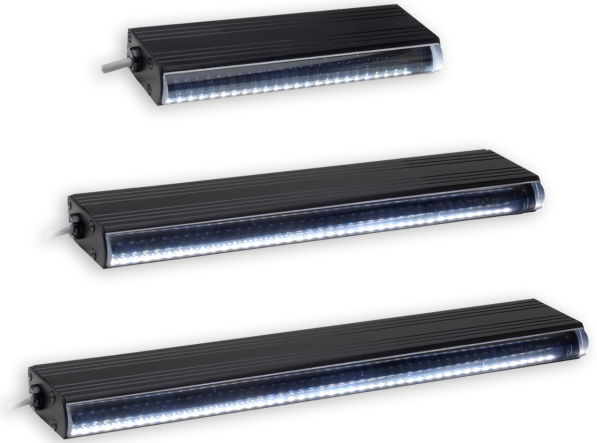


### Product Highlights

- Our classic LL163 Line Lights are suitable for low intensity, low speed line scan applications.
- These line lights are well established and have proven reliability.



### General Specifications

|                              | Color   | 24V Current    | All Other Controls  |
|------------------------------|---|----------------|---------------------|
| Electrical Specifications    | 625, 660, 880   | 0.03A per 1.5" | 0.014A Max per 1.5" |
|                              | 395, 470, 620, WHI  | 0.02A per 1.5" | 0.009A Max per 1.5" |
| Normal Operating Temperature | 0 - 60°C  |                |                     |
| Weight                       | Per 3" - 226.8g (8.0oz)   |                |                     |
| 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<br>Group 1 (Low-Risk) Applicable Wavelengths: 470, 520, 625, 660, WHI<br>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             | Lens Focus   | Number of LEDs                              | — | Peak Wavelength   | Connector/Control                 | — | Alternative Connector               |
|---|-----------------------------|--|---|---|---|-----------------------------------|---|-------------------------------------|
| LL  | XXXX                        | X  | XXX   | — | XXX   | XX                                | — | XXX                                 |
| LL  | 163<br>2912<br>3024<br>3148 | A <sup>3</sup><br>B <sup>3</sup><br>D <sup>3</sup><br>E <sup>3</sup> | Refer to Emitting Length Chart <sup>2</sup> |   | 395 (UV)<br>470 (blue)<br>520 (green)<br>625 (red orange)<br>660 (red)<br>880 (IR)<br>WHI (white)   | C1<br>C5<br>IC<br>I3<br>I3S<br>24 |   | M8 <sup>1</sup><br>M12 <sup>1</sup> |
| EX:<br>LL163A030-WHIIC<br>LL163B102-625IC-M12 |                             |  |   |   | <sup>1</sup> Available with IC, I3, I3S, and 24 V options only<br><sup>2</sup> Applicable only to LL163<br><sup>3</sup> Refer to Mechanical Specs for lens focus descriptions |                                   |   |                                     |

See website product page for in-stock product numbers.

