KURTZON
SPECIFICATION GRADE LIGHTING
ILLUMINATING YOUR WORLD

PROJECT

DATE   TYPE

NOTES

REV: 12/18/2024

Cleanroom **TL-S Troffers**

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

- **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**

- **0-10v 1% Dimming Standard**

- **Up to 40,700 Lm Delivered @ 134Lm/Watt**

- **B.A.A. & B.A.B.A Compliant & 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	Material	Size	Row Qty.	LED Type	CCT/CRI	Voltage	Optics		Options	
TL-S										

Series	Material	Size	Light Source		CCT/CRI	Voltage	Optics		Options	
			Row Qty.	LED Type						
TL-S	**1** White CRS Hsg. & White CRS Door	**1x4** 1' x 4' Housing	1	LEDR	**83 CRI:**	**120V**	**P12ACR**	0.135" P12 Prismatic Impact Resistant Acrylic (Inverted)	**SW**	Wet Location Hub Supplied (not installed)
			2	LEDH	**830** 3000K	**277V**	**LEX**	0.125" P12 Prismatic Polycarbonate (Inverted)	**PxL** *	Programmed to User Specified Lumen Value.
	2 White CRS Hsg. & Polished 304 SS Door			LEDHF	**835** 3500K	**UNV**	**A19**	0.156" A19 Prismatic Impact Resistant Acrylic (Inverted)	**PxW** *	Programmed to User Specified Wattage Value.
		2x2 2' x 2' Housing	2		**840** 4000K	**347V***	**TG**	0.156" Prismatic Tempered Glass (Inverted)	**10KV**	10KV Parallel Surge Protection (One Supplied Per Circuit)
	3 Polished 304 SS Hsg. & Polished 304 SS Door	**OR**	3		**850** 5000K		**HIA**	0.140" P12 Prismatic High Impact Resistant Acrylic (Inverted)	**GTD**	Generator Transfer Device
		2x4 2' x 4' Housing	4			*347V Available with 10% dimming, not all options are compatible with 347V	**FROST**	0.125" Flat Diffusing Frost Acrylic	**WHIP**	Must Specify Length and Wire Qty
	4 White AL Hsg. & Polished 304 SS Door				**90+ CRI:**		**2DBW**	0.125" Flat Diffused Acrylic with Bi-Directional Batwing DISTRIBUTION	**OCCMW**	Internal microwave OCC Sensor
					935 3500K		**LBW**	0.125" Flat Diffused Acrylic with Linear Batwing Distribution	**FC**	Fuse & Holder (One Supplied Per Circuit)
	5 White AL Hsg. & White AL Door				**940** 4000K		**GH85**	0.125" Flat Diffused Acrylic with Glare Suppression Distribution	**EM10**	10W Integral LED EM (Specify Input Voltage)
					950 5000K				**EM20**	20W Remote LED EM (Specify Input Voltage)
	6 White CRS Hsg. & White AL Door								**EDL**	-40F Electronic Driver
					NOTE: Additionally available in 95 + CRI with Seoul Sun-Like LEDS. Consult factory for more information.		NOTE: P12ACR option is standard and will be provided when no other option is selected		**WHT**	White Finished Door & HSG
	7 White AL Hsg. & White CRS Door								**AMW**	Anti-Microbrial White Powdercoat
									2/ED	Two Drivers/Two Circuits
									316SS DOOR **	316 Stainless Steel Door Frame
									316SS HSG ***	316 Stainless Steel Housing

Note*: Specify Value in Ordering Notes
Note**: 316 SS Door Frame to Replace 304SS Door on Material Options 3 or 4
Note***: 316 SS Housing to Replace 304SS/430 SS Housing on Material Option 3

Ordering Notes, If Applicable

Cleanroom **TL-S Troffers**

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

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 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.

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: Commercially available in a wide variety of Color Temperature (CCT), FLUX, and CRI. Highly efficient and consistent color maintained to 3 SDMC for color critical applications. B50/L70 and compliant with Zhaga recognized hole patterns. Consult factory for LED options or configurations not listed below.

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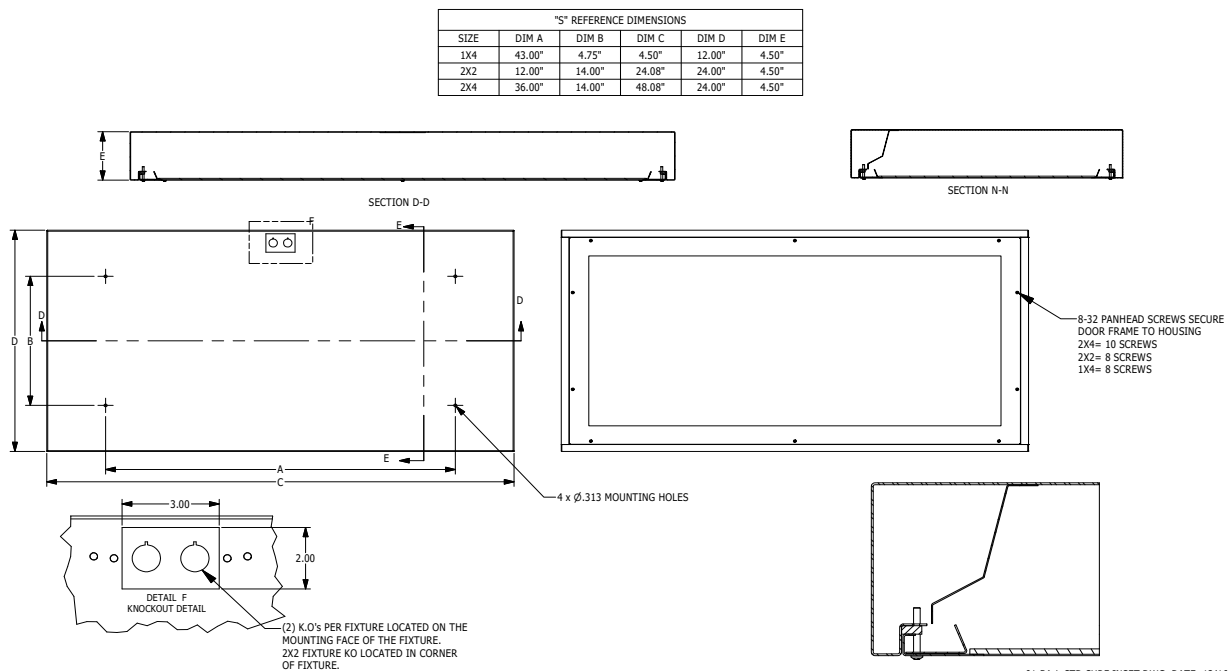
REFLECTOR: Die formed metal with high reflectance white polyester powder coat finish. Typical reflectivity 92%.

