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SWIR LED ILLUMINATION

Wavelengths from 1050nm to 1650nm are now offered in the Metaphase Line Light and Collimated Line Light. Short-wave infrared technology provides the necessary contrast to illuminate test objects that visible and ultraviolet light cannot provide.

The SWIR 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 SWIR 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.

Available Wavelengths

1050nm 1200nm 1300nm 1450nm 1550nm 1650nm

Broadband IR

is available for the SWIR Line Light. The SWIR Line Light can be configured with any combination of these six available wavelengths.

Utilizing a full rod focal lens, the SWIR Line Light provides a tight structured beam of light for up to 12 inches (30.48 cm). The optimal working distance is 5 inches (12.7 cm). High uniformity (±10%) makes the SWIR Line Light ideal for front and back lighting line scan applications.

SPECIFICATIONS

Power Source:	24VDC ±5%
Cable (Standard):	10 ft. (3 m) with flying leads
Housing:	Black Anodized Aluminum
Ambient Temperature:	-20°C to 40°C

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SWIR Line Lights							
				Cable(s)			
MODEL*	Overall Length Inches / cm	Lens Length Inches / cm	Weight lbs/Kg	Qty	Lgth	Description	Max. Current @24VDC
UL-LL209	7.0 / 17.8	6.25 / 15.9	3.2 / 1.45	2	10ft	18 AWG, 4 Conductor and 24 AWG, 8 Conductor	2.0A max.
UL-LL309	12.0 / 30.5	11.25 / 28.6	5.4 / 2.45				2.5A max.
UL-LL409	17.0 / 43.2	16.25 / 41.3	7.7 / 3.49				3.0A max.
UL-LL509	22.0 / 55.9	21.25 / 54.0	10.0 / 4.54				3.5A max.
UL-LL609	27.0 / 68.6	26.25 / 66.7	12.2 / 5.53			16 AWG, 4 Conductor and 24 AWG, 8 Conductor	4.0A max.
UL-LL709	32.0 / 81.3	31.25 / 79.4	14.5 / 6.58				4.5A max.
UL-LL809	37.0 / 94.0	36.25 / 92.1	16.7 / 7.57				5.0A max.
UL-LL909	42.0 / 106.7	41.25 / 104.8	18.9 / 8.57				5.5A max.
UL-LL1009	47.0 / 119.4	46.25 / 117.5	21.2 / 9.62				6.0A max.
UL-LL1109	52.0 / 132.1	51.25 / 130.2	23.5 / 10.6				6.5A max.
SWIR Collimated Line Lights							
				Cable(s)			
MODEL*	Overall Length Inches / cm	Lens Length Inches / cm	Weight lbs/Kg	Qty	Lgth	Description	Max. Current @24VDC
UL-CLL209	7.0 / 17.8	5.0 / 12.7	3.2 / 1.45	2	10ft	18 AWG, 4 Conductor and 24 AWG, 8 Conductor	2.0A max.
UL-CLL309	12.0 / 30.5	10.0 / 25.4	5.4 / 2.45				2.5A max.
UL-CLL409	17.0 / 43.2	15.0 / 38.1	7.7 / 3.49				3.0A max.
UL-CLL509	22.0 / 55.9	20.0 / 50.8	10.0 / 4.54				3.5A max.
UL-CLL609	27.0 / 68.6	25.0 / 63.5	12.2 / 5.53			16 AWG, 4 Conductor and 24 AWG, 8 Conductor	4.0A max.
UL-CLL709	32.0 / 81.3	30.0 / 76.2	14.5 / 6.58				4.5A max.
UL-CLL809	37.0 / 94.0	35.0 / 88.9	16.7 / 7.57				5.0A max.
UL-CLL909	42.0 / 106.7	40.0 / 101.6	18.9 / 8.57				5.5A max.
UL-CLL1009	47.0 / 119.4	45.0 / 114.3	21.2 / 9.62				6.0A max.
UL-CLL1109	52.0 / 132.1	50.0 / 127.0	23.5 / 10.6				6.5A max.

