

EXOLIGHT v2.0



Advanced Performance for Machine Vision
Inspection, Measurement, and Gauging

The 2nd Gen Exolight

The Metaphase Exolight™ is best applied where a highly intense, yet widely diffused light beam is required. The ISO2 comes standard with a sturdier, more-uniform diffuser as compared to the original. These fixtures produce higher power and more stable output while featuring long lifetime expectancy and low cost of ownership. Solid-state performance ensures 75,000-hour lifetime (L70)

- ✓ Machine Vision & Automation
- ✓ Packaging inspection such as absence & presence of product
- ✓ Work bench illumination
- ✓ Automotive component inspection
- ✓ Coiled steel pin-hole detection
- ✓ Pick & place
- ✓ Sorting facilities / Bar code reading

Features

- Clamping style tilt bracket allows for easy positioning from 0-180°
- Locking knob feature also available
- Built-in constant current driver(s) with 0-10V intensity control
- Continuous and Strobe with power boosting versions available
- Compatible with DDC-3, ILD-35 intensity controllers, and ULC-2 controllers
- Polarizer lens option to further reduce hot spots and glare
- CE, RoHS compliant
- Compact robust packaging, no glass

Ordering Info

Exolight Part Numbers and Sizes



Exolight

MODEL	LENGTH ID (inches)	WAVELENGTH	DRIVER	POLARIZER	CABLE LENGTH	CONNECTOR
ISO2	XXX	XXXXX	XXX-XXXXXX	XXXX	XXX	XXXX
ISO2	2 through 119 (See above chart)	W (White 6000K, Nominal) R (Red 630nm) G (Green 530 nm) B (Blue 470nm) IR850 (Infrared 850nm) IR940 (Infrared 940nm) UV365 (UV Short 365nm) UV395 (UV Long 395nm) RGB (Red-Green-Blue)	24Z 24Z-TRG 24-ILSXXX 24-ILD U ¹	POLO	5M 10M	M12D ^{1 2} BC ^{1 3}
			XXX=rate in μ s Example: 250	Select or leave blank for no polarizer	Length can be customized: ex. 7M = 7 meters Select or leave blank for 3 meters	Select or leave blank for flying leads ¹ Not available in lights exceeding 4A input current ² Default cable length for M12D connector is 19 inches ³ Default cable length for a Barrel Connector is 10 feet

Note: For preview purpose, you are seeing up to 25 latest rows here and and per page 10 items if you enable paginate. Also note that, The table style may differ at the frontend as your theme may overwrite few css elements.

Some elements like custom filters and row-inline styling is not available in this design mode. Please check on live preview or in your embeded page.



PRODUCT SPECIFICATIONS

Power Source	24VDC +/- 5%
Cable (Typical)	See Cabling Chart
Housing	Black Anodized Aluminum
Operating Temperature	-20° C to 40° C
Lifetime Expectancy	75,000 Hours
Intensity	Varies by Model
Compliance	CE, RoHS
Intensity Control	0-10V intensity control built in. Compatible with optional DDC-3 and ILD-35-24-L Dimmers
IP Rating	IP50

Control wiring for 24Z version of light		WIRING DIAGRAM (6 Conductor)		M12	
WIRE COLOR	FUNCTION	WIRE COLOR	FUNCTION	PIN #	FUNCTION
RED	+24VDC	RED, ORANGE	+24VDC	1	+24VDC
GREEN	SIGNAL GROUND	GREEN	SIGNAL GROUND	2	0-10VDC INTENSITY CONTROL
BLACK	GROUND (24V RTN)	BLACK, BLUE	GROUND (24V RTN)	3	GROUND (24V RTN)
WHITE	0-10VDC INTENSITY CONTROL	WHITE	0-10VDC INTENSITY CONTROL	4	SIGNAL GROUND
When not using intensity control, connect the 0-10V control line to +24VDC and Signal Ground to Ground (24V RTN)				5	NOT USED (Optional)
NOTE: See Cabling table to determine number of connectors				<p>NOTE: The M12 connector option is not recommended for lights rated in excess of 4 amps max current. Contact Metaphase for additional quick disconnect options.</p>	

