

ISO2

The ISO2 (Exolight v2.0) builds upon the world renowned, ground breaking technology of the original Exolight Series (ISO). The ISO2 has a high-impact durable molded diffuser that results in a similar appearance to a fluorescent tube but has all the advantages of an LED front and backlight. With its 120° spread of uniform illumination, the ISO2 is an ideal candidate for the most sensitive area scan applications, as a front light, backlight, and some line scan applications. Consult your Metaphase representative for IP rated versions as well as options that include polarizer, quick disconnect and more.



FEATURES

- The 24V version has a Built-in Constant Current Driver with 0-10VDC Intensity Control
- Passive cooling (no fans needed)
- Lumiform diffuser with 120° (±5%) uniform lighting
- Compatible with DDC-3 and ILD-35-24-L
- Hard molded diffuser for durability and resistance to impacts
- Features a clamping style tilt bracket to allow for easy positioning from 0 – 180°

APPLICATIONS

- Machine Vision and Automation
- Work bench illumination
- Automotive component inspection
- Coiled steel pin-hole detection
- Pick and Place applications
- Sorting facilities
- Robotic Inspection

WAVELENGTHS

Order ID	Description / nanometers
W	White (6000K), Nominal
R	Red / 630nm
G	Green / 530nm
B	Blue / 470nm
IR850 (or IRN)	Infrared / 850nm
IR880 (or IRL)	Infrared / 880nm
IR940	Infrared / 940nm
UV395 (or UVL)	Ultraviolet Long / 395nm
RGB	Red-Green-Blue
RGBIR850	Red-Green-Blue-IR850
WIR850	White-IR850

GENERAL SPECIFICATIONS

Power Source:	24VDC ±5%
Cable (Standard):	10-foot cable with flying leads
Housing:	Black Anodized Aluminum
Ambient Temp:	-20°C to 40°C
Lifetime Expectancy:	75,000 hours (except UV)

ISO2

SINGLE COLOR EXO2 LIGHTS													
MODEL	Lens Length Inches (cm)	Weight lbs/Kg	Cable(s)			Typical Current (Amps) @24VDC							
			QTY	Length	Description	WHITE	RED	GREEN	BLUE	IR	UVL		
ISO2-5	5.63 (14.3)	1.17/.531	1	10ft	18 AWG, 4 Conductor	0.3	0.4	0.4	0.4	0.3	0.4		
ISO2-8	7.13 (18.1)	1.46/.662				0.4	0.5	0.4	0.4	0.3	0.4		
ISO2-14	13.16 (33.4)	2.49/1.13				0.8	1.0	1.1	1.0	0.6	0.9		
ISO2-19	18.23 (46.3)	3.22/1.46				1.1	1.5	1.5	1.4	1.0	1.3		
ISO2-23	22.03 (56.0)	3.74/1.70				1.3	1.7	1.7	1.6	1.3	1.5		
ISO2-30	29.63 (75.2)	5.18/2.35				1.8	2.4	2.4	2.3	1.6	2.0		
ISO2-34	33.23 (84.4)	5.65/2.56			2	20ft	18 AWG, 6 Conductor	2.3	2.7	2.8	2.7	2.0	2.4
ISO2-48	44.85 (113.9)	7.63/3.46						3.2	3.5	3.8	3.6	3.0	3.2
ISO2-53	52.23 (132.7)	8.62/3.91						3.3	4.4	4.4	4.3	3.0	3.7
ISO2-57	56.98 (144.7)	9.41/4.27						3.7	4.6	4.7	4.7	3.3	4.1
ISO2-63	62.48 (158.7)	10.3/4.67						4.0	5.0	5.4	5.2	4.0	4.5
ISO2-68	67.23 (170.8)	11.1/5.03						4.6	5.5	5.9	5.6	4.4	4.9
ISO2-71	70.73 (179.7)	12.0/5.44	4.8	5.7			6.1	5.9	4.8	5.1			
ISO2-89	88.23 (224.1)	14.1/6.40	6.0	7.8			8.4	7.8	5.9	6.6			
ISO2-96	95.73 (243.1)	15.3/6.94	6.6	8.0			8.7	8.7	6.6	7.2			
ISO2-100	99.23 (252.0)	15.9/7.21	6.8	8.5			9.2	8.8	6.9	7.6			
ISO2-119	118.23 (300.3)	17.7/8.03	8.3	10.3			11.1	10.6	8.1	9.2			
ISO2-132	133.25 (338.5)	18.6/8.44	9.5	11.8			12.8	12.2	9.3	10.5			