*Custom sizes and configuration are available

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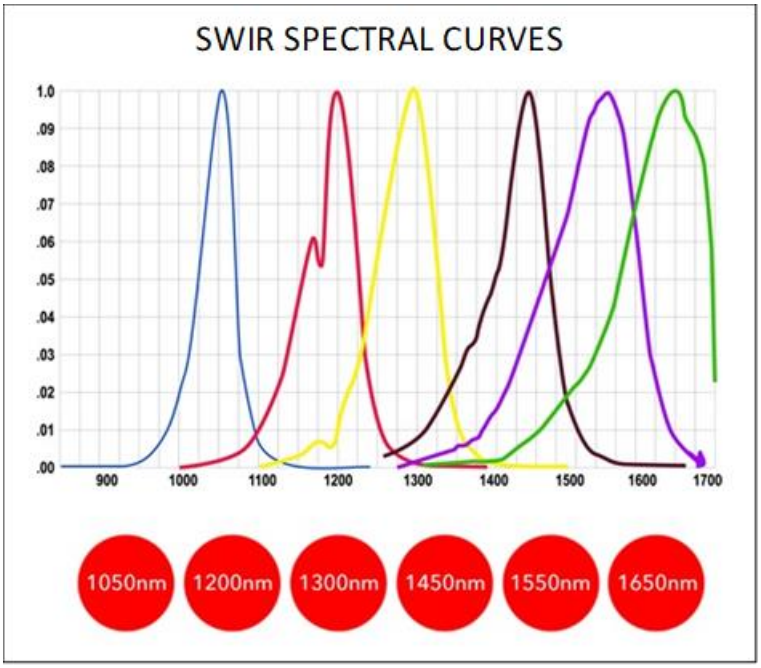
Cable#1 Wiring (4 conductor)	
Wire Color	Function
RED	+24VDC
WHITE	+24VDC
BLACK	GROUND (24V RTN)
GREEN	Signal Ground

Cable#2 Wiring (8 conductor)	
Wire Color	Function
BROWN	IR1050, 0-10V Intensity Control
ORANGE	IR1200, 0-10V Intensity Control
BLUE	IR1300, 0-10V Intensity Control
GREEN	IR1450, 0-10V Intensity Control
BROWN-white	IR1550, 0-10V Intensity Control
ORANGE-white	IR1650, 0-10V Intensity Control
BLUE-white	No Connection
GREEN-white	No Connection

Note: 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).



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PART NUMBER KEY											
MODEL	LENGTH ID (inches)	-	WAVELENGTH	-	DRIVER* (most common)	-	POLARIZER	-	COVER	-	CABLE LENGTH
UL-_LL	XXXX	-	XXXXX	-	XXX	-	XXXX	-	XX	-	XXX
UL-LL **UL-CLL**	**209 to 1109**		**W** (White 6000K, Nominal) **IR05** (Infrared 1050nm) **IR20** (Infrared 1200nm) **IR30** (Infrared 1300nm) **IR45** (Infrared 1450nm) **IR55** (Infrared 1550nm) **IR65** (Infrared 1650nm) Select up to six wavelengths		**24Z** **24-ILSXXX** XXX=rate in µs Example: 250		**POL0** Must use CC with Polarizer Select or leave blank for no polarizer		**CC** Select or leave blank for no cover		**5M** **10M** Length can be customized: ex.7M=7meters Select or leave blank for 3 meters
Example 1: **UL-LL509-IR05IR20IR30IR45IR55-24Z** Example 2: **UL-CLL909-IR20IR30IR45IR55IR65-24Z**											

When ordering the Backlight version diffuser, add a B designator before LL. Example: UL-BLL509-IR05IR20IR30IR45IR55-24Z

Lens Allocation: Quartz Convergence Lens (UX-LL) / Quartz Collimated Lens (UX-CLL)

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.