Control conditions for trigger (24Z-TRG) AND inline strobe (ILS)	NPN Input Lead	PNP Input Lead	Result
NPN mode (falling)	<.9VDC	N/A (float)	Enables Light
PNP mode (rising)	N/A (float)	>2.5VDC	Enables Light
No Inputs	No Connection	No Connection	Light is Disabled

NOTE: For 24Z-TRG, to enable light, 0-10V line must be enabled



Exolight Wiring Functions

RGB (6 Conductor (24Z))		RGB with ULC-2 (6 Conductor)		RGBIR (10 Conductor (24Z))		RGBIR with ULC-2 (10 Conductor)	
WIRE COLOR	FUNCTION	WIRE COLOR	FUNCTION	WIRE COLOR	FUNCTION	WIRE COLOR	FUNCTION
BROWN	+24VDC	RED (+) BLACK (-)	LED INPUT, RED	WHITE WHITE/BLACK	+24VDC	RED (+) RED/BLACK (-)	LED INPUT, RED
BLACK	GROUND (24V RTN)	GREEN (+) WHITE (-)	LED INPUT, GREEN	BLACK	GROUND (24V RTN)	GREEN (+) GREEN/BLACK (-)	LED INPUT, GREEN
WHITE	SIGNAL GROUND	BLUE (+) ORANGE (-)	LED INPUT, BLUE	RED/BLACK GREEN/BLACK ORANGE/BLACK	SIGNAL GROUND	BLUE (+) BLACK (-)	LED INPUT, BLU
RED	0-10VDC RED INTENSITY CONTROL	Terminated within a 2 position P-508-2 connector to interface with ULC-2, "LED Output"		RED/BLACK GREEN/BLACK ORANGE/BLACK	0-10 VDC RED INTENSITY CONTROL	ORANGE (+) ORANGE/BLACK (-)	LED INPUT, IR
GREEN	0-10VDC GREEN INTENSITY CONTROL			GREEN	0-10 VDC GREEN INTENSITY CONTROL	WHITE WHITE/BLACK	NO CONNECTION
BLUE	0-10VDC BLUE INTENSITY CONTROL			BLUE	0-10 VDC BLUE INTENSITY CONTROL	Terminated within a 2 position P-508-2 connector to interface with ULC-2, "LED Output"	
When not using intensity control, connect the 0-10V control line to +24VDC and Signal Ground to Ground (24V RTN)				ORANGE	0-10 VDC IR INTENSITY CONTROL		
		When not using intensity control, connect the 0-10V control line to +24VDC ad Signal Ground to Ground (24V RTN)					



Compatible with ULC-2 (-U) lights

Metaphase Technologies' Universal LED Controller provides independent, constant-current control of two LED loads up to 4 amps continuous DC or a maximum output power of 60 Watts per channel. In Pulse (Strobe) Mode, the ULC-2 is capable of output currents up to 40 amps. The ULC-2 is capable of driving LED forward voltages between 3V and 20V. Pulsewidths are adjustable down to 2 microseconds and external trigger rates up to 50kHz. The ULC-2 may be remotely controlled over Ethernet using the Metaphase Windows software MetaBOSS. Additionally, user-adjustments of the ULC-2 are provided by way of a user-friendly LCD interface. Up to five preset configurations per channel may be saved and recalled to meet the changing demands of today's applications.



DIMMING CONTROLLERS

ILD-35-24-L

Analog power dimming for use with Exolight Series Lights Features a ten turn precision lock-in knob.



DDC-3 (Compatible with 24-Z lights)

Metaphase Technologies' Digital Dimming Controller (DDC-3) provides 0-10V dimming voltage control of three independent LED loads in increments of 0.1V. The DDC-3 may be remotely controlled over Ethernet using Metaphase Technologies' MetaBOSS Windows software or by third-party programs using the DDC-3's Ethernet and USB Commands. Additionally, user-adjustments of the DDC-3 are provided by way of a user-friendly LCD interface.