*Custom sizes and configurations are available

WIRING DIAGRAM (4 conductor)		WIRING DIAGRAM (6 conductor)		M12 (5 position male)	
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
				5	No Connection
When not using the Intensity Control, connect the 0-10V control line to the +24VDC and connect the Signal Ground to Ground (24V RTN)				The M12 connector option is not recommended for lights rated more than 4 amps	

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).

ISO2

SINGLE COLOR EXO2 LIGHTS with ULC-2 Controller														
			Cable(s)			Typical Controller Settings: Input Current / Strobe Current (Amps) @250us								
MODEL*	Lens Length Inches (cm)	Weight lbs/Kg	QTY	Lgth	Description	WHITE	RED	GREEN	BLUE	IR	UVL	UVS		
ISO2-5	5.63 (14.3)	1.17/.531	1	10ft	18 AWG, 4 Conductor	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5		
ISO2-8	7.13 (18.1)	1.46/.662				0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5	0.5/2.5
ISO2-14	13.16 (33.4)	2.49/1.13				1.5/13	1.5/13	1.5/13	1.5/13	1.5/13	1.5/13	1.5/13	1.5/13	1.5/13
ISO2-19	18.23 (46.3)	3.22/1.46				1.5/13	1.5/13	1.5/13	1.5/13	1.5/13	1.5/13	1.5/13	1.5/13	1.5/13
ISO2-23	22.03 (56.0)	3.74/1.70				1.5/15	1.5/15	1.5/15	1.5/15	1.5/15	1.5/15	1.5/15	1.5/15	1.5/15
ISO2-30	29.63 (75.2)	5.18/2.35				2.0/18	2.0/18	2.0/18	2.0/18	2.0/18	2.0/18	2.0/18	2.0/18	2.0/18
ISO2-34	33.23 (84.4)	5.65/2.56			2.2/20	2.2/20	2.2/20	2.2/20	2.2/20	2.2/20	2.2/20	2.2/20	2.2/20	
ISO2-48	44.85 (113.9)	7.63/3.46			2.7/25	2.7/25	2.7/25	2.7/25	2.7/25	2.7/25	2.7/25	2.7/25	2.7/25	
ISO2-53	52.23 (132.7)	8.62/3.91			3.0/25	3.0/25	3.0/25	3.0/25	3.0/25	3.0/25	3.0/25	3.0/25	3.0/25	
ISO2-57	56.98 (144.7)	9.41/4.27			3.3/27	3.3/27	3.3/27	3.3/27	3.3/27	3.3/27	3.3/27	3.3/27	3.3/27	
ISO2-63	62.48 (158.7)	10.3/4.67			3.6/27	3.6/27	3.6/27	3.6/27	3.6/27	3.6/27	3.6/27	3.6/27	3.6/27	
ISO2-68	67.23 (170.8)	11.1/5.03			4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	
ISO2-71	70.73 (179.7)	12.0/5.44			4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	4.0/30	
ISO2-89	88.23 (224.1)	14.1/6.40			2	20ft	18 AWG, 6 Conductor	Contact Metaphase for possible custom order configurations						
ISO2-96	95.73 (243.1)	15.3/6.94												
ISO2-100	99.23 (252.0)	15.9/7.21												
ISO2-119	118.23 (300.3)	17.7/8.03												
ISO2-132	133.25 (338.5)	18.6/8.44												