Link to *Driver Options Key / **Connector Options Key

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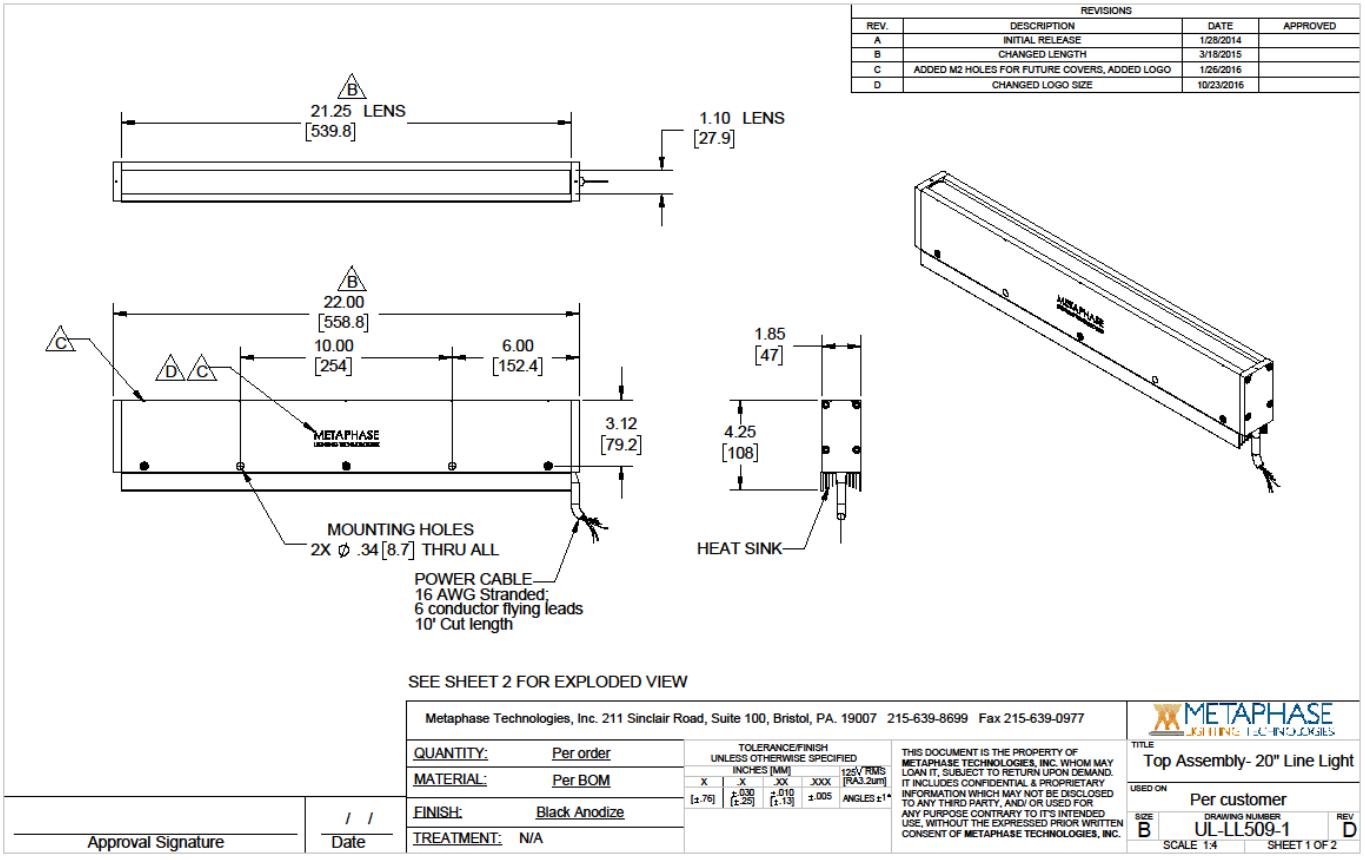
Sample Part Number: **UL-LL509-IR05IR20IR30IR45IR55-24Z**



COMPLIANCE

RoHS compliant

CE

CONTACT US

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