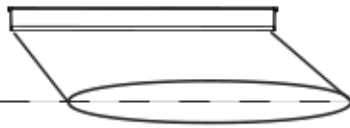


Optical measurement taken using AL4554-660C5 @ 25mm

### Area of Illuminance & Intensity

Working Area (FWHM)  
@ Working Distance

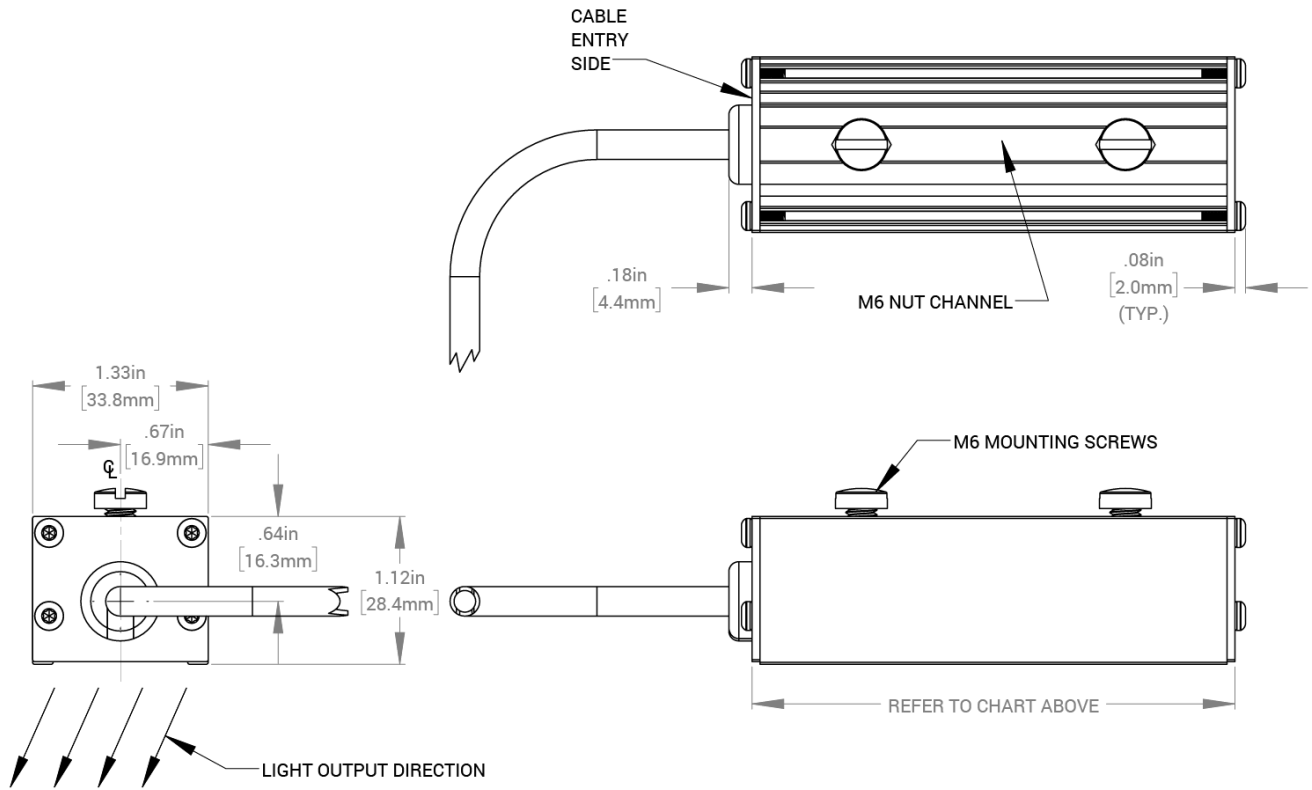
102 X 218 (mm)  
@25 (mm)



Light Output

Irradiance (W/M<sup>2</sup>): Min 81.6; Typ 96  
Illuminance (kLux): Min 5.3; Typ 6.2