*Custom sizes and configurations are available

SINGLE COLOR LIGHT with ULC-2 (4 conductor)	
WIRE COLOR	FUNCTION
RED, WHITE (+)	LED INPUT
BLACK, GREEN (-)	
Terminated within a 2 position ULC-2 output connector (Phoenix Contact P/N: BCP-508-2)	

ISO2

RGB EXO2 LIGHTS						
MODEL	Lens Length Inches (cm)	Weight lbs/Kg	Cable QTY	Cable Length	Cable Description	Typical Input Current (Amps)
ISO2-05-RGB-24	6.50 (16.5)	1.33/.603	1	10ft	18 AWG, 6 Conductor	0.5
ISO2-10-RGB-24	11.51 (29.2)	2.07/.939				1.1
ISO2-20-RGB-24	21.62 (54.9)	3.67/1.66				2.4
ISO2-30-RGB-24	31.73 (80.6)	5.39/2.44				2.9
ISO2-40-RGB-24	41.73 (106.0)	7.09/3.22				3.9
ISO2-50-RGB-24	51.73 (131.4)	8.54/3.87	2			4.9

RGBIR EXO2 LIGHTS						
MODEL	Lens Length Inches (cm)	Weight lbs/Kg	Cable QTY	Cable Length	Cable Description	Typical Input Current (Amps)
ISO2-06-RGBIR-24	7.40 (18.8)	1.52/.689	1	10ft	22 AWG, 10 Conductor	0.8
ISO2-10-RGBIR-24	11.40 (29.0)	2.03/.921				0.8
ISO2-12-RGBIR-24	13.40 (34.0)	2.41/1.09				0.9
ISO2-17-RGBIR-24	17.40 (44.2)	2.96/1.34				1.2
ISO2-20-RGBIR-24	21.40 (54.4)	3.62/1.64				1.5
ISO2-22-RGBIR-24	23.40 (59.4)	3.97/1.80				1.6
ISO2-25-RGBIR-24	26.40 (67.1)	4.48/2.03				2.0
ISO2-35-RGBIR-24	36.40 (92.4)	6.19/2.81				2.9
ISO2-45-RGBIR-24	46.40 (117.9)	7.89/3.58				3.7
ISO2-65-RGBIR-24	66.40 (168.7)	11.29/5.12				5.4

*Custom sizes and configurations are available

RGB (6 Conductor)		RGBIR (10 Conductor)	
WIRE COLOR	FUNCTION	WIRE COLOR	FUNCTION
ORANGE	+24VDC	WHITE WHT/BLK	+24VDC
BLACK	GND (24V RTN)	BLACK	GND (24V RTN)
WHITE	SIG GND	RED/BLK GREEN/BLK ORG/BLK	SIGNAL GND
RED	0-10V RED Intensity Control	RED	0-10V RED Intensity Control
GREEN	0-10V GREEN Intensity Control	GREEN	0-10V GREEN Intensity Control
BLUE	0-10V BLUE Intensity Control	BLUE	0-10V BLUE Intensity Control
<p>When not using the Intensity Control, connect the 0-10V control line(s) to +24VDC and connect SIG GND to GND (24V RTN)</p>		ORANGE	0-10V INFRARED Intensity Control
		<p>When not using the Intensity Control, connect the 0-10V control line(s) to +24VDC and connect SIG GND to GND (24V RTN)</p>	

ISO2

RGB EXO2 LIGHTS with ULC-2 Controller option						
MODEL*	Lens Length Inches (cm)	Weight lbs/Kg	Cable QTY	Cable Length	Cable Description	Typical Controller Settings: Input/ Strobe Current @250us (per color) (Amps)
ISO2-05-RGB-U	6.50 (16.5)	1.33/.603	1	10ft	18 AWG, 6 Conductor	1.0/10
ISO2-10-RGB-U	11.51 (29.2)	2.07/.939				1.4/13
ISO2-20-RGB-U	21.62 (54.9)	3.67/1.66				2.5/25
ISO2-25-RGB-U	26.90 (68.3)	4.53/2.05				3.6/27
ISO2-36-RGB-U	37.10 (94.2)	6.31/2.86	2			4.7/35
ISO2-41-RGB-U	42.20 (107.2)	7.17/3.25				5.8/40

