

The 2nd generation Exolight builds upon the world renowned, ground breaking technology of the original Exolight Series. Our new molded Lumiform diffuser provides a dramatic increase in uniformity, coverage area, and resistance to impact. With a 120° spread of uniform lighting, the EXO2 is perfect for even the most sensitive area scan application and its high level of diffusion makes it a great candidate for transmission or backlight applications; even for line scan. Hard molding makes the diffuser extremely durable to impact and can be configured for IP rating with greater water and dust resistance.



FEATURES

- Lumiform diffuser with 120° (±5%) uniform lighting
- Hard molded diffuser for durability and resistance to impacts
- Features a clamping style tilt bracket to allow for easy positioning from 0 – 180°
- Available in a wide variety of colors: White, Red, Green, Blue, RGB, UV, IR, and mixed LED technology
- Available in a large variety of sizes up to 132 inches (3.4 meters) in length

WAVELENGTH (nanometers)

W	White 6000K
R	Red 630nm
G	Green 530nm
B	Blue 470nm
IR	Infrared 850nm
UVL	Ultraviolet Long 395nm
UVS	Ultraviolet Short 365nm
RGB	630/530/470nm
RGBIR	630/530/470/850nm

SPECIFICATIONS

Cable (Standard):	10 ft. (3 m) with flying leads
Housing:	Black Anodized Aluminum
IP Rating:	IP65 sealed, IP50 unsealed
Operating Temperature:	-30°C to 60°C
Illuminance:	Varies by model
Intensity Control:	0 – 10V intensity control built in. Compatible with optional DDC-3 and ILD-35-24-L
Lifetime (Expected):	75,000 hours

Note: Multispectral & custom wavelengths available

EXO2 SPECIFICATIONS, continued

SINGLE COLOR EXO2 LIGHTS												
MODEL	Lens Length Inches (cm)	Weight ±10% lbs/Kg	Cable(s)			Typical Current (Amps) @24VDC						
			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	0.3	0.4	0.5	0.5	0.2	0.4	0.4
ISO2-8	7.13 (18.1)	1.46/.662				0.3	0.4	0.5	0.5	0.3	0.4	0.4
ISO2-14	13.16 (33.4)	2.49/1.13				0.8	0.9	1.0	1.3	0.5	0.9	1.1
ISO2-19	18.23 (46.3)	3.22/1.46				1.2	1.3	1.8	1.8	0.7	1.3	1.5
ISO2-23	22.03 (56.0)	3.74/1.70				1.3	1.4	1.6	2.1	1.0	1.5	1.7
ISO2-30	29.63 (75.2)	5.18/2.35			18 AWG, 6 Conductor	1.8	2.0	2.8	2.8	1.2	2.0	2.4
ISO2-34	33.23 (84.4)	5.65/2.56				2.2	2.3	3.4	3.3	1.5	2.4	2.8
ISO2-48	44.85 (113.9)	7.63/3.46				2.8	3.1	4.4	4.4	1.9	3.1	3.7
ISO2-53	52.23 (132.7)	8.62/3.91				3.3	3.6	5.2	5.1	2.4	3.7	4.3
ISO2-57	56.98 (144.7)	9.41/4.27				3.7	4.0	5.7	5.7	2.7	4.0	4.7
ISO2-63	62.48 (158.7)	10.3/4.67				4.0	4.3	6.2	6.2	2.9	4.4	5.2
ISO2-68	67.23 (170.8)	11.1/5.03				4.3	4.7	6.7	6.7	3.2	4.8	5.6
ISO2-71	70.73 (179.7)	12.0/5.44				4.7	4.9	7.0	6.9	3.4	5.0	5.8
ISO2-89	88.23 (224.1)	14.1/6.40				5.8	6.1	8.8	8.8	4.2	6.3	7.3
ISO2-96	95.73 (243.1)	15.3/6.94	6.3	6.7		9.5	9.5	4.6	6.8	7.9		
ISO2-100	99.23 (252.0)	15.9/7.21	6.5	7.0	10.1	10.0	4.9	7.2	8.4			
ISO2-119	118.23 (300.3)	17.7/8.03	7.8	8.3	11.9	11.8	5.6	8.5	9.9			
ISO2-132	133.25 (338.5)	18.6/8.44	8.8	9.4	13.4	13.4	6.3	9.6	11.2			

