KURTZON
SPECIFICATION GRADE LIGHTING
ILLUMINATING YOUR WORLD

PROJECT

DATE   TYPE

NOTES

REV: 12/18/2024

Cleanroom **KL-S Blue Troffers**

1x4, 2x2 and 2x4 Blue/White LED Surface Luminaires

- **Rated IP66**

- **Suitable for ISO 3-9 Cleanspaces**

- **Suitable for 209E Class 1-100,000 Cleanspaces**

- **ETL listed for Wet Locations**

- **One piece overlapping doorframe**

- **Robotically seam welded housing**

- **0-10v 1% Dimming Standard for most configurations.**

- **Narrow Spectrum 475nm or 450nm Blue LEDs**

- **White / Blue separately controlled circuits**

- **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.

5/10 YEAR WARRANTY | **NSF** | **c ETL us Intertek** | **ISO 3-9** ISO 14644-1 CLASS 3 | **IP66** IEC 60529 | **BSL 3&4** BIO SAFETY LEVELS | **209E 1** FED STD 209E CLASS 1 | **1700 PSI** HOSEDOWN | **MADE IN THE USA** | **BAA COMPLIANT** | **BABA COMPLIANT**

ORDERING GUIDE

Series	Material	Size	Row Qty.	Blue LED Wavelength	Row Qty.	White LED	CCT/CRI	Voltage	Optics	Options

| KL-S |

Series	Material	Size	Light Source					Voltage	Optics	
			Row Qty.	Blue LED Wavelength	Row Qty.	White LED	CCT/CRI			
KL-S	**1** White CRS Hsg. & White CRS Door	**1x4** 1' x 4' Housing	1	BLED450	1	LEDR	**83 CRI:**	**120V**	**P12ACR**	0.135" P12 Prismatic Impact Resistant Acrylic (Inverted)
		3 LED Rows Max	2	BLED475	2	LEDH	830 3000K	**277V**	**LEX**	0.125" P12 Prismatic Polycarbonate (Inverted)
	2 White CRS Hsg. & Polished 304 SS Door					LEDHF	835 3500K	**UNV**	**A19**	0.156" A19 Prismatic Impact Resistant Acrylic (Inverted)
		2x2 2' x 2' Housing	1		1		840 4000K	**347V***	**TG**	0.156" Prismatic Tempered Glass (Inverted)
	3 Poshiled 304 SS Hsg. & Polished 304 SS Door	**OR**	2		2		850 5000K		**HIA**	0.140" P12 Prismatic High Impact Resistant Acrylic (Inverted)
		2x4 2' x 4' Housing	3		3			*347V Available with 10% dimming, not all options are compatible with 347V	**FROST**	0.125" Flat Diffusing Frost Acrylic
	4 White AL Hsg. & Polished 304 SS Door		4				**90+ CRI:**		**2DBW**	0.125" Flat Diffused Acrylic with Bi-Directional Batwing Distribution
		5 LED Rows Max					935 3500K		**LBW**	0.125" Flat Diffused Acrylic with Linear Batwing Distribution
	5 White AL Hsg. & White AL Door						940 4000K		**GH85**	0.125" Flat Diffused Acrylic with Glare Suppression Distribution
							950 5000K		NOTE: P12ACR option is standard and will be provided when no other option is selected	
	6 White CRS Hsg. & White AL Door									
	7 White AL Hsg. & White CRS Door					NOTE: Additionally available in 95 + CRI with Seoul Sun-Like LEDS. Consult factory for more information.				

Ordering Notes, If Applicable

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-Microbrial White Powdercoat
2/EDb	Two Circuits of Blue Light
2/EDW	Two Circuits of White Light

Note*: Specify Value in Ordering Notes

Cleanroom **KL-S Blue Troffers**

1x4, 2x2 and 2x4 Blue/White LED Surface Luminaires

SPECIFICATIONS

HOUSING: One piece, hole free, robotically seam welded housing has flattened knockouts for a superior seal. Housings are available in .050" 3003 Aluminum, 18Ga 304 Stainless Steel, or 20Ga Cold Rolled Steel.

DOOR FRAME: One piece door frame with welded corners overlaps the fixture allowing the NSF approved microcellular gasket to seal to the housing. Door frame is hinged by aircraft cables and is supplied with captive stainless steel flush head screws to allow easy wiping of the surface. Available in .050" 3003 Powder coated Alum., 20Ga 304 Polished SS, or 18Ga 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: Fixture available with Blue only or Blue & White LED's, each color will be supplied with its own driver for dual switching. Blue LED's provide a narrow 450nm or 475nm spectrum. White high efficiency LEDs are commercially available & available in a wide variety of CRI and CCT. 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%.
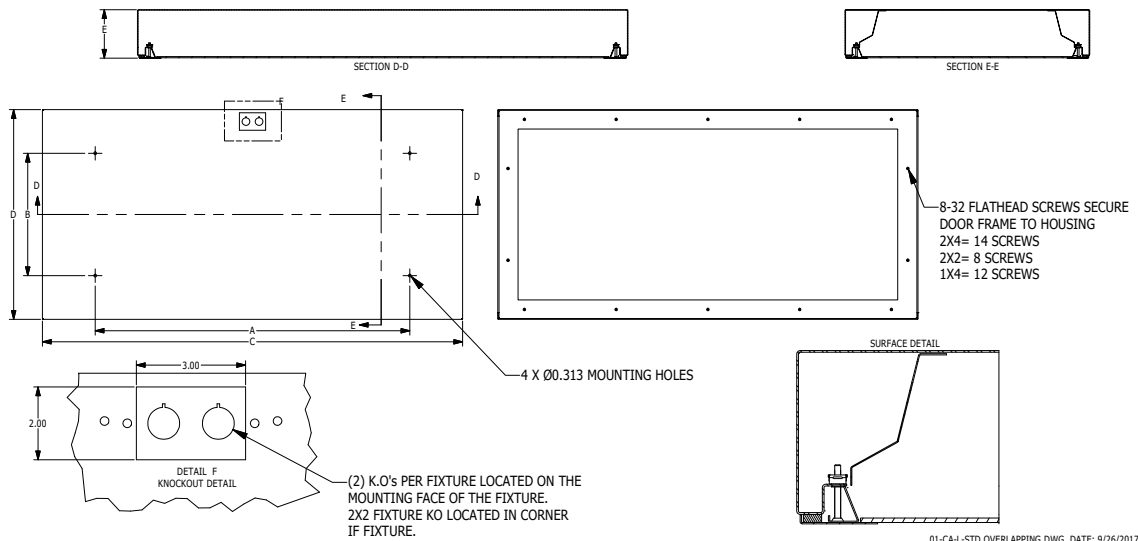
INSTALL SURFACE: Four .312" dia.mounting holes and a removable gasketed wiring access plate with Supply entry via 1/2" trade size flattened knockouts. Suitable for surface installation onto covered ceilings only.

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: IP66 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 1 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"	48.08"	12.00"	4.75"
2X2	12.00"	14.00"	24.08"	24.00"	4.75"
2X4	36.00"	14.00"	48.08"	24.00"	4.75"

SECTION D-D

SECTION E-E

8-32 FLATHEAD SCREWS SECURE DOOR FRAME TO HOUSING
2X4= 14