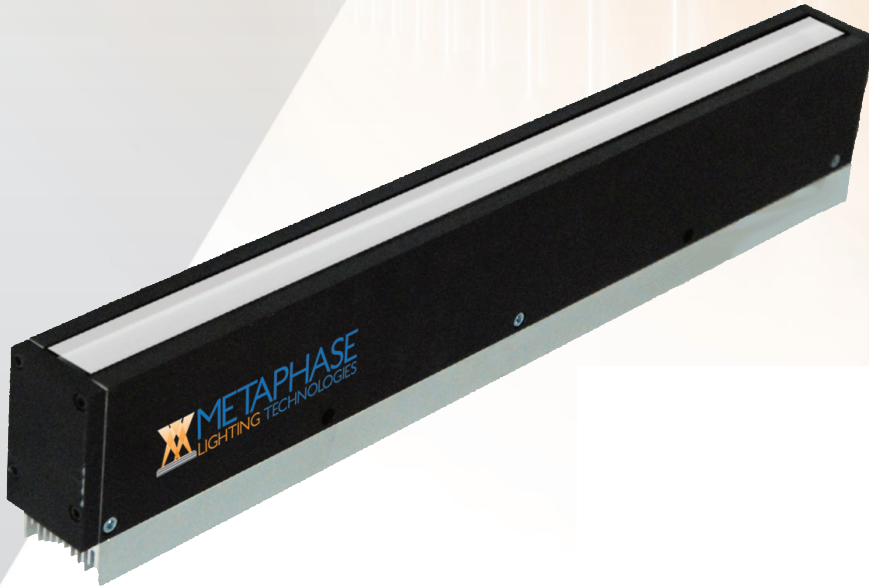


UB-LL Line Light



Brightest Line Light in the WORLD

The UB-LL Line Light Difference

The UB-LL Line Light is the latest design in the Metaphase family of LED lights for line scan. Its narrow, structured beam delivers high intensity and concentrated light for the narrow field of view of a traditional line scan camera.

The high intensity and uniformity allows the UL Line Light to be used as front light to inspect for material defects, angled to obtain an off-axis effect to highlight surface defects, or it may be placed beneath the object for a backlight effect to inspect for holes, voids, or contaminants. It is the brightest passively cooled line light in the world!

- ◆ Web inspection (foil, plastic film, PCBs, glass, paper, web converting, etc.)
- ◆ Geometry measurements of long targets
- ◆ Direct position measurement
- ◆ Tube or bottle inspection
- ◆ Printed circuit board inspection

Features

- 2.5 Million LUX !!
- NO SEAM lensing (focused or collimated)
- Drop-in Replacement for UL-LL Series
- Multiple cover, diffuser, back-lighting options
- Passive cooling (no fans needed)
- Compliance: CE and RoHS.
- Compatible with DDC-3, ULC-2 and ILD-35 Controllers
- 0-10V dimming
- Ambient Temp: -20°C to 40°C
- Lifetime Expectancy: 75,000 hours

UBLL Part Numbers and Sizes


UB-LL
 Line Light
**TABLE 1: PART NUMBER KEY**

Contact your Metaphase Sales representative for custom versions (intensity, uniformity, wavelengths, sizes, etc).

Family	Size	Wavelength	Diffuser	Lens Position	Driver	Polarizer
UB-LL- (ultra bright, white only)	210 = 5-in active	W	NC00 (No cover, no diff)	LP1 (Focused)	24Z (internal with 0-10V dimming)	P0 (standard)
	310 = 10-in active	R	NC06 (No cover, std diff)	LP2 (Collimated)	U (ext. driver control)	P9 (perpendicular)
LL- (standard, all non-white)	410 = 15-in active	G	NC26 (No cover, 2x diff)		24Z-TRG	-
	510 = 20-in active				24-ILZFT	
	610 = 25-in active	B	CC00 (Cover, no diff)			
UC-LL- (active cooling with compressed air)	710 = 30-in active		CC06 (Cover, std diff)			
	810 = 35-in active	RGB	CC26 (Cover, 2x diff)		24-ILS	
	910 = 40-in active					
UG-LL- (active cooling with liquid)	1010 = 45-in active	RGBW				
	1110 = 50-in active	UV365				
		UV395				
	XX10 up to 4110 for 200-in active	IR850				
		IR940				
		IR05 *				
		IR20				
		IR30				
	IR45					
	IR55					
	IR65					

Contact Metaphase Technologies or your local representative for options such as custom diffusers, lenses, polarizers, IP-rated enclosures for harsh environments, higher intensity, custom wavelengths, higher uniformity, etc. Not all options are available for all lights.

