






Expandable

### Product Highlights

- Suited for use with low intensity, low speed line scan applications
- Red, Green, Blue, White, UV and IR wavelengths available
- Range of Working Distances and Line Widths available
- LL163 - Expandable in lengths of 1.5" up to 80"
- LL163 Derivatives: LL2912 (3"), LL3024 (6"), LL3148 (12")

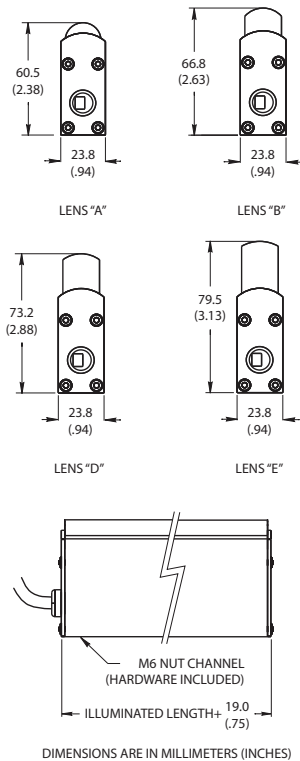


### General Specifications

Electrical Specifications	Color	24v Current	All Other Controls
	625, 660 , 880	.03 A per 1.5"	.014 A Max per 1.5"
395, 470, 520, WHI	.02 A per 1.5"	.009 A Max per 1.5"	
Normal Operating Temperature	0 - 60°C		
Weight	Per 3" - 226.8g (8.0oz)		
Standard Cable Information	Up to 2 meters (80") long - 105°C rated PVC jacket, foil shield with drain.		
Photobiological Risk Factor IEC 62471	<b>Exempt Applicable Wavelengths: 880</b> <b>Group 1 (Low-Risk) Applicable Wavelengths: 470, 520, 625, 660, WHI</b> <b>Group 2 (Moderate Risk) Applicable Wavelengths: 395</b>		
Compliance	  		
IP Rating	IP50		
Lumen Maintenance	L70 = 50,000 hours		

# LL163 Expandable Series

## Mechanical Specifications



LL163 Part Number Chart								
Length		Part Number	Length		Part Number	Length		Part Number
Illuminated	Unit		Illuminated	Unit		Illuminated	Unit	
2.25"	3"	LL163X006	29.25"	30"	LL163X114	56.25"	57"	LL163X222
3.75"	4.5"	LL2912X <sup>1</sup>	30.75"	31.5"	LL163X120	57.75"	58.5"	LL163X228
5.25"	6"	LL163X018	32.25"	33"	LL163X126	59.25"	60"	LL163X234
6.75"	7.5"	LL3024X <sup>1</sup>	33.75"	34.5"	LL163X132	60.75"	61.5"	LL163X240
8.25"	9"	LL163X030	35.25"	36"	LL163X138	62.25"	63"	LL163X246
9.75"	10.5"	LL163X036	36.75"	37.5"	LL163X144	63.75"	64.5"	LL163X252
11.25"	12"	LL163X042	38.25"	39"	LL163X150	65.25"	66"	LL163X258
12.75"	13.5"	LL3148X <sup>1</sup>	39.75"	40.5"	LL163X156	66.75"	67.5"	LL163X264
14.25"	15"	LL163X054	41.25"	42"	LL163X162	68.25"	69"	LL163X270
15.75"	16.5"	LL163X060	42.75"	43.5"	LL163X168	69.75"	70.5"	LL163X276
17.25"	18"	LL163X066	44.25"	45"	LL163X174	71.25"	72"	LL163X282
18.75"	19.5"	LL163X072	45.75"	46.5"	LL163X180	72.75"	73.5"	LL163X288
20.25"	21"	LL163X078	47.25"	48"	LL163X186	74.25"	75"	LL163X294
21.75"	22.5"	LL163X084	48.75"	49.5"	LL163X192	75.75"	76.5"	LL163X300
23.25"	24"	LL163X090	50.25"	51"	LL163X198	77.25"	78"	LL163X306
24.75"	25.5"	LL163X096	51.75"	52.5"	LL163X204	78.75"	79.5"	LL163X312
26.25"	27"	LL163X102	53.25"	54"	LL163X210	80.25"	81"	LL163X318
27.75"	28.5"	LL163X108	54.75"	55.5"	LL163X216			