COMPANY CONTACT INFORMATION

Contact your Metaphase Lighting Technologies representative at **+1 215-639-8699** or your local representative for additional details, options and customizations. For any sales inquiries contact us at **sales@metaphase-tech.com**.

COMPLIANCE



IEC
62417



EXOLIGHT v2.0 in 24-Z version

MODEL	TYPICAL DC CURRENT (AMPS)								
	WHITE	RED	GREEN	BLUE	IR	UV395	UV365	RGB	RGBIR
IS02-5	0.32	0.25	0.41	0.33	0.20	0.43	0.43	0.50	0.41
IS02-8	0.41	0.31	0.51	0.41	0.26	0.43	0.43	0.50	0.41
IS02-10	0.57	0.44	0.71	0.58	0.41	0.86	0.86	0.99	1.01
IS02-14	0.81	0.63	1.02	0.83	0.51	1.08	1.08	0.99	1.21
IS02-19	1.14	0.88	1.43	1.16	0.71	1.51	1.51	0.99	1.61
IS02-20	1.30	1.01	1.63	1.33	0.82	1.72	1.72	1.99	2.01
IS02-23	1.38	1.07	1.73	1.41	0.87	1.72	1.72	1.99	2.01
IS02-30	2.03	1.57	2.55	2.07	1.28	2.59	2.59	2.98	3.02
IS02-34	2.11	1.64	2.66	2.16	1.33	2.81	2.81	2.98	3.22
IS02-40	2.69	2.08	3.38	2.74	1.69	3.46	3.46	4.06	4.03
IS02-48	2.85	2.21	3.59	2.91	1.79	3.68	3.68	4.43	4.44
IS02-53	3.33	2.57	4.19	3.40	2.10	4.34	4.34	5.18	5.04
IS02-57	3.67	2.82	4.62	3.75	2.30	4.78	4.78	5.55	5.65
IS02-63	4.00	3.09	5.03	4.09	2.51	5.22	5.22		
IS02-68	4.33	3.35	5.45	4.42	2.72	5.66	5.66		
IS02-71	4.59	3.55	5.78	4.69	2.87	5.88	5.88		
IS02-80	5.33	4.12	6.71	5.44	3.34	6.99	5.98		
IS02-89	5.75	4.44	7.25	5.87	3.60	7.44	7.44		
IS02-96	6.26	4.83	7.89	6.39	3.91	8.11	8.11		
IS02-100	6.50	5.02	8.19	6.64	4.06	8.56	8.56		
IS02-119	7.76	5.99	9.80	7.93	4.85	10.14	10.14		
IS02-132	8.78	6.77	11.09	8.97	5.48	11.51	11.51		

All values are +/- 10%

Contact Metaphase for possible custom order options

PRODUCT WAVELENGTH



*Note: Multispectral Custom Wavelengths Available



EXOLIGHT v2.0 with ULC-2 CONTROLLER (DC values)

