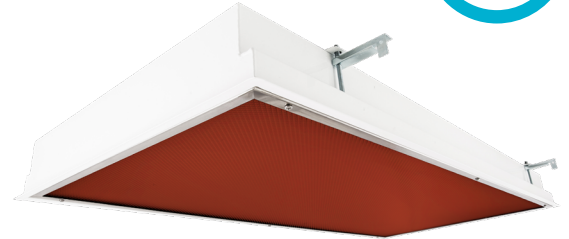


Cleanroom EL Vivarium Troffers - Tunable White

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



- **Rated IP55**
- **Suitable for ISO 5-9 Cleanspaces**
- **Suitable for 209E Class 100-100,000 cleanspaces**
- **ETL listed for Wet Locations**
- **Channel Inset Door Frame**
- **Robotically seam welded housing**
- **Tunable White 2700k - 6500k CCT**
- **Available in 630nm and 660nm Red LEDs**
- **White/Red separately controlled circuits**
- **Available With DALI Or 0-10V Controls**
- **Made in the USA by a Family Owned US Corporation**



DISCLAIMER: Although KURTZON has prepared the information contained in this document with all due care, KURTZON does not warrant or represent that the information is free from errors or omission. While the information is considered to be true and correct at the date of publication, changes in circumstances after the time of publication may impact on the accuracy of the information. The information may change without notice and KURTZON is not in any way liable for the accuracy of any information printed and stored or in any way interpreted or used.

ORDERING GUIDE

Series	Installation	Material	Size	Red LED	Wavelength	White LED	CCT (White LED)	Control	Voltage	Options
EL	R: Recessed (Suitable for Flange & Grid Installations)	3: White 430 SS Hsg. & Polished 304 SS Door	1x4: 1' x 4' Housing	1/RLED	630: 630nm	1/LEDTW	827/865:	0-10v Analog Dimming UNV	UNV	FC: Fuse & Holder (One Supplied Per Circuit) 2/EDR: Two Circuits of Red Light EM10: 10W Integral LED EM (Specify Input Voltage) EM20: 20W External LED EM (Specify Input Voltage) WHT: White Finished Door & HSG LEX: .125" Prismatic Polycarbonate A19: .156" Prismatic P19 Pattern Clear Acrylic HIA: .140" High Impact P12 Pattern Clear Acrylic TG: .156" Prismatic Tempered Glass SW: Wet Locatoin Hub Supplied (not installed) PxL: Programmed to User Specified Lumen Value. PxW: Programmed to User Specified Wattage Value. 10KV: 10KV Parallel Surge Protection (1 Per Circuit) WHIP: Must Specify Length and Wire Qty .125 FROST: 1/8" Frost Acrylic Lens OCCMW: Internal microwave OCC Sensor
		4: White AL Hsg. & Polished 304 SS Door	MAX 3 Arrays Total (2 Max Per Color)	2/RLED	660: 660nm	2/LEDTW	80 CRI; 2700k-6500k CCT			
		5: White AL Hsg. & White AL Door	2x2: 2' x 2' Housing	1/RLED	630: 630nm	1/LEDTW				
		MAX 4 Arrays Total	2/RLED	660: 660nm	2/LEDTW					
		OR	3/RLED		3/LEDTW					
		2x4: 2' x 4' Housing	4/RLED		4/RLED					
	MAX 4 Arrays Total									
S: Surface	2: White CRS Hsg. & Polished 304 SS Door	3: Polished 304 SS Hsg. & Polished 304 SS Door	1x4: 1' x 4' Housing	1/RLED	630: 630nm	1/LEDTW		UNV	UNV	FC: Fuse & Holder (One Supplied Per Circuit) 2/EDR: Two Circuits of Red Light EM10: 10W Integral LED EM (Specify Input Voltage) EM20: 20W External LED EM (Specify Input Voltage) WHT: White Finished Door & HSG LEX: .125" Prismatic Polycarbonate A19: .156" Prismatic P19 Pattern Clear Acrylic HIA: .140" High Impact P12 Pattern Clear Acrylic TG: .156" Prismatic Tempered Glass SW: Wet Locatoin Hub Supplied (not installed) PxL: Programmed to User Specified Lumen Value. PxW: Programmed to User Specified Wattage Value. 10KV: 10KV Parallel Surge Protection (1 Per Circuit) WHIP: Must Specify Length and Wire Qty .125 FROST: 1/8" Frost Acrylic Lens OCCMW: Internal microwave OCC Sensor
		4: White AL Hsg. & Polished 304 SS Door	MAX 2 Arrays Total	2/RLED	660: 660nm	2/LEDTW				
		5: White AL Hsg. & White AL Door	2x2: 2' x 2' Housing	1/RLED	630: 630nm	1/LEDTW				
	6: White CRS Hsg. & White AL Door	MAX 4 Arrays Total	2/RLED	660: 660nm	2/LEDTW					
		OR	3/RLED		3/LEDTW					
		2x4: 2' x 4' Housing	4/RLED		4/RLED					
	MAX 4 Arrays Total									

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

SPECIFICATIONS

HOUSING: One piece, hole free, robotically seam welded housing has flattened knockouts for a superior seal. Recessed housings are available in .040" 3003 Aluminum or 20Ga 430 Stainless Steel. Surface housings are available in .040" 3003 Aluminum, 20Ga 430 Stainless Steel, or 20Ga 1008 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.

LENS: Impact resistant .135" thick virgin acrylic with P12 prismatic pattern inverted. See "Options" for other choices.

TUNABLE WHITE LEDS: Commercially available minimum 80 CRI 2 channel LED modules 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 . See LED options to specify a custom range of Color temperatures. Consult factory for lumen output configurations not listed on spec sheets.