## Mechanical Specs

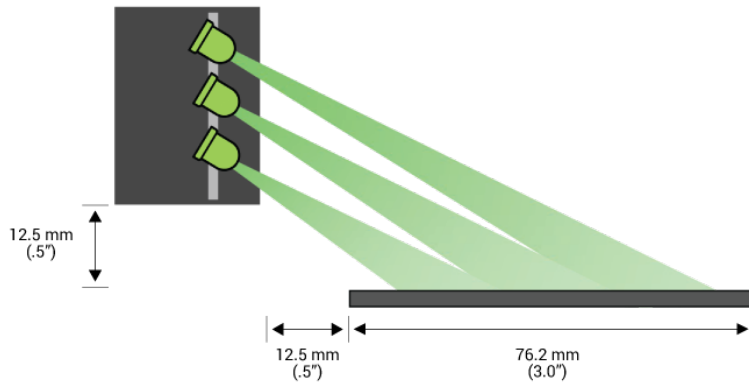


AL150 Emitting Length Chart

Emitting Length (in)	Part Number	Emitting Length (in)	Part Number	Emitting Length (in)	Part Number	Emitting Length (in)	Part Number
1.5"	AL150006	21.9"	AL150126	42.3"	AL150246	62.7"	AL150366
2.5"	AL150012	22.9"	AL150132	43.3"	AL150252	63.7"	AL150372
3.5"	AL150018	23.9"	AL150138	44.4"	AL150258	64.8"	AL150378
4.6"	AL4424 <sup>1</sup>	25.0"	AL150144	45.4"	AL150264	65.8"	AL150384
5.6"	AL150030	26.0"	AL150150	46.4"	AL150270	66.8"	AL150390
6.6"	AL150036	27.0"	AL150156	47.4"	AL150276	67.8"	AL150396
7.6"	AL150042	28.0"	AL150162	48.4"	AL150282	68.8"	AL150402
8.6"	AL150048	29.0"	AL150168	49.5"	AL150288	69.9"	AL150408
9.7"	AL4554 <sup>1</sup>	30.1"	AL150174	50.5"	AL150294	70.9"	AL150414
10.7"	AL150060	31.1"	AL150180	51.5"	AL150300	71.9"	AL150420
11.7"	AL150066	32.1"	AL150186	52.5"	AL150306	72.9"	AL150426
12.7"	AL150072	33.1"	AL150192	53.5"	AL150312	73.9"	AL150432
13.7"	AL150078	34.1"	AL150198	54.6"	AL150318	75.0"	AL150438
14.8"	AL150084	35.2"	AL150204	55.6"	AL150324	76.0"	AL150444
15.8"	AL150090	36.2"	AL150210	56.6"	AL150330	77.0"	AL150450
16.8"	AL150096	37.2"	AL150216	57.6"	AL150336	78.0"	AL150456
17.8"	AL150102	38.2"	AL150222	58.6"	AL150342	79.0"	AL150462
18.8"	AL150108	39.3"	AL150228	59.7"	AL150348	80.1"	AL150468
19.9"	AL150114	40.3"	AL150234	60.7"	AL150354	81.1"	AL150474
20.9"	AL46120 <sup>1</sup>	41.3"	AL150240	61.7"	AL150360	82.1"	AL150480

<sup>1</sup> AL4424, AL4554, and AL46120 represent legacy part numbers

## BALA Light Function Diagram



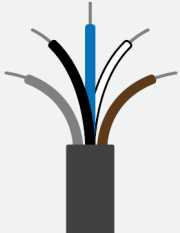
The Broad Area Linear Array (BALA) design is exclusive to Ai.

Originally designed for inspecting circuit boards, BALAs are aimed to create illumination that is very even in intensity along the length of the light, with controlled "fall off" in the transverse direction.

To create a wider area of illumination, two BALAs can be placed parallel to and facing each other.

## Electrical Specs

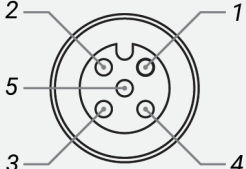
## Standard Flying Lead Functions for 24V, IC, I3, I3S, and I4 Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS	I4 FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED	NPN/ACTIVE LOW TRIGGER
BLUE	DC GND	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING

The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, I3S, or I4 control, without the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.

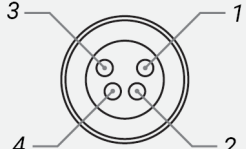
## M12 Connector Pinout Functions for 24V, IC, I3, I3S, and I4 Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS	I4 FUNCTIONS
1	24 V DC	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED	NPN/ACTIVE LOW TRIGGER
3	DC GND	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING

The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, I3S, or I4 control, with an A-coded 5-position Male M12 connector.

## M8 Connector Pinout Functions for 24V, IC, I3, I3S, and I4 Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS	I4 FUNCTIONS
1	24 V DC	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER	PNP/ACTIVE HIGH TRIGGER

The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, I3S, or I4 control, with an A-coded 4-position Male M8 connector.

For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

## Control Specs

<p><b>C1 CONNECTOR</b></p> <p>For use with: <b>DCS Series Controllers</b></p> <p>Strobe/Continuous Controllers</p>	<p><b>C5 CONNECTOR</b></p> <p>For use with: <b>Pulsar 320</b></p> <p>High Power Strobe only Controller</p>	<p><b>ICS 2 (IC)</b></p> <p>In-line Continuous Controller</p> <p>Powered with: <b>24V Power Supply</b></p>	<p><b>ICS 3</b></p> <p>In-line Strobe/ Continuous Controller</p> <p>Default On</p> <p>Powered with: <b>24V Power Supply</b></p>
<p><b>ICS 3S (I3S)</b></p> <p>In-line Strobe/ Continuous Controller</p> <p>Default Off</p> <p>Powered with: <b>24V Power Supply</b></p>	<p><b>I4</b></p> <p>In-line Strobe/ Continuous Controller</p> <p>Powered with: <b>24V Power Supply</b></p>	<p><b>24 VOLT</b></p> <p>Flying/Tinned Leads</p> <p>Powered with: <b>24V Power Supply</b></p>	

## Warranty Information

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.

## Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

## 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](mailto:orders@advancedillumination.com).

## Company Information

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