SINGLE COLOR EXO2 WIRING OPTIONS:

WIRING DIAGRAM (4 conductor)		WIRING DIAGRAM (6 conductor)		M12 Speedcon (#1405879, 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
<p>When not using the Intensity Control, connect the 0-10V control line to +24VDC and connect the Signal Ground to Ground (24V RTN)</p>				<p>The M12 connector option is not recommended for lights rated in excess of 4 amps max current.</p>	

EXO2 SPECIFICATIONS, continued

SINGLE COLOR EXO2 LIGHTS with ULC-2 Controller													
MODEL	Lens Length Inches (cm)	Weight ±10% lbs/Kg	Cable(s)			Input Current / Strobe Current (Amps) @250us							
			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
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
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
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
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
ISO2-34	33.23 (84.4)	5.65/2.56			18 AWG, 6 Conductor	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
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
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
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
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
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
ISO2-89	88.23 (224.1)	14.1/6.40				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											

SINGLE COLOR LIGHT with ULC-2 (4 conductor)	
WIRE COLOR	FUNCTION
RED, WHITE (+)	LED INPUT
BLACK, GREEN (-)	
Terminated within a 2 position BCP-508-2 connector to interface with the ULC-2 "LED Output"	

EXO2 SPECIFICATIONS, continued

RGB EXO2 LIGHTS						
MODEL	Lens Length Inches (cm)	Weight ±10% lbs/Kg	Cable QTY	Cable Length	Cable Description	Input Current (Amps)
ISO2-05-RGB-24	6.50 (16.5)	1.33/.603	1	10ft	18 AWG, 6 Conductor	0.4
ISO2-10-RGB-24	11.51 (29.2)	2.07/.939				0.9
ISO2-20-RGB-24	21.62 (54.9)	3.67/1.66				2.2
ISO2-30-RGB-24	31.73 (80.6)	5.39/2.44				2.7
ISO2-40-RGB-24	41.73 (106.0)	7.09/3.22	2			3.6
ISO2-50-RGB-24	51.73 (131.4)	8.54/3.87				4.5

RGBIR EXO2 LIGHTS						
MODEL	Lens Length Inches (cm)	Weight ±10% lbs/Kg	Cable QTY	Cable Length	Cable Description	Input Current (Amps)
ISO2-06-RGBIR-24	7.40 (18.8)	1.52/.689	1	10ft	22 AWG, 10 Conductor	0.7
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				0.8
ISO2-17-RGBIR-24	17.40 (44.2)	2.96/1.34				1.1
ISO2-20-RGBIR-24	21.40 (54.4)	3.62/1.64				1.4
ISO2-22-RGBIR-24	23.40 (59.4)	3.97/1.80				1.5

RGB (6 Conductor)	
WIRE COLOR	FUNCTION
ORANGE	+24VDC
BLACK	GND (24V RTN)
WHITE	SIG GND
RED	0-10V RED Intensity Control
GREEN	0-10V GREEN 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>	

RGBIR (10 Conductor)	
WIRE COLOR	FUNCTION
WHITE WHT/BLK	+24VDC
BLACK	GND (24V RTN)
RED/BLK GREEN/BLK ORG/BLK	SIGNAL GND
RED	0-10V RED Intensity Control
GREEN	0-10V GREEN Intensity Control
BLUE	0-10V BLUE Intensity Control
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>	

EXO2 SPECIFICATIONS, continued

RGB EXO2 LIGHTS with ULC-2 Controller option						
MODEL	Lens Length Inches (cm)	Weight ±10% lbs/Kg	Cable QTY	Cable Length	Cable Description	Input/ Strobe Current@250us (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				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 ±10% lbs/Kg	Cable QTY	Cable Length	Cable Description	Input/ Strobe Current@250us (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				1.2/10
ISO2-20-RGBIR-U	21.40 (54.4)	3.70/1.69				1.5/13
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

RGB with ULC-2 (6 Conductor)	
WIRE COLOR	FUNCTION
RED (+)	LED INPUT
BLACK (-)	RED
GREEN (+)	LED INPUT
WHITE (-)	GREEN
BLUE (+)	LED INPUT
ORANGE (-)	BLUE
Terminated within a 2 position BCP-508-2 connector to interface with the ULC-2, "LED Output"	