*SWIR Wavelengths (IR05 = 1050, IR20 = 1200, IR30 = 1300, IR45 = 1450, IR55 = 1550, IR65 = 1650)

NOTE: Cable length is 3M, add "-5m" or "-10m" to end of part number for 5 meter or 10 meter cable. Contact Sales for custom connectors



MODEL	Overall Length Inches / cm	Lens Length Inches / cm	Weight lbs/Kg	Cable(s)			Typical Current (Amps) @24VDC						
				Qty	Lgth	Desc.	WHITE	RED	GREEN	BLUE	IR	UVS	UVL
UL-LL210	7.0 / 17.8	6.25 / 15.9	3.2 / 1.45	1	10ft	16 AWG 6 Wire	1.0	0.4	0.6	0.5	0.6	0.7	0.8
UL-LL310	12.0 / 30.5	11.25 / 28.6	5.4 / 2.45				2.0	0.8	1.1	1.1	1.1	1.4	1.6
UL-LL410	17.0 / 43.2	16.25 / 41.3	7.7 / 3.49				3.0	1.2	1.7	1.7	2.0	2.1	2.4
UL-LL510	22.0 / 55.9	21.25 / 54.0	10.0 / 4.54				4.0	1.6	2.2	2.2	2.7	3.2	3.2
UL-LL610	27.0 / 68.6	26.25 / 66.7	12.2 / 5.53				5.0	2.0	2.9	2.8	3.4	4.0	3.4
UL-LL710	32.0 / 81.3	31.25 / 79.4	14.5 / 6.58				6.0	2.4	3.5	3.4	4.1	4.8	4.1
UL-LL810	37.0 / 94.0	36.25 / 92.1	16.7 / 7.57				7.0	2.9	4.2	4.0	4.7	5.6	4.8
UL-LL910	42.0 / 106.7	41.25 / 104.8	18.9 / 8.57				8.0	3.3	4.8	4.6	5.6	6.4	5.5
UL-LL1010	47.0 / 119.4	46.25 / 117.5	21.2 / 9.62				9.0	3.7	5.4	5.2	6.4	7.2	6.2
UL-LL1110	52.0 / 132.1	51.25 / 130.2	23.5 / 10.6				10.0	4.2	6.0	5.8	7.1	8.0	6.9
UL-LL1210	57.0 / 144.8	56.25 / 142.9	25.5 / 11.6				11.0	4.6	6.7	6.4	7.9	8.8	7.6
UL-LL1310	62.0 / 157.5	61.25 / 155.6	28.3 / 12.8				12.0	5.0	7.4	7.0	8.7	9.6	8.2
UL-LL1410	67.0 / 170.2	66.25 / 168.3	30.4 / 13.8				13.0	5.5	8.1	7.7	9.6	10.4	8.9
UL-LL1510	72.0 / 182.9	71.25 / 181.0	35.5 / 16.1				14.0	5.9	8.8	8.3	10.4	11.2	9.6
UL-LL1610	77.0 / 195.6	76.25 / 193.7	37.7 / 17.1	15.0	6.4	9.5	9.0	11.3	12.0	10.3			
UL-LL1710	82.0 / 208.3	81.25 / 206.4	40.0 / 18.1	16.0	6.9	10.2	9.7	12.1	12.8	11.0			
UL-LL1810	87.0 / 221.0	86.25 / 219.1	42.3 / 19.2	17.0	7.3	10.9	10.4	13.0	13.6	11.7			
UL-LL1910	92.0 / 233.7	91.25 / 231.8	44.5 / 20.2	18.0	7.8	11.7	11.1	14.0	14.4	12.4			
UL-LL2010	97.0 / 246.4	96.25 / 244.5	47.0 / 21.3	19.0	8.3	12.5	11.8	14.9	15.2	13.0			
UL-LL2110	102 / 259.1	101.25 / 257.2	49.0 / 22.2	20.0	8.8	13.3	12.5	15.9	16.0	13.7			
UL-LL2210	107 / 271.8	106.25 / 269.9	51.2 / 23.2	21.0	9.3	14.1	13.3	17.0	16.8	14.4			
UL-LL2310	112 / 284.5	111.25 / 282.6	53.4 / 24.2	22.0	9.8	14.9	14.1	18.0	17.6	15.1			
UL-LL2410	117 / 297.2	116.25 / 295.3	55.6 / 25.2	23.0	10.3	15.7	14.8	19.1	18.2	15.8			
UL-LL2510	122 / 309.9	121.25 / 308.0	58.0 / 26.3	24.0	10.8	16.6	15.7	20.3	18.8	16.5			

