

Cleanroom EL-R Vivarium Troffers: EL-R-VIVARIUM-TW

1x4, 2x2 and 2x4 Red/White LED Recessed Luminaires

PRODUCT FEATURES

- ✓ ETL Listed for Wet Locations
- ✓ IP55 Rated
- ✓ Suitable for ISO 5-9 Cleanspaces
- ✓ Suitable for FED Std 209E Class 100-100,000 Cleanspaces
- ✓ Channel Inset Door Frame
- ✓ Robotically Seam Welded Housing
- ✓ Narrow Spectrum 630nm, 660nm, and 735nm Red Non-filtered LEDs
- ✓ White / Red Separately Controlled Circuits
- ✓ Recessed Housing Suitable for Tbar Grid & Hardlid Installations
- ✓ B.A.A. & B.A.B.A Compliant & Made in the USA by a Family Owned US Corporation
- ✓ Available as Warm Dim or as Separately Controlled Intensity & CCT
- ✓ Tunable White LEDs Allow a Full Range of CCTs from 2700K-6500K CCT



ORDERING GUIDE

Series	Material	Size	Row Qty.	Red LED Wavelength	Row Qty.	White LED	CCT/CRI	Control	Voltage	Optics	Options
EL-R						LED TW					
Series	Material	Size	Row Qty.	Red LED Wavelength	Row Qty.	White LED	CCT/CRI	Control	Voltage	Optics	Options
EL-R	2 White CRS Hsg. & Polished 304 SS Door	1x4 1' x 4' Housing	1	RLED630	1	LED TW	80 CRI:	10VA 0-10V Analog Control	120V	P12ACR 0.135" P12 Prismatic Impact Resistant Acrylic (Inverted)	
		3 LED Rows Max	2	RLED660	2		827/ 865 2700K-6500K	10VA	277V	LEX 0.125" P12 Prismatic Polycarbonate (Inverted)	
	3 White 430 SS Hsg. & Polished 304 SS Door	2x2 2' x 2' Housing	1	RLED735	1		90+ CRI:	10VWD 0-10V Warm Dim Control	UNV	A19 0.156" A19 Prismatic Impact Resistant Acrylic (Inverted)	
		OR	2		2		927/965 2700K-6500K			TG 0.156" Prismatic Tempered Glass (Inverted)	
	4 White AL Hsg. & Polished 304 SS Door	2x4 2' x 4' Housing	3		3					HIA 0.140" P12 Prismatic High Impact Resistant Acrylic (Inverted)	
	5 White AL Hsg. & White AL Door	5 LED Rows Max	4							FROST 0.125" Flat Diffusing Frost Acrylic	
	6 White CRS Hsg. & White AL Door									2DBW 0.125" Flat Diffused Acrylic with Bi-Directional Batwing Distribution	
										LBW 0.125" Flat Diffused Acrylic with Linear Batwing Distribution	
										GH85 0.125" Flat Diffused Acrylic with Glare Suppression Distribution	
NOTE: P12ACR option is standard and will be provided when no other option is selected.											

Ordering Notes, If Applicable

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Options	
SW	Wet Location Hub Supplied (not installed)
PxL *	Programmed to User Specified Lumen Value.
PxW *	Programmed to User Specified Wattage Value.
10KV	10KV Parallel Surge Protection (One Supplied Per Circuit)
GTD	Generator Transfer Device
WHIP	Must Specify Length and Wire Qty
OCCMW	Internal Microwave OCC Sensor
FC	Fuse & Holder (One Supplied Per Circuit)
EM10	10W Integral LED EM (Specify Input Voltage)
EM20	20W Remote LED EM (Specify Input Voltage)
EDL	-40F Electronic Driver
WHT	White Finished Door & HSG
AMW	Anti-Microbial White Powdercoat
2/EDR	Two Circuits of Red Light
2/EDW	Two Circuits of White Light
GG	1/8" Thick Grid Gasket (Provided Loose)

Note*: Specify Value in Ordering Notes

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SPECIFICATIONS

HOUSING: One piece, hole free, robotically seam welded housing has flattened knockouts for a superior seal. Housings are available in .040" 3003 Aluminum, 20Ga 430 Stainless Steel, or 20Ga Cold Rolled Steel.

DOOR FRAME: Inset door frame made from welded channels regresses into the housing to allow the neoprene gasket to seal to the housing. Door frame is hinged by aircraft cables and secures to housing with captive stainless steel pan head screws. Available in .040" 3003 Powder coated Alum. , 20Ga 304 Polished SS.

GASKETS: Closed cell 100% pure neoprene gasket with vulcanized corners making a one-piece oil and solvent resistant gasket system. GG option provides a loose 1/8" thick adhesive backed gasket intended to adhere to the top face of a suspended grid ceiling for grid profiles that do not already have gasket on them.

OPTICS: Standard P12 prismatic acrylic lens is provided when no other options are selected. All prismatic lensing options come with an inverted lens so the smooth side faces the room for easy cleaning. All optics are sealed to the door with NSF listed RTV silicone sealant. Other optics are available, consult factory for more information or options not listed.