RGBIR with ULC-2 (10 Conductor)	
WIRE COLOR	FUNCTION
RED (+)	LED INPUT
RED/BLK (-)	RED
GREEN (+)	LED INPUT
GRN/BLK(-)	GREEN
BLUE (+)	LED INPUT
BLACK (-)	BLUE
ORANGE (+)	LED INPUT
ORG/BLK (-)	IR
WHITE (+)	NO
WHT/BLK (-)	CONNECTION
Terminated within a 2 position BCP-508-2 connector to interface with the ULC-2, "LED Output"	

EXO2 SPECIFICATIONS, continued

MODEL NUMBER KEY					
MODEL	LENS LENGTH	COLOR/WAVELENGTH	OPTION 1	OPTION 2	
ISO2	XXX	XXXXX	XXX	XXX-XXX	
	Enter lens length in inches. See chart above for standard sizes from 5" to 132". Contact Metaphase for additional and custom sizes.	W (White 6000K) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR (Infrared 850nm) UVL (Ultraviolet Long 395nm) UVS (Ultraviolet Short 365nm) RGB (Red-Green-Blue) RGBIR (Red-Green-Blue + IR)	24 (+24VDC) (standard) U (ULC-2 interface) KEY (Keyance Controller) ILD (In Line Dimmer) ILS (In Line Strobe)	(Leave Blank for a 10ft. Cable with flying leads) T (M12 quick disconnect) TRG (PNP/NPN On/Off feature)* P (Polarizer, available for all configurations) XXX Customizable per order	

***TRG** (Internal Trigger feature)

The Trigger feature consists of two additional leads from the EXO2 Light. One lead is for a user provided NPN controlled input and a second lead for a PNP controlled input. The following chart describes the circuit operation:

Condition	NPN Input Lead	PNP Input Lead	Result
NPN mode	<.9VDC	N/A (float)	Enables Light
PNP mode	N/A (float)	>2.5VDC	Enables Light
No Inputs	No Connection	No Connection	Light is Disabled

Note: When the Light is Enabled it is controlled by the 0-10VDC Intensity Control. For maximum intensity, tie the 0-10VDC Intensity Control line to +24 VDC and connect the Signal Ground line to 24V RTN.

Sample Model Number: ISO2-53-W-24

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

120° LIGHT ARC

2.60 [66]

3.68 [93.4]

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	8/19/2016	

POWER CABLE
18 AWG Stranded;
6 conductor w/ flying leadwire
ends; 10' Lg.

HEX NUT(S)
FOR ADJUSTING
LIGHT ANGLE

52.23 FROSTED LENS
[1326.5]

55.22 [1402.7]

27.18 [690.25]

.63 MOUNTING SLOT

φ .343 SLOT [8.71]

54.35 MOUNTING SLOTS [1380.49]

CENTER SUPPORT HOLE
M6X1.0 - 6H √ .300 [7.62]

SECTION A-A
SCALE 1 : 2

2.19 [55.64]

M6-1.0 THREAD
X .30 [7.62] DEEP

φ .50 C'BORE [12.70]

SEE SHEET 2 FOR EXPLODED VIEW AND BOM.

Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977																				
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MATERIAL: See BOM	INCHES (MM)																			
FINISH: Matt Black Anodize	±.030 [±.76] ±.020 [±.51] ±.010 [±.25] ±.005 ANGLES ±1°																			
TREATMENT: N/A		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">TITLE</td> </tr> <tr> <td colspan="2" style="text-align: center;">ISO2 Light-53" Long</td> </tr> <tr> <td colspan="2">USED ON</td> </tr> <tr> <td colspan="2" style="text-align: center;">Per customer</td> </tr> <tr> <td>SIZE</td> <td>REV</td> </tr> <tr> <td style="text-align: center;">B</td> <td style="text-align: center;">A</td> </tr> <tr> <td colspan="2" style="text-align: center;">DRAWING NUMBER</td> </tr> <tr> <td colspan="2" style="text-align: center;">ISO2-53-1</td> </tr> <tr> <td colspan="2" style="text-align: center;">SCALE 1-12 SHEET 1 OF 1</td> </tr> </table>	TITLE		ISO2 Light-53" Long		USED ON		Per customer		SIZE	REV	B	A	DRAWING NUMBER		ISO2-53-1		SCALE 1-12 SHEET 1 OF 1	
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Approval Signature	Date																			

COMPLIANCE



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