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

## Part Number Key

Model Type	Model Extension	Lens Type	# of LEDs <sup>2</sup>	—	Spectral Wavelength	Connector/Control	—	Alternative Connector
XX	XXXX	X	XXX	—	XXX	XX	—	XXX
LL	163 2912 3024 3148	A B D E	refer to chart		395 (UV) 470 (blue) 520 (green) 625 (red-orange) 660 (red) 880 (infra-red) WHI (white)	C1 C5 IC I3 I3S 24		M12 <sup>1</sup>
Ex: LL163A030-WHIIC LL163B102-625IC-M12						<sup>1</sup> Available with IC, I3, I3S and 24v options only <sup>2</sup> Only applicable for LL163 and not LL2912, LL3024 or LL3148		

**Stock Product:** shipped within 3 days  
LL2912A-WHIC1

**Build to Order:** shipped in two weeks

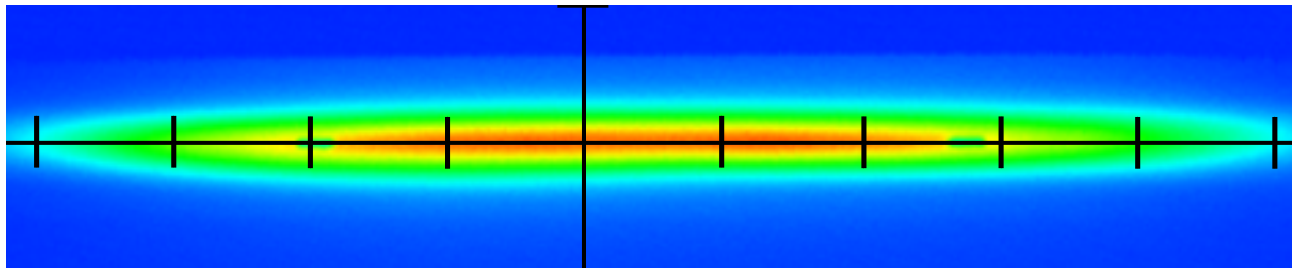
## Connector | Control Options

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

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## Optical Performance

### Intensity Distribution



Optical measurement taken using LL16312-WHIIC @ 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

## Operation and Wiring

### ICS 2 (IC)

Pin (M12)	Function	Wire Color
1	+24 VDC	Brown
2	0-10 VDC Analog Control	White
3	GND	Blue
4	GLO	Black
5	N/A	Gray

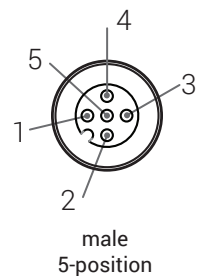
### ICS 3 (I3 and I3S)

Pin (M12)	Function	Wire Color
1	+24 VDC	Brown
2	Reserved	White
3	GND	Blue
4	PNP/Active High Trigger	Black
5	0-10 VDC Analog Control	Gray

### 24 Volt

Pin (M12)	Function	Wire Color
1	+24 VDC	Brown
2	N/A	White
3	-24 VDC	Blue
4	N/A	Black
5	N/A	Gray

### Optional M12 Pinout



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## 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 two years from the original date of purchase. Should a defect develop during this period, please contact Ai Customer Service or your Ai distributor for a Return Merchandise Authorization (RMA), and return the complete product, freight prepaid, to Ai. If a defect is found, Ai will - at our discretion - repair or replace the product without charge. Ai claims no liability for any implied warranties, including "merchantability" and "fitness for a specific purpose."

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

## Company Information

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