MODEL	TYPICAL DC CURRENT (AMPS)										
	WHITE	RED	GREEN	BLUE	IR	UV395	UV365	RGB			RGBIR
	DC	DC	DC	DC	DC	DC	DC	DC-R	DC-G	DC-B	DC *
ISO2-5	0.50	0.50	0.50	0.50	0.50	0.51	0.51	0.16	0.32	0.32	0.14
ISO2-8	0.63	0.63	0.63	0.63	0.63	0.51	0.51	0.16	0.32	0.32	0.14
ISO2-10	0.88	0.88	0.88	0.88	0.88	1.02	1.02	0.48	0.48	0.48	0.42
ISO2-14	1.25	1.25	1.25	1.25	1.25	1.28	1.28	0.48	0.97	0.97	0.42
ISO2-19	1.75	1.75	1.75	1.75	1.75	1.79	1.79	0.48	0.97	0.97	0.56
ISO2-20	2.00	2.00	2.00	2.00	2.00	2.05	2.05	0.64	1.29	1.29	0.83
ISO2-23	2.13	2.13	2.13	2.13	2.13	2.05	2.05	0.64	1.29	1.29	0.83
ISO2-30	3.13	3.13	3.13	3.13	3.13	3.07	3.07	0.97	1.93	1.93	1.25
ISO2-34	3.25	3.25	3.25	3.25	3.25	3.33	3.33	0.97	1.93	1.93	1.25
ISO2-40	4.13	4.13	4.13	4.13	4.13	4.10	4.10	1.77	1.77	1.77	1.67
ISO2-48	4.38	4.38	4.38	4.38	4.38	4.36	4.36	1.93	1.93	1.93	1.53
ISO2-53	5.13	5.13	5.13	5.13	5.13	5.12	5.12	2.26	2.26	2.26	2.09
ISO2-57	5.63	5.63	5.63	5.63	5.63	5.64	5.64	2.42	2.42	2.42	1.95
ISO2-63	6.13	6.13	6.13	6.13	6.13	6.15	6.15				
ISO2-68	6.63	6.63	6.63	6.63	6.63	6.66	6.66				
ISO2-71	7.00	7.00	7.00	7.00	7.00	6.92	6.92				
ISO2-80	8.13	8.13	8.13	8.13	8.13	8.20	8.20				
ISO2-89	8.75	8.75	8.75	8.75	8.75	8.71	8.71				
ISO2-96	9.50	9.50	9.50	9.50	9.50	9.48	9.48				
ISO2-100	9.88	9.88	9.88	9.88	9.88	9.99	9.99				
ISO2-119	11.75	11.75	11.75	11.75	11.75	11.79	11.79				
ISO2-132	13.25	13.25	13.25	13.25	13.25	13.32	13.32				

All values are +/- 10%. Strobe values based on 250us pulsewidth and 10% duty cycle.

Number of ULC Channels

1 channel

2 channel

3 channel -- # LEDs are sometimes not divisible evenly by 3 so 4 channels may be recommended

4 channel



EXOLIGHT v2.0 with ULC-2 CONTROLLER (Strobe values)

MODEL	TYPICAL STROBE CURRENT (AMPS PER CHANNEL)										
	WHITE	RED	GREEN	BLUE	IR	UV395	UV365	RGB			RGBIR
	Strobe	Strobe	Strobe	Strobe	Strobe	Strobe	Strobe	Strobe-R	Strobe-G	Strobe-B	Strobe *
ISO2-5	3.2	3.2	3.2	3.2	3.2	4.0	4.0	1.6	3.2	3.2	1.40
ISO2-8	4.0	4.0	4.0	4.0	4.0	4.0	4.0	1.6	3.2	3.2	1.40
ISO2-10	5.6	5.6	5.6	5.6	5.6	8.0	8.0	4.8	4.8	4.8	4.20
ISO2-14	8.0	8.0	8.0	8.0	8.0	10.0	10.0	4.8	9.6	9.6	4.20
ISO2-19	11.2	11.2	11.2	11.2	11.2	14.0	14.0	4.8	9.6	9.6	5.60
ISO2-20	12.8	12.8	12.8	12.8	12.8	16.0	16.0	6.4	12.8	12.8	8.40
ISO2-23	13.6	13.6	13.6	13.6	13.6	16.0	16.0	6.4	12.8	12.8	8.40
ISO2-30	20.0	20.0	20.0	20.0	20.0	24.0	24.0	9.6	19.2	19.2	12.60
ISO2-34	20.8	20.8	20.8	20.8	20.8	26.0	26.0	9.6	19.2	19.2	12.60
ISO2-40	26.4	26.4	26.4	26.4	26.4	32.0	32.0	17.6	17.6	17.6	16.80
ISO2-48	28.0	28.0	28.0	28.0	28.0	34.0	34.0	19.2	19.2	19.2	15.40
ISO2-53	32.8	32.8	32.8	32.8	32.8	40.0	40.0	22.4	22.4	22.4	21.00
ISO2-57	36.0	36.0	36.0	36.0	36.0	44.0	44.0	24.0	24.0	24.0	19.60
ISO2-63	39.2	39.2	39.2	39.2	39.2	48.0	48.0				
ISO2-68	42.4	42.4	42.4	42.4	42.4	52.0	52.0				
ISO2-71	44.8	44.8	44.8	44.8	44.8	54.0	54.0				
ISO2-80	52.0	52.0	52.0	52.0	52.0	64.0	64.0				
ISO2-89	56.0	56.0	56.0	56.0	56.0	68.0	68.0				
ISO2-96	60.8	60.8	60.8	60.8	60.8	74.0	74.0				
ISO2-100	63.2	63.2	63.2	63.2	63.2	78.0	78.0				
ISO2-119	75.2	75.2	75.2	75.2	75.2	92.0	92.0				
ISO2-132	84.8	84.8	84.8	84.8	84.8	104.0	104.0				