Eye Safety	
Color	EN 62471 Eye Safety Risk Group
RED	RG3
WHITE	RG1
BLUE	RG1
GREEN	RG1
UV	RG3

SINGLE COLOR UB LINE LIGHTS

Cable #1 (6 conductor, flying leads)	
Wire Color	Function
RED, BROWN	+24VDC
YELLOW	SIGNAL GROUND
BLACK, BLUE	GROUND (24V RTN)
ORANGE	0-10VDC INTENSITY CONTROL

When not using Intensity Control, connect the 0-10V control line to +24VDC and connect Signal Ground to Ground (24V RTN) for maximum intensity

Cable #1 (6 conductor, flying leads)	
Wire Color	Function
RED	+24VDC
BROWN	+24VDC
ORANGE	+24VDC
BLACK	GROUND (24V RTN)
BLUE	GROUND (24V RTN)
YELLOW	GROUND (24V RTN)

MULTI COLOR UB LINE LIGHTS

RGB Cable #1 (6 Conductor)	
Wire Color	Function
BROWN	+24VDC
BLACK	GND (24V RTN)
YELLOW	SIG GND
RED	0-10V GREEN Intensity Control
ORANGE	0-10V GREEN Intensity Control
BLUE	0-10V GREEN Intensity Control

When not using the Intensity Control, connect the 0-10V control line(s) to +24VDC and connect SIG GND to GND (24V RTN)

RGB Cable #2 (If Applicable)	
Wire Color	Function
RED	+24VDC
BROWN	+24VDC
ORANGE	+24VDC
BLACK	GND (24V RTN)
BLUE	GND (24V RTN)
YELLOW	GND (24V RTN)
	POWER CABLE