LEDs: Fixture available with Red only or Red & White LEDs, each color will be supplied with its own driver for dual switching. Red LED's provide a narrow 630nm, 660nm, or 735nm spectrum light for wavelength sensitive applications. White high efficiency LEDs are commercially available minimum 80 or 90 CRI 2 channel LED modules and use 2700K and 6500K chips to mix color in order to achieve a desired color temperature. Modules have rated lifetime of L70 > 50,000 hrs and efficacy of 165Lm/W. LEDs are controllable via 0-10v dimming, see next page for control options. Consult factory for lumen output configurations not listed on spec sheets.. All boards have Zhaga recognized hole patterns and come with a 5 year warranty.

DRIVERS: Standard Universal Voltage Class 2 drivers are 0-10v Dimmable to 1% and rated -20C (-4F). They come with at least 2.5Kv surge protection, have less than 10% THD at max load, Ballast Factor Greater than .95 and are programmable to match specific lumen or wattage requirements. Drivers with higher input voltage ratings are available, consult factory for driver specifications. (Each color LED comes standard with its own driver)

REFLECTOR: Die formed metal with high reflectance white polyester powder coat finish. Typical reflectivity 92%.

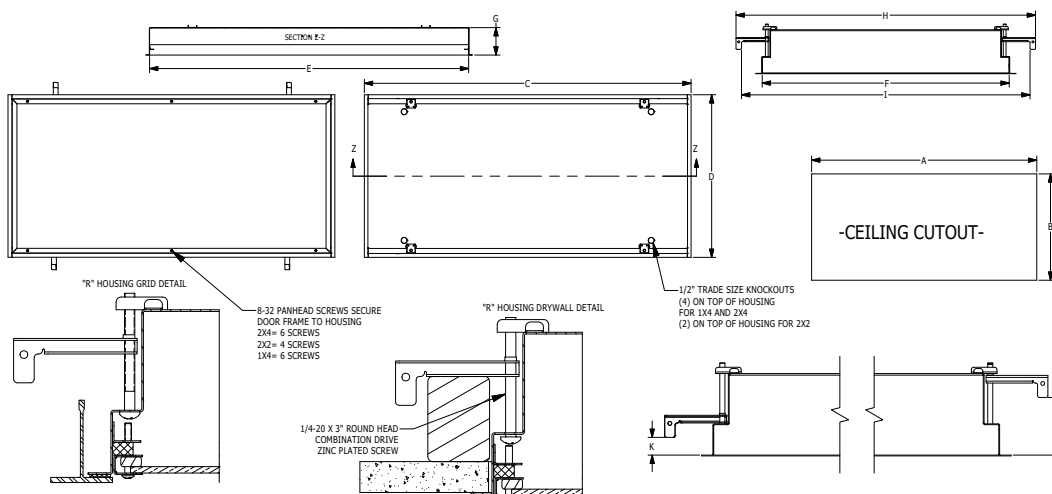
INSTALLATION: Suitable for recessed Non-IC installation into covered ceilings. Fixtures are supplied with .875" flattened knockouts for supply entry. Recessed housings have (4) swing out toggle arms that are used to draw the fixture in to the ceiling for hard lid installation without the need for a yoke hanger. The toggle arm adjuster bolts are accessible from the room side of the luminaire and the actual toggles can be used as means of establishing a seismic support for lay in ceiling installations. Confirm ceiling compatibility with dimension drawings below.

FINISH: Stainless steel door frames are satin polished unless WHT or AMW options are selected. All other materials are provided with gloss high reflectance white polyester powdercoat with 1000hr salt spray test per ASTM B117. AMW option provides a white anti-microbial polyester powder coat to all exposed surfaces.

LISTINGS: IP55 rated for dust and water ingress. ETL listed per UL_1598 for wet locations. Chicago Plenum Rated. Certified ISO-14644-1 for class 5 through class 9 cleanspaces. Certified Fed Std 209E for Class 100 through Class 100,000 cleanspaces. NSF2 Listed for Non-Food & Splash Zones. Drivers and LEDs are covered by a 5 year warranty, the remaining fixture is covered by a 10 year warranty. This product Series is both Build America Buy America (B.A.B.A.) & Buy American Act (B.A.A.) compliant.

PRODUCT DRAWINGS

"R" HOUSING REFERENCE DIMENSIONS											
SIZE	A	B	C	D	E	F	G	H	I	J	K
1X4	47.00"	11.00"	47.63"	11.69"	46.50"	10.50"	4.00"	15.275"	14.275"	2.81"	0.86"
2X2	23.00"	23.00"	23.63"	23.69"	22.50"	22.50"	4.00"	27.31"	26.31"	2.81"	0.86"
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ENERGY DATA - WHITE LED