INSTALL SURFACE: Four .312" dia.mounting holes and a removable gasketed wiring access plate with Supply entry via 1/2" trade size flattened knockouts. Suitable for surface installation onto covered ceilings only.

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

LISTINGS: IP65 rated for dust and water ingress. Suitable for 1700 PSI high pressure hosedowns. ETL listed per UL_1598 for wet locations. 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 & 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

"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 D-D

SECTION N-N

8-32 PANHEAD SCREWS SECURE DOOR FRAME TO HOUSING
2X4= 10 SCREWS
2X2= 8 SCREWS
1X4= 8 SCREWS

4 x Ø.313 MOUNTING HOLES

3.00

2.00

DETAIL F
KNOCKOUT DETAIL

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

01-BA-L-STD SURF INSET DWG. DATE: 12/16/2020

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ENERGY DATA

SURFACE & RECESSED INSET LED TROFFER (APPROX[1] LUMENS DELIVERED)										
ENCLOSURE SIZE	LIGHT PACKAGE	80 CRI (3000K - 5000K)				90 CRI (3500K, 4000K)				STANDARD DIMMING
		LUMENS	WATTS[2]	EFFICACY[3]	MAX AMB TEMP	LUMENS	WATTS[2]	EFFICACY[3]	MAX AMB TEMP[4]	
1X4	1LEDR	3,034	29	105	45°C (113°F)	2,924	29	101	45°C (113°F)	0-10V 1%
1X4	2LEDR	**6,067**	**55**	**110**	45°C (113°F)	**5,848**	**56**	**105**	45°C (113°F)	0-10V 1%
1X4	2LEDH	**11,754**	**109**	**108**	35°C (95°F)	**11,228**	**109**	**103**	35°C (95°F)	0-10V 1%
1X4	2LEDHF	**17,346**	**153**	**113**	35°C (95°F)	14,454	183	79	35°C (95°F)	0-10V 1%
1X4	EM10	1050-1130	4	NA	40°C (104°F)	790-1050	4	NA	40°C (104°F)	NA
2X2	2LEDR	2,986	29	103	45°C (113°F)	2,881	29	99	45°C (113°F)	0-10V 1%
2X2	3LEDR	**4,479**	**42**	**107**	45°C (113°F)	**4,321**	**42**	**103**	45°C (113°F)	0-10V 1%
2X2	2LEDH	5,875	55	107	40°C (104°F)	5,601	55	102	40°C (104°F)	0-10V 1%
2X2	4LEDR	5,972	55	109	45°C (113°F)	5,761	56	103	45°C (113°F)	0-10V 1%
2X2	3LEDH	**8,813**	**80**	**110**	40°C (104°F)	**8,402**	**81**	**104**	35°C (95°F)	0-10V 1%
2X2	4LEDH	11,750	109	108	40°C (104°F)	11,202	109	103	35°C (95°F)	0-10V 1%
2X2	4LEDHF	**17,850**	**153**	**117**	35°C (95°F)	14766	184	80	35°C (95°F)	0-10V 1%
2X2	EM10	1030-1170	4	NA	40°C (104°F)	800-1040	4	NA	40°C (104°F)	NA
2X4	2LEDR	6,718	55	122	45°C (113°F)	6,428	56	115	45°C (113°F)	0-10V 1%
2X4	3LEDR	**10,077**	**83**	**122**	45°C (113°F)	**9,642**	**83**	**116**	45°C (113°F)	0-10V 1%
2X4	2LEDH	13,261	109	122	40°C (104°F)	12,601	109	116	40°C (104°F)	0-10V 1%
2X4	4LEDR	13,436	111	121	45°C (113°F)	12,856	113	114	45°C (113°F)	0-10V 1%
2X4	3LEDH	**19,892**	**164**	**121**	40°C (104°F)	**18,902**	**164**	**115**	40°C (104°F)	0-10V 1%
2X4	4LEDH	26,522	220	121	40°C (104°F)	25,202	220	115	40°C (104°F)	0-10V 1%
2X4	4LEDHF	**40,740**	**305**	**134**	35°C (95°F)	35,344	373	95	35°C (95°F)	0-10V 1%
2X4	EM10	1221-1340	4	NA	40°C (104°F)	950-1160	4	NA	40°C (104°F)	NA

[1] DELIVERED LUMEN DATA IS EXTRAPOLATED FROM MEASURED DATA @25C WITH NO EXTRA OPTIONS. VARIANCES WILL OCCUR WHEN OPTIONS ARE CHOSEN

[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.

PHOTOMETRICS

P12 PRISMATIC

Key:

- - - - - **0**
-·-·-·- **45**
———— **90**