

Product Highlights

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



General Specifications

| Electrical Specifications | Color | 24V Current | All Other Controls |
|------------------------------|---|-------------|--------------------|
| | 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 ⁴ | | 395 (UV) ² | C1 | D (Diffuser) | | M8 ¹ |
| | 4424 | | | 470 (blue) | C5 | P ³ (Polarizer) | | M12 ¹ |
| | 4554 | | | 520 (green) | IC | | | |
| | 46120 | | | 625 (red orange) | I3 | | | |
| | | | | 660 (red) | I3S | | | |
| | | | | 880 (IR) | I4 | | | |
| | | | | WHI (white) | 24 | | | |
| EX: AL15012-660C1 AL15084-66024 | | | | | | ¹ Available with IC, I3, I3S, I4, and I4 options only ² Not available with 24 V or IC options ³ 470 (blue) will reduce the life of the polarizer ⁴ 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

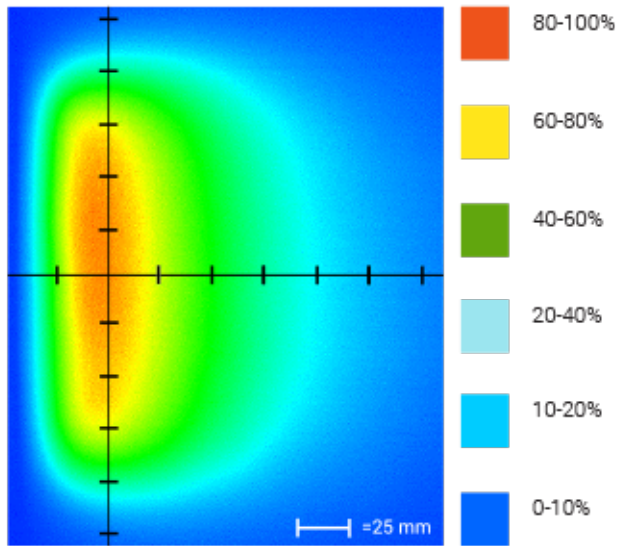
Advanced illumination (Ai) will be ending the manufacture of the 660nm color option on our classic aimed lights due to the LEDs being discontinued from the manufacturer. We expect to have six months of inventory to fulfill orders, after that we suggest purchasing the same light but with the 625nm wavelength.

