



# MetaLight™ Line Light Model:LL504



Metaphase offers the industry's breakthrough performance line lights for imaging, web, and high-speed line scan applications requiring ultra-high intensity and uniformity. Our line lights are built as lean fixtures that can be easily controlled and integrated into visions systems.

Our MetaLight™ Line Lights feature an adjustable lens, enhanced cooling options, and low current consumption.

## BENEFITS:

- High Uniformity both laterally and longitudinally
- Lens Options for various beam widths and working distances
- Strobe synchronization; Control compatibility for high precision pulse-modulation and 0-10V Intensity Control capability
- Adjustable lens focusing range of mm to meters
- Backlight versions for web backlight & silhouetting applications
- From 1" to 120" (10ft) in length
- Built-in constant current driver(s) provides consistent illumination output
- 24V version require no special controllers; simply provide 24VDC

## APPLICATIONS:

- Road Surface Inspection
- Bottle Inspection
- High Speed Scanning
- Geometry Measurement
- Detection of Holes
- Sheet Inspection
- Web Inspection
- Print Inspection
- Fabrics Inspection
- Solar Cells

## RATINGS:



## DOMINANT WAVELENGTH:

Part #	Color	Power Supply
LL504-W-24	White 5500K	
LL504-R-24	Red 630nm	
LL504-B-24	Blue 470nm (Optional 455nm)	
LL504-G-24	Green 530nm	24 volt power supply available upon request.
LL504-IRN-24	Infrared 850nm	

10 ft. flying leads come standard on all products.  
Light features built-in constant current driver.  
No expensive controller required.



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## ELECTRICAL & CONTROLS:

Current Consumption	1.0A
Light Intensity	+/-5%
Illuminance	220,000 Lux
Operating Temperature	-40°F(-45°) to 100°F (37.8°C)
Lifetime Hours	75,000 Hours

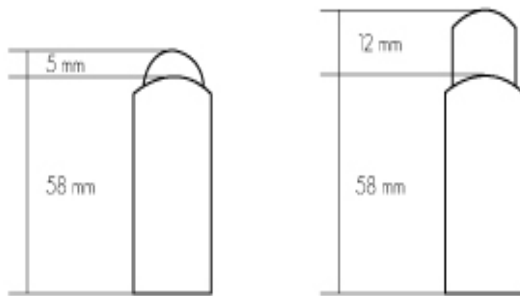
## WIRING DIAGRAM:

WHITE & RED	+24VDC
GREEN	Signal Ground
BLACK & GREEN	Ground
WHITE	0-10VDC Intensity Control

18 AWG 4 WIRES CABLE X 1 w/ 24 AWG 2 WIRES CABLE X 1  
 When not using intensity control, connect 0-10V control line to +24 (Max Intensity Control = 25V) and intensity control ground to ground

## FOCAL LENS:

### Metaphase Line Light Lens Options

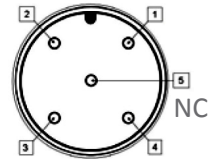


## HOUSING:

Dimensions	Length: 21.07in / 535.2mm Width: 1in / 25.4mm Height: 2.95in / 74.88mm
Weight	1.5lb/ 680.389 g
Housing	Aluminum
Finish	Powder Coating - Black

## WIRING DIAGRAM:

PIN #	Function
1	+24VDC
2	0-10VDC Intensity Control
3	Ground
4	Signal Ground

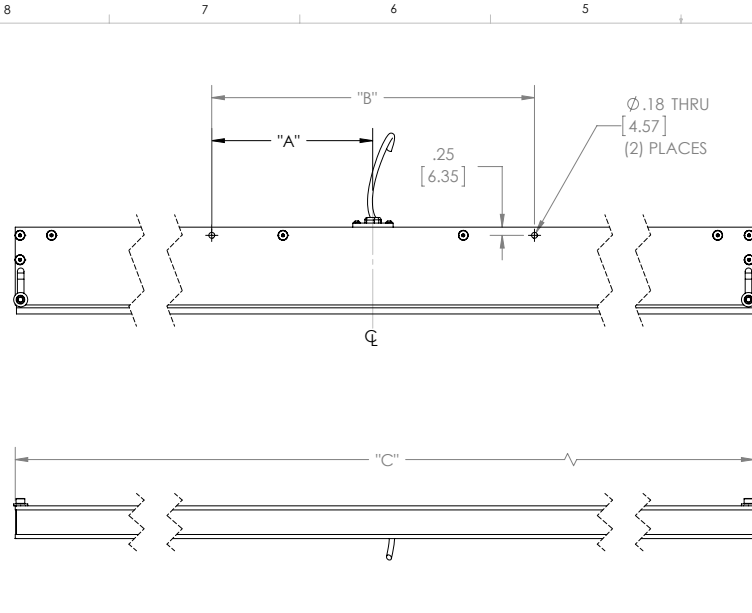




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## DRAWING & DETAILS:



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

SIZE	PART NUMBER	DIM "A"	DIM "B"	DIM "C"
10"	LL304	2.00 [50.8]	4.00 [101.6]	10.938 [277.8]
16"	LL404	3.00 [76.2]	6.00 [152.4]	16.00 [406.4]
20"	LL504	3.00 [76.2]	6.00 [152.4]	21.07 [535.2]
25"	LL604	5.00 [127]	10.00 [254]	26.14 [664]
30"	LL704	5.00 [127]	10.00 [254]	31.20 [792.5]
35"	LL804	5.00 [127]	10.00 [254]	36.27 [921.3]
40"	LL904	5.00 [127]	10.00 [254]	41.37 [1050.8]

ELECTRICAL CORD  
CAROL STYLE C0742A, 24 AWG  
10 FT LG, WITH FLYING LEADWIRE ENDS.

**PROPRIETARY AND CONFIDENTIAL**  
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ± ANGULAR: MACH ± BEND: ± TWO PLACE DECIMAL: ± THREE PLACE DECIMAL: ±	NAME: KW DATE: 6-7-11	METAPHASE TECHNOLOGIES, INC.
INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL: FINISH:	CHECKED: ENG APPR.: MFG APPR.: Q.A. COMMENTS:	TITLE: <b>LINE LIGHT METABRIGHT 10 THRU 40 INCH</b>
NEXT ASSY: USED ON: APPLICATION: DO NOT SCALE DRAWING		SIZE: <b>B</b> DWG. NO. <b>LLX04</b> REV SCALE: NTS WEIGHT: SHEET 1 OF 1

## ORDERING INFORMATION:

• LL504 -  - 24 -

**Back Line Light Option:**  
Replace designator "LL" with "BLL" on the prefix for units deployed in transmitted imaging applications.  
ex: BLL504-R-24

**W**- White 6000k  
**R**- Red 630nm  
**G**- Green 530nm  
**B**- Blue 470 nm  
(Optional 450nm)  
**IRN**- Infrared 850nm

\***BLANK**- 10 ft. Flying Leads  
**T**- M12 Quick Disconnect  
**ILD**- In Line Dimmer  
**ILS**- In Line Strobe (customer provide trigger info)  
**LL** - Long Focal Lens

\* Intensity will be lower for NON-Fan option