CHANNEL-FGRS-RED LED TROFFER						
ENCLOSURE SIZE	LED SELECTION	80 CRI TUNABLE WHITE (4000k)			MAX AMBIENT TEMP ³	CCT RANGE
		LUMENS	WATTS	EFFICACY		
1x4	1LEDTW	3,950	34	116	40°C (104°F)	2700k - 6500k
1x4	2LEDTW	7,550	68	111	40°C (104°F)	2700k - 6500k
2x2	1LEDTW	1,950	17	115	40°C (104°F)	2700k - 6500k
2x2	2LEDTW	3,950	35	113	40°C (104°F)	2700k - 6500k
2x2	3LEDTW	5,900	53	111	40°C (104°F)	2700k - 6500k
2x2	4LEDTW	7,800	68	115	40°C (104°F)	2700k - 6500k
2x4	1LEDTW	4,000	35	114	40°C (104°F)	2700k - 6500k
2x4	2LEDTW	8,150	68	120	40°C (104°F)	2700k - 6500k
2x4	3LEDTW	12,200	103	118	40°C (104°F)	2700k - 6500k
2x4	4LEDTW	15,950	135	118	40°C (104°F)	2700k - 6500k

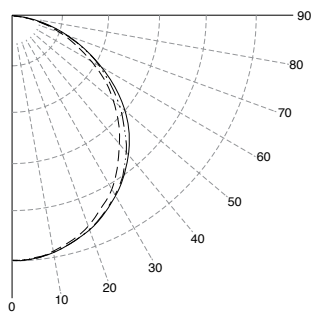
- 1 DELIVERED LUMEN DATA IS CALCULATED BASED ON STATIC WHITE PHOTOMETRY @ 4000K CCT
- 2 WATTAGE IS MEASURED WITH 4000K SELECTION @ 120VAC AND Tambient = 25C. WATTAGES MAY VARY WITH ALTERNATE CONFIGURATIONS
- 3 EFFICACY CALCULATED USING 4000K CCT DATA.
- 4 MAX AMBIENT TEMP RATING, NON-IC INSTALLATION. TEMP RATING MAY VARY WITH SPECIFIED DRIVERS OR ANY NON STANDARD SELECTION
- 5 90 MINUTE 10W EMERGENCY DRIVER; LUMENS CALCULATED BASED ON FIXTURE EFFICACY.
- 6 EM10 DELIVERED LUMENS = (DELIVERED LUMENS/LUMINAIRE WATTS)*10

PHOTOMETRICS

P12 PRISMATIC

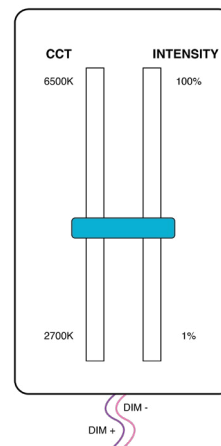
Key:

— 0
- - - 45
— 90



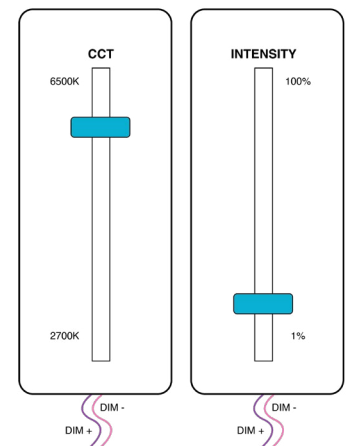
CONTROL OPTIONS

WARM DIM CONTROL



Only one set of dimming Leads are required. As Intensity is increased so is the CCT. As intensity decreases the CCT decreases to warmer color Temperatures.

CONTINUOUS CCT CONTROL



Two set of dimming leads are required. Intensity and CCT of light are controlled independently from one another.

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ENERGY DATA - COLOR LED

CHANNEL-FGRS-RED LED TROFFER								
ENCLOSURE SIZE	LED SELECTION	630nm (RED)			660nm (RED)			MAX AMBIENT TEMP ⁵
		LUMENS	WATTS	EFFICACY	LUMENS	WATTS	EFFICACY	
1X4	1RLED	1,122	27	42	1,167	44.5	26.2	40°C (104°F)
1X4	2RLED	2,068	53	39	2,320	88.9	26.1	40°C (104°F)
2X2	1RLED	549	14	39	567	22.2	25.5	40°C (104°F)
2X2	2RLED	1,011	27	37	1,127	44.5	25.4	40°C (104°F)
2X2	3RLED	1,560	41	38	1,695	66.7	25.4	40°C (104°F)
2X2	4RLED	2,022	53	38	2,254	88.9	25.4	40°C (104°F)
2X4	1RLED	1,247	27	46	1,281	44.5	28.8	40°C (104°F)
2X4	2RLED	2,298	53	43	2,547	89	28.6	40°C (104°F)
2X4	3RLED	3,545	80	44	3,828	133.5	28.7	40°C (104°F)
2X4	4RLED	4,596	106	43	5,095	178	28.6	40°C (104°F)

* View previous page for energy data notes.

NOTE: 735nm Far Red light is measured in radiometric power since the wavelengths are so close to the human non-visible light spectrums. Each module of 735nm LEDs generates ≈ 7,000 mW of radiometric power.

COLOR LED RELATIVE DISTRIBUTION