RED LEDS: Red LED's provide a narrow 630nm spectrum light for wavelength sensitive applications. Alternately available are 660nm narrow spectrum LEDS for a wider range of applications.

TUNABLE WHITE DRIVERS: Dual Channel Programmable Drivers make color tuning simple. Available in 0-10v Analog Dimming or DALI digital dimming. The 0-10v continuous dimming method uses two sets of dimming wires. 1 set of dimming wires controls the luminous flux while maintaining consistent color and the other set controls the color in a linear dimming curve. 0-10v is also available as warm dimming that uses 1 set of dimming wires that adjust both intensity and color simultaneously. Alternately control is available with DALI Digital Dimming as well.

RED DRIVERS: Standard Universal Voltage Class 2 drivers are 0-10v Dimmable to 1% . 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. RED LED's come with their own driver so they can be switched separately from the white LEDs.

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

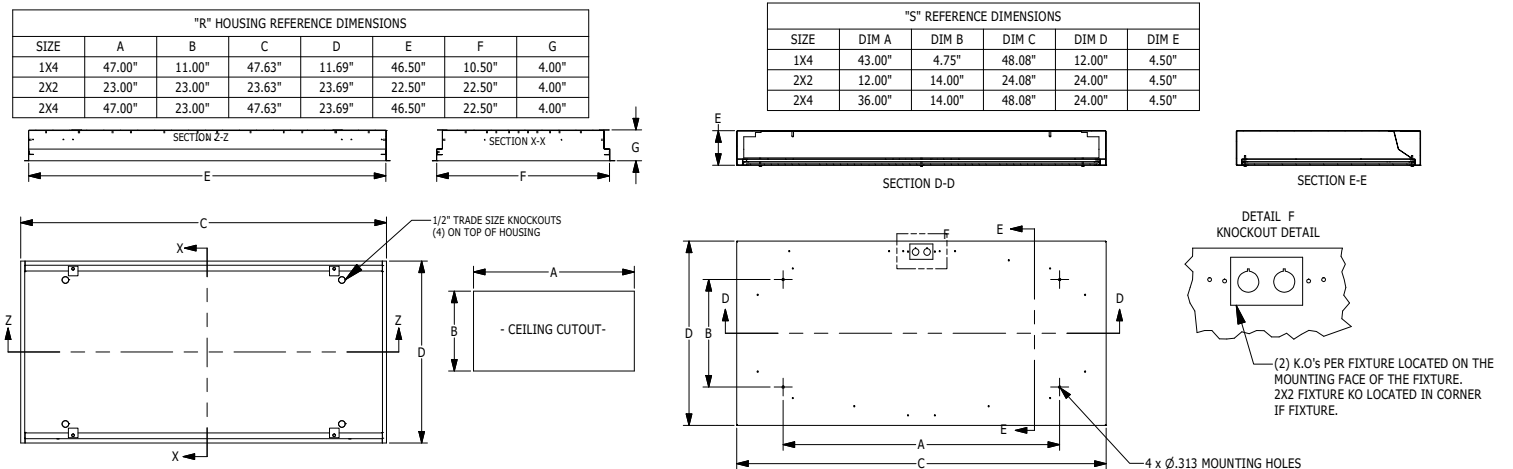
INSTALL RECESSED: One fixture suitable for Grid and Flanged installation. Accommodates 1" and 1.5" T-Bar Grid (Consult factory for 2" T-Bar Grid compatibility). Four adjustable toggle arms with holes for seismic support wire attachment. Supply entry via 1/2" trade size flattened knockouts. Non-IC installation

INSTALL SURFACE: Four .312" dia. mounting holes and a removable gasketed wiring access plate with Supply entry via 1/2" trade size flattened knockouts.

FINISH: Gloss white high reflectance 1000 hr. salt spray polyester powder coat finish standard for all housings. Stainless steel doorframes are satin polished unless option WHT is chosen.

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. Optionally NSF2 Listed for Non-Food Zones. Drivers and LEDS are covered by a 5 year warranty, the remaining fixture is covered by a 10 year warranty.

PRODUCT DRAWINGS



Cleanroom EL Vivarium Troffers - Tunable White

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

ENERGY DATA - WHITE LED

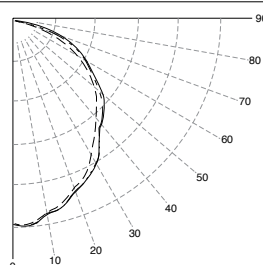
CHANNEL-FGRS-RED LED TROFFER						
ENCLOSURE SIZE	LED SELECTION	80 CRI TUNABLE WHITE (4000k)			MAX AMBIENT TEMP ³	CCT RANGE
		LUMENS	WATTS	EFFICACY		
1x4	1LEDTW	3,950	34	116	40°C (104°F)	2700k - 6500k
1X4	2LEDTW	7,550	68	111	40°C (104°F)	2700k - 6500k
2x2	1LEDTW	1,950	17	115	40°C (104°F)	2700k - 6500k
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 INSTALLATON. 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

EL-R-5-2X4-1/RLED-630-UNV

Report No: 19741.0
 Total Lumens: 1,228
 Wattage: 27.206
 Efficacy: 45.1 (Lumens Per Watt)
 Fixture Size: 2'x4'
 Key:
 - - - - - 0
 45
 ———— 90



Cleanroom EL Vivarium Troffers - Tunable White

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

ENERGY DATA - COLOR LED

CHANNEL-FGRS-RED LED TROFFER								
ENCLOSURE SIZE	LED SELECTION	630nm (RED)			660nm (RED)			MAX AMBIENT TEMP ³
		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.

COLOR LED RELATIVE DISTRIBUTION