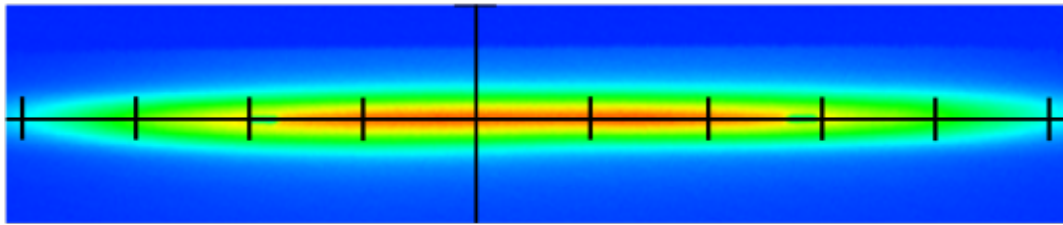
**Shipping:**

Stock Products: within three days

Build-to-Order Products: within one to three weeks

## Optical Specs

### Intensity Distribution



Optical measurement taken using LL16312-WHIC @ 25mm

— = 12.5mm



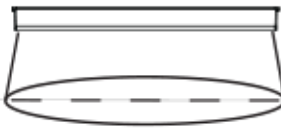
### Line Width @ Working Distance

|                  | Lens 'A' | Lens 'B' | Lens 'D' | Lens 'E' |
|------------------|----------|----------|----------|----------|
| Working Distance | 25mm     | 50mm     | 75mm     | 125mm    |
| Line Width       | 6mm      | 9.5mm    | 13mm     | 16mm     |

### Area of Illuminance & Intensity

Working Area (FWHM)  
@ Working Distance

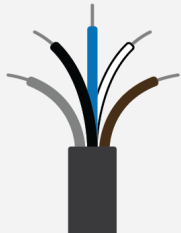
81 X 6 (mm)  
@25 (mm)



Light Output

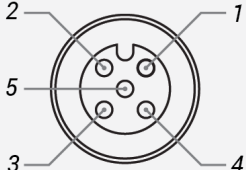
Irradiance (W/M<sup>2</sup>): Min 77.77 ; Typ 91.5  
Illuminance (kLux): Min 21.08 ; Typ 24.8

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

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


The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S 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 and I3S Control Options

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

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

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

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

The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S 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.