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

PCN 166

Optical Specs

Intensity Distribution

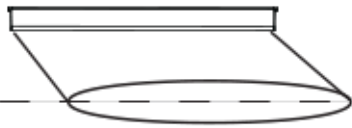


Optical measurement taken using AL4554-660C5 @ 25mm

Area of Illuminance & Intensity

Working Area (FWHM)
@ Working Distance

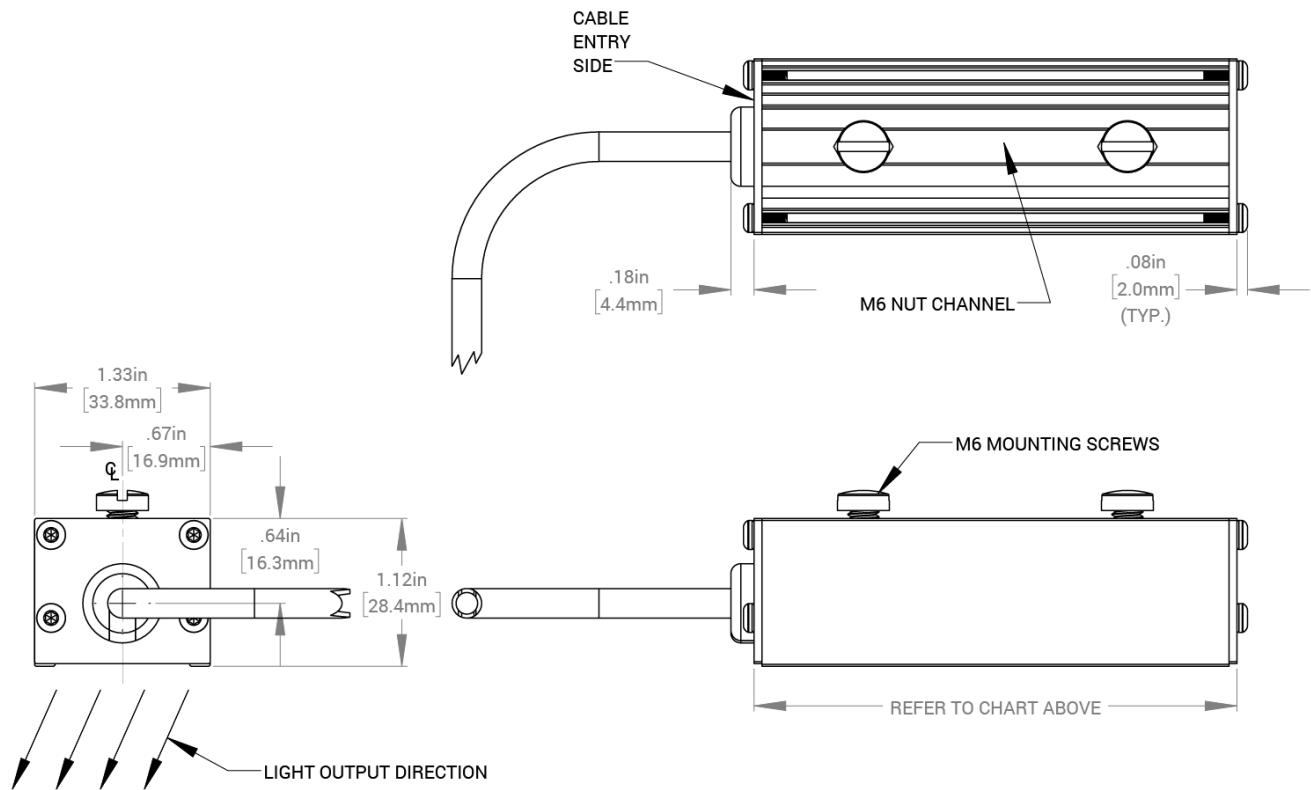
102 X 218 (mm)
@25 (mm)



Light Output

Irradiance (W/M²): Min 81.6; Typ 96
Illuminance (kLux): Min 5.3; Typ 6.2

Mechanical Specs

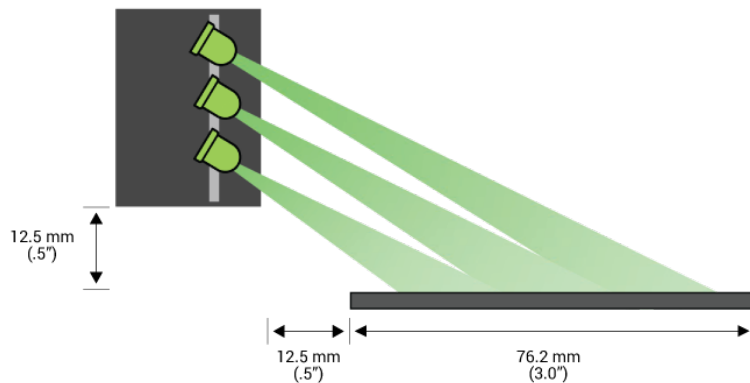


AL150 Emitting Length Chart

| 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 ¹ | 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 ¹ | 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 ¹ | 41.3" | AL150240 | 61.7" | AL150360 | 82.1" | AL150480 |

¹ AL4424, AL4554, and AL46120 represent legacy part numbers

BALA Light Function Diagram



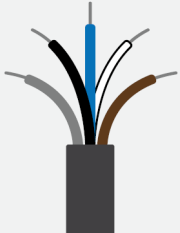
The Broad Area Linear Array (BALA) design is exclusive to Ai.

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.

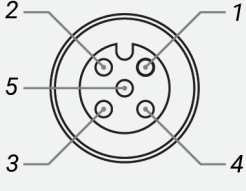
Electrical Specs

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 |

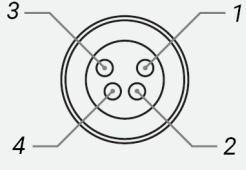
The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, I3S, or I4 control, without the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.

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

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

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.

Company Information

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