KURTZON
SPECIFICATION GRADE LIGHTING
ILLUMINATING YOUR WORLD

PROJECT

DATE   TYPE

NOTES

REV: 12/27/2018

Cleanroom **TL Troffers - Tunable White**

1x4, 2x2 and 2x4 High Efficiency LED Luminaires

2700K TW 6500K

- **Rated IP65**
- **Suitable for ISO 3-9 Cleanspaces**
- **Suitable for 209E class 100-100,000 Cleanspaces**
- **ETL listed for Wet Locations**
- **One piece Inset Doorframe**
- **Robotically seam welded housing**
- **Tunable White 2700k - 6500k CCT**
- **Available With DALI Or 0-10V Controls**
- **Recessed Housing suitable for Tbar Grid AND Hardlid Installations**
- **Made in the USA by a Family Owned US Corporation**

Badges: 5/10 YEAR WARRANTY | NSF | cETLus Intertek | CCEA APPROVED | ISO 3-9 ISO 14644-1 CLASS 3 | IP65 IEC 60529 | BSL 1&2 BIO SAFETY LEVELS | MADE IN THE USA | 1700 PSI HOSEDOWN | 209E 100 FED STD 209E CLASS 100 | 2700K TW 6500K

ORDERING GUIDE

Series	Installation Type	Material	Size	Source	CCT	Control	Voltage	Options
TL								

Series	Installation Type	Material	Size	Source	CCT	Control:	Voltage	Options
TL	**R**: Recessed (Suitable for Flange & Grid)	**3:** White 430 SS Hsg. & Polished 304 SS Door **4:** White AL Hsg. & Polished 304 SS Door **5:** White AL Hsg. & White AL Door **7:** White AL Hsg. & White CRS Door	**1x4:** 1' x 4' Housing **2x2:** 2' x 2' Housing OR **2x4:** 2' x 4' Housing	1/LEDTW 2/LEDTW 2/LEDTW 3/LEDTW 4/LEDTW	**827/865:** 80 CRI; 2700k-6500k CCT	**0-10v Analog Dimming** **10V-CON:** Continuous CCT 0-10v dimming **10V-WD:** Warm Dim 0-10V dimming **DALI Digital Dimming** **DAL-CON:** Cont. CCT DALI dimming	UNV	**FF:** Fuse & Holder (One Supplied Per Circuit) **WHIP:** Must Specify Length and Wire Qty **.125 FROST:** 1/8" Frost Acrylic Lens **EM10:** 10W Integral LED EM (Specify Input Voltage) **EM20:** 20W Remote 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 (One Supplied Per Circuit) **OCCMW:** Internal microwave OCC Sensor
	S: Surface	**1:** White CRS Hsg. & White CRS Door **2:** White CRS Hsg. & Polished 304 SS Door **3:** White 430 SS Hsg. & Polished 304 SS Door **4:** White AL Hsg. & Polished 304 SS Door **5:** White AL Hsg. & White AL Door **6:** White CRS Hsg. & White AL Door **7:** White AL Hsg. & White CRS Door	**1x4:** 1' x 4' Housing **2x2:** 2' x 2' Housing OR **2x4:** 2' x 4' Housing	1/LEDTW 2/LEDTW 2/LEDTW 3/LEDTW 4/LEDTW				

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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 304 Stainless Steel, or 20Ga 1008 Cold Rolled Steel.

DOOR FRAME: One piece inset door frame with seam welds regressing into housing to allowing the NSF approved microcellular 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, or 18Ga 1008 Powder coated CRS.

GASKETS: NSF Listed closed cell microcellular extruded KleanLock SealPro 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. Sealed to door with NSF listed RTV silicone. See "Options" for other choices.

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.

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.