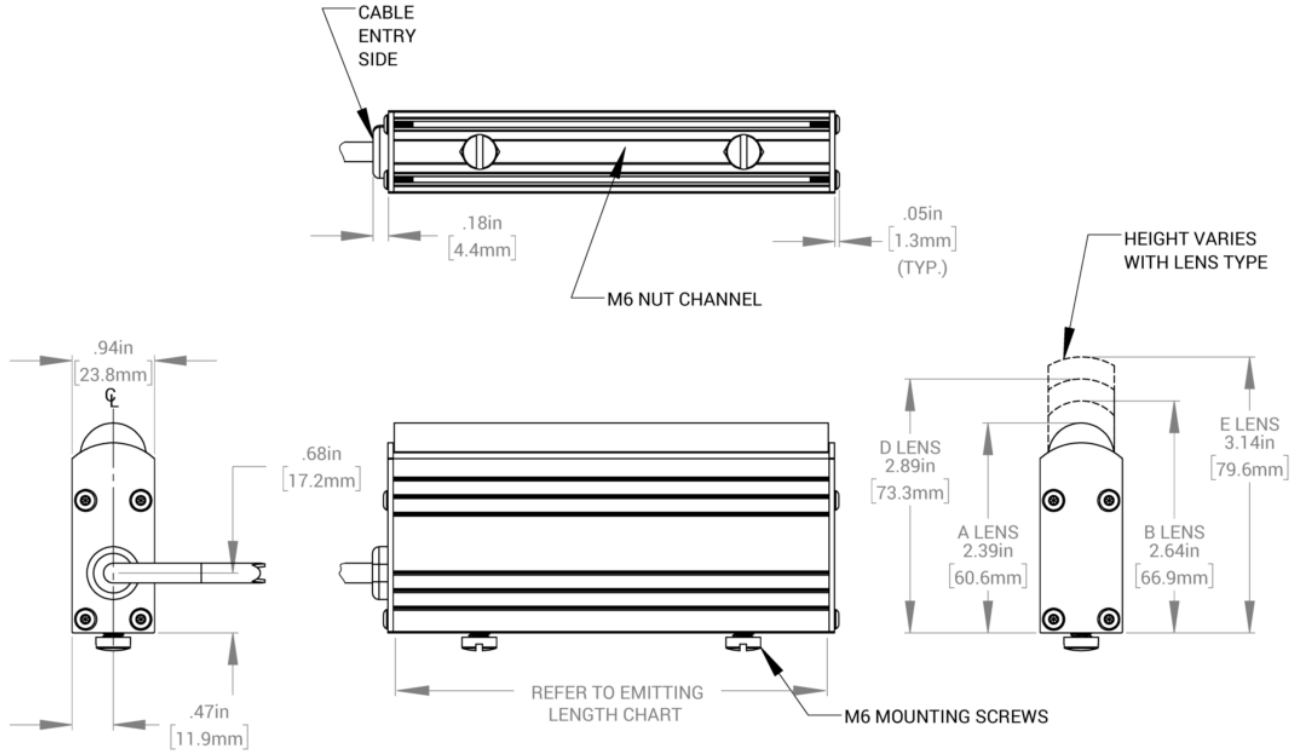
## Control Specs

| C1 Connector                               | C5 Connector                                      | ICS 2 (IC)  | ICS 3 (I3)  | ICS 3S (I3S)  | 24   |
|--|---|---|---|---|--|
| For use with:<br>DCS Series<br>Controllers | For use with:<br>Pulsar 320 Strobe<br>Controller. | Continuous in-line<br>controller<br><br>Powered with:<br>24V power supply | Combination<br>strobe/continuous<br>in-line controller<br><br>Powered with:<br>24V power supply | Default-OFF<br>strobe/continuous<br>in-line controller<br><br>Powered with:<br>24V power supply | Flying/tinned leads<br><br>Powered with:<br>24V power supply |

## Mechanical Specs

\*LL2912, LL3024, AND LL3148 HAVE  
LEGACY PART NUMBERS

SEE LL163 PART NUMBER CHART  
FOR SIZING OPTIONS



LL163 Emitting Length Chart

| Emitting Length (in) | Part Number          | Emitting Length (in) | Part Number | Emitting Length (in) | Part Number |
|----------------------|----------------------|----------------------|-------------|----------------------|-------------|
| 2.25"                | LL163X006            | 29.25"               | LL163X114   | 56.25"               | LL163X222   |
| 3.75"                | LL2912X <sup>1</sup> | 30.75"               | LL163X120   | 57.75"               | LL163X228   |
| 5.25"                | LL163X018            | 32.25"               | LL163X126   | 59.25"               | LL163X234   |
| 6.75"                | LL3024X <sup>1</sup> | 33.75"               | LL163X132   | 60.75"               | LL163X240   |
| 8.25"                | LL163X030            | 35.25"               | LL163X138   | 62.25"               | LL163X246   |
| 9.75"                | LL163X036            | 36.75"               | LL163X144   | 63.75"               | LL163X252   |
| 11.25"               | LL163X042            | 38.25"               | LL163X150   | 65.25"               | LL163X258   |
| 12.75"               | LL3148X <sup>1</sup> | 39.75"               | LL163X156   | 66.75"               | LL163X264   |
| 14.25"               | LL163X054            | 41.25"               | LL163X162   | 68.25"               | LL163X270   |
| 15.75"               | LL163X060            | 42.75"               | LL163X168   | 69.75"               | LL163X276   |
| 17.25"               | LL163X066            | 44.25"               | LL163X174   | 71.25"               | LL163X282   |
| 18.75"               | LL163X072            | 45.75"               | LL163X180   | 72.75"               | LL163X288   |
| 20.25"               | LL163X078            | 47.25"               | LL163X186   | 74.25"               | LL163X294   |
| 21.75"               | LL163X084            | 48.75"               | LL163X192   | 75.75"               | LL163X300   |
| 23.25"               | LL163X090            | 50.25"               | LL163X198   | 77.25"               | LL163X306   |
| 24.75"               | LL163X096            | 51.75"               | LL163X204   | 78.75"               | LL163X312   |
| 26.25"               | LL163X102            | 53.25"               | LL163X210   | 80.25"               | LL163X318   |
| 27.75"               | LL163X108            | 54.75"               | LL163X216   |                      |             |

X refers to Lens Focus: A, B, D, E

<sup>1</sup> LL2912, LL3024, and LL3148 represent legacy part numbers

## 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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