All values are +/- 10%. Strobe values based on 250us pulsewidth and 10% duty cycle.

Number of ULC Channels

1 channel

2 channel

3 channel -- # LEDs are sometimes not divisible evenly by 3 so 4 channels may be recommended

4 channel

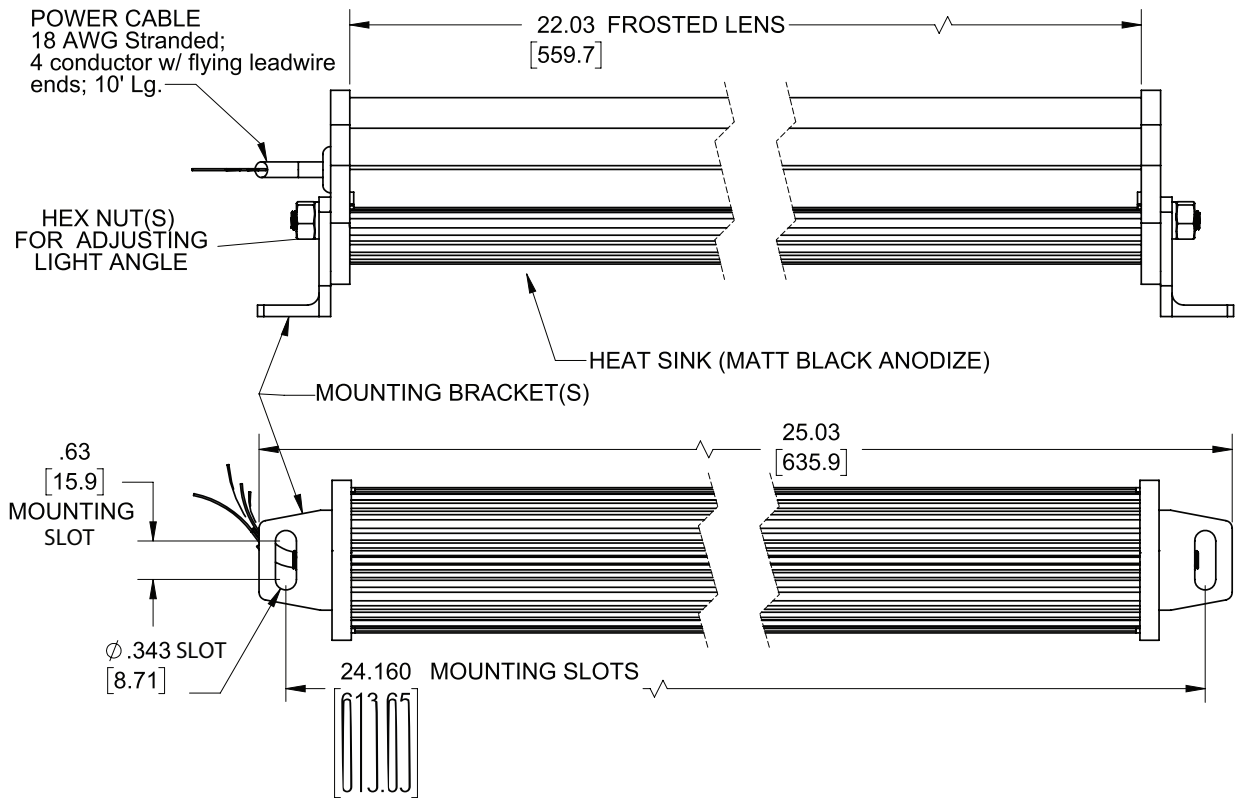
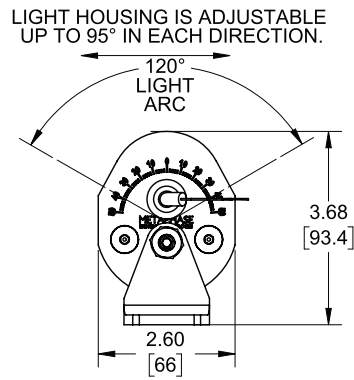