RGBIR EXO2 LIGHTS with ULC-2 Controller option						
MODEL*	Lens Length Inches (cm)	Weight lbs/Kg	Cable QTY	Cable Length	Cable Description	Typical Controller Settings: Input/ Strobe Current @250us (per color) (Amps)
ISO2-05-RGBIR-U	6.40 (16.3)	1.31/.594	1	10ft	22 AWG, 10 Conductor	0.7/10
ISO2-10-RGBIR-U	11.40 (29.0)	2.05/.930				1.1/13
ISO2-20-RGBIR-U	21.40 (54.4)	3.70/1.69				1.1/13
ISO2-25-RGBIR-U	26.40 (67.1)	4.48/2.03				2.0/20
ISO2-35-RGBIR-U	36.40 (92.4)	6.19/2.81				2.5/25
ISO2-45-RGBIR-U	46.40 (117.9)	7.89/3.58				3.0/30
ISO2-65-RGBIR-U	66.40 (168.7)	11.29/5.12				4.0/30

*Custom sizes and configurations are available

ISO2

PART NUMBER KEY														
MODEL	-	LENGTH ID (inches)	-	WAVELENGTH	-	DRIVER* (most common)	-	POLARIZER	-	COVER	-	CABLE LENGTH	-	CONN.** (most Common)
ISO2	-	XXX	-	XXXXX	-	XXX-XXXXXX	-	XXXX	-	XX	-	XXX	-	XXXX
ISO2		5 through 132 (See above chart)		W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) IR880 (Infrared 880nm) IR940 (Infrared 940nm) UV395 (UV Long 395nm) RGB (Red-Green-Blue) RGBIR850 (Red-Green-Blue-IR850) WIR850 (White-IR850)		24Z 24Z-TRG 24-ILSXXX 24-ILD U¹ XXX=rate in μs Example: 250	POLO Must use CC with Polarizer Select or leave blank for no polarizer	CC Select or leave blank for frosted cover	5M 10M Length can be customized: ex.7M=7meter s Select or leave blank for 3 meters	M12D^{1 2} BC^{1 3} Select or leave blank for flying leads				
Example 1: ISO2-19-W-24Z-POLO-CC-M12D Example 2: ISO2-48-G-24Z-TRG						¹ Not available in lights exceeding 4A input current ² Default cable length for an M12D connector is 19 inches ³ Default cable length for a Barrel Connector is 10 feet								

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)

***(Link to Connector Key)

ISO2

Sample Model Number: ISO2-19-W-24Z

LIGHT HOUSING IS ADJUSTABLE UP TO 95° IN EACH DIRECTION.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	POWER CABLE UPDATE	7/17/2017	

Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977

QUANTITY:	Per order
MATERIAL:	See BOM
FINISH:	Matt Black Anodize
TREATMENT:	N/A

SEE SHEET 2 FOR EXPLODED VIEW AND BOM.

TOLERANCE/FINISH
UNLESS OTHERWISE SPECIFIED

INCHES (MM)		125 (V.RIMS)	
X	X	.XX	.XXX
[±.76]	[±.38]	[±.010]	[±.005]
	[±.25]	[±.13]	
			ANGLES ±1°

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TITLE		ISO2 Light-19" Long	
USED ON		Per customer	
SIZE	DRAWING NUMBER	REV	
B	ISO2-19-1	B	
SCALE 1:12		SHEET 1 OF 1	

Approval Signature _____ Date ____/____/____

COMPLIANCE



CONTACT US

Contact Metaphase Technologies at **215-639-8699** or your local representative for additional details, options and customizations.