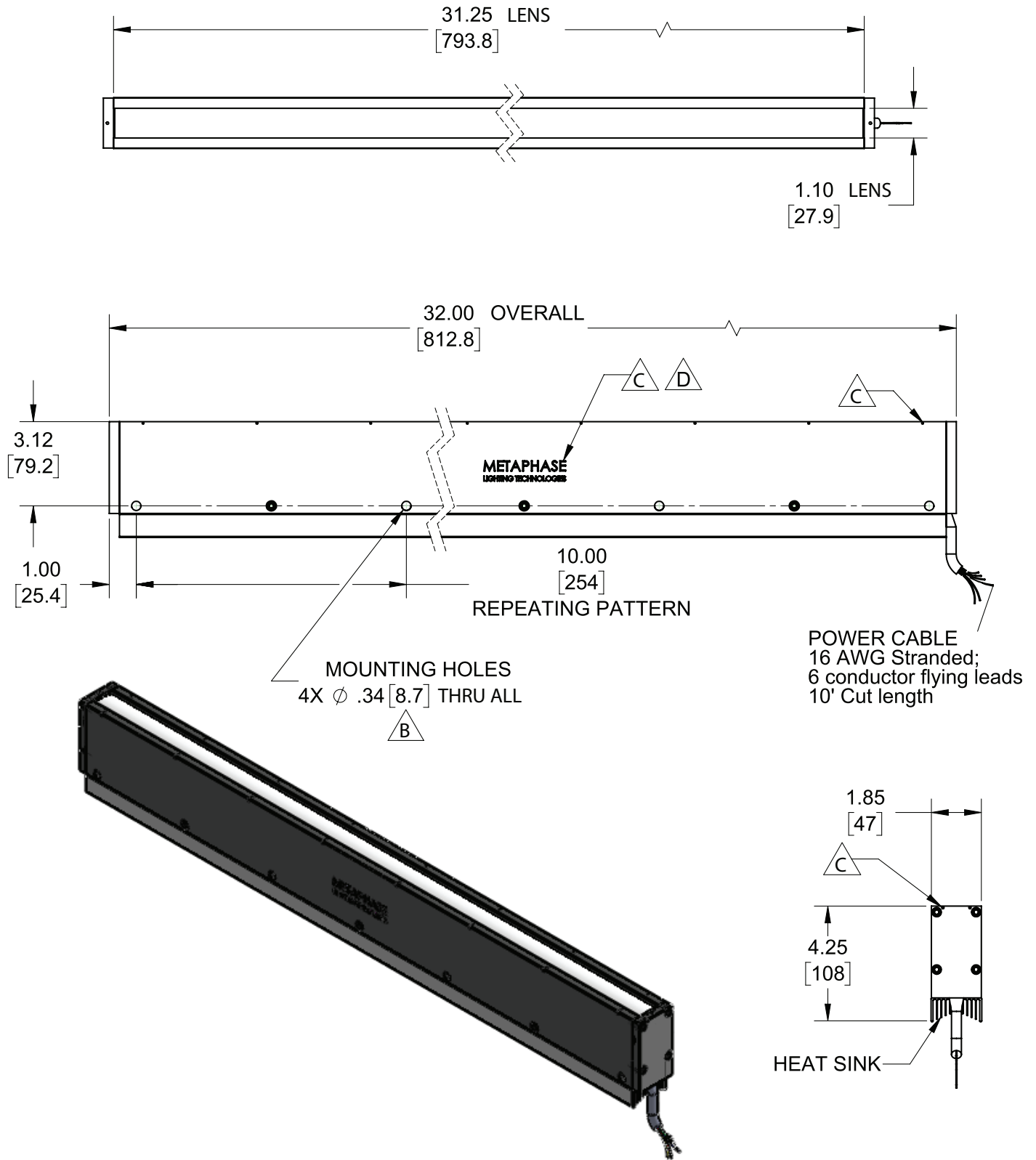
The 0-10VDC Intensity Control input can accept voltages from 0-24VDC where the light will operate at full intensity in the 10-24VDC range. The light is proportionally dimmer for any Intensity Control voltage less than 10VDC and the light is OFF at approximately 0V or not connected (floating).

UB-LL / LL-X10

SAMPLE MODEL NUMBER: UB-LL709-W-24Z



UB-LL
Line Light





For nearly two decades, Metaphase Technologies has been developing products that implement “The Quality of Light” through engineering and manufacture of cutting-edge LED illuminators for machine vision, military, and specialty lighting applications.

We're proud of our demonstrated expertise engineering flexible lighting solutions that have facilitated integration into thousands of vision systems designs.

Throughout the world, Metaphase clients enjoy the enhanced automation and image capture benefits of our patent-pending breakthroughs in uniform diffuse high brightness and ultra-brightness LED illumination.

First to implement built-in constant current drivers across multiple product lines, Metaphase continues to synergize cutting-edge LED lighting & control technologies that streamline innovation and increases return on investment.

Made in the USA for nearly 30 years, our versatile designs are continuously updated to incorporate the latest advances in LEDs, thermal management, optics, and electronic technologies to meet the challenging needs of today's global automation and scientific marketplace.

Contact us to see how Metaphase can help with your cutting-edge lighting needs.



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