EXOLIGHT CABLING

Model	Cables			
	Single color	ULC-2	RGB	RGBIR
ISO-2	1, 3m, 24AWG-4	1, 3m, 24AWG-4	1, 3m, 24AWG-6	1, 3m, 22AWG-10
ISO-4	1, 3m, 24AWG-4	1, 3m, 24AWG-4	1, 3m, 24AWG-6	1, 3m, 22AWG-10
ISO-8	1, 3m, 24AWG-4	1, 3m, 24AWG-4	1, 3m, 24AWG-6	1, 3m, 22AWG-10
ISO-14	1, 3m, 24AWG-4	1, 3m, 24AWG-4	1, 3m, 24AWG-6	1, 3m, 22AWG-10
ISO-19	1, 3m, 24AWG-4	1, 3m, 24AWG-4	1, 3m, 18AWG-6	2, 3m, 18AWG-6
ISO-23	1, 3m, 24AWG-4	1, 3m, 24AWG-4	1, 3m, 18AWG-6	2, 3m, 18AWG-6
ISO-30	1, 3m, 18AWG-4	1, 3m, 18AWG-4	1, 3m, 18AWG-6	2, 3m, 18AWG-6
ISO-34	1, 3m, 18AWG-4	1, 3m, 18AWG-4	1, 3m, 18AWG-6	2, 3m, 18AWG-6
ISO-48	1, 3m, 18AWG-4	1, 3m, 18AWG-4	2, 6m, 18AWG-6	2, 6m, 18AWG-6
ISO-53	1, 3m, 18AWG-4	1, 3m, 18AWG-4	2, 6m, 18AWG-6	2, 6m, 18AWG-6
ISO-57	1, 3m, 18AWG-4	1, 3m, 18AWG-4	2, 6m, 18AWG-6	2, 6m, 18AWG-6
ISO-60	1, 3m, 18AWG-4	1, 3m, 18AWG-4	2, 6m, 18AWG-6	2, 6m, 18AWG-6
ISO-63	1, 3m, 18AWG-4	2, 6m, 18AWG-4	2, 6m, 18AWG-6	2, 6m, 18AWG-6
ISO-68	1, 3m, 18AWG-4	2, 6m, 18AWG-4	2, 6m, 18AWG-6	2, 6m, 18AWG-6
ISO-71	2, 6m, 18AWG-4	2, 6m, 18AWG-4	2, 6m, 18AWG-6	2, 6m, 18AWG-6
ISO-89	2, 6m, 18AWG-4			
ISO-96	2, 6m, 18AWG-4			
ISO-100	2, 6m, 18AWG-4			
ISO-114	2, 6m, 18AWG-4			
ISO-119	2, 6m, 18AWG-4			

Legend

# of cables	1, 3m, 24AWG-4
Length of cables	1, 3m, 24AWG-4
Conductor used	1, 3m, 24AWG-4
# of Conductors	1, 3m, 24AWG-4



COMPANY CONTACT INFORMATION

Contact your Metaphase Lighting Technologies representative at **+1 215-639-8699** or your local representative for additional details, options and customizations. For any sales inquiries contact us at sales@metaphase-tech.com

COMPLIANCE



IEC
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