REFLECTOR: Die formed metal with high reflectance white polyester powder coat finish. Typical reflectivity 92%.
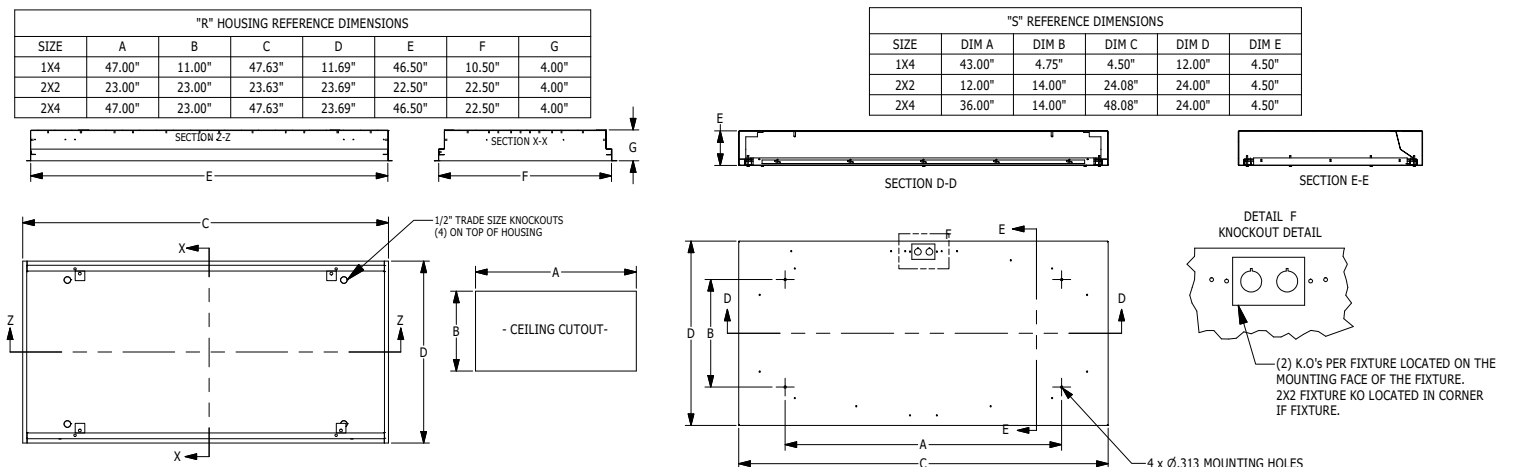
INSTALL RECESSED: One fixture suitable for Grid and Flanged installation. Accommodates 1" and 1.5" T-Bar Grid (Consult factory for 2" T-Bar Grid compatibility). Four adjustable toggle arms with holes for seismic support wire attachment. Supply entry via 1/2" trade size flattened knockouts.

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 recessed housings. Stainless steel doorframes and surface housings are satin polished unless option WHT is chosen.

LISTINGS: IP65 rated for dust and water ingress. Suitable for 1700 PSI high pressure hosedowns. ETL listed per UL_1598 for wet locations. Chicago Plenum Rated. Certified ISO-14644-1 for class 3 through class 9 cleanspaces. Certified Fed Std 209E for Class 100 through Class 100,000 cleanspaces. 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

"R" HOUSING REFERENCE DIMENSIONS							
SIZE	A	B	C	D	E	F	G
1X4	47.00"	11.00"	47.63"	11.69"	46.50"	10.50"	4.00"
2X2	23.00"	23.00"	23.63"	23.69"	22.50"	22.50"	4.00"
2X4	47.00"	23.00"	47.63"	23.69"	46.50"	22.50"	4.00"

"S" REFERENCE DIMENSIONS				
SIZE	DIM A	DIM B	DIM C	DIM D	DIM E
1X4	43.00"	4.75"	4.50"	12.00"	4.50"
2X2	12.00"	14.00"	24.08"	24.00"	4.50"
2X4	36.00"	14.00"	48.08"	24.00"	4.50"

SECTION Z-Z
SECTION X-X
SECTION D-D
SECTION E-E

1/2" TRADE SIZE KNOCKOUTS (4) ON TOP OF HOUSING

- CEILING CUTOUT-

DETAIL F KNOCKOUT DETAIL

(2) K.O's PER FIXTURE LOCATED ON THE MOUNTING FACE OF THE FIXTURE. 2X2 FIXTURE KO LOCATED IN CORNER IF FIXTURE.

4 x Ø.313 MOUNTING HOLES

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ENERGY DATA

INSET-FGRS-LED TROFFER (APPROX[1] LUMENS DELIVERED)						
ENCLOSURE SIZE	LIGHT PACKAGE	Tunable White 80 CRI (4000K)			MAX AMB TEMP	CCT RANGE
		LUMENS	WATTS[2]	EFFICACY[3]		
1X4	1LEDTW	3,350	34	99	40°C (104°F)	2700k - 6500k
1X4	2LEDTW	6,750	68	99	40°C (104°F)	2700k - 6500k
1X4	EM10	990*	4	NA	40°C (104°F)	NA
2X2	2LEDTW	3,550	35	101	40°C (104°F)	2700k - 6500k
2X2	3LEDTW	5,300	53	100	40°C (104°F)	2700k - 6500k
2X2	4LEDTW	7,100	68	104	40°C (104°F)	2700k - 6500k
2X2	EM10	1000-1010*	4	NA	40°C (104°F)	NA
2X4	2LEDTW	7,650	68	113	40°C (104°F)	2700k - 6500k
2X4	3LEDTW	11,500	103	112	40°C (104°F)	2700k - 6500k
2X4	4LEDTW	15,350	135	114	40°C (104°F)	2700k - 6500k
2X4	EM10	1120-1140*	4	NA	40°C (104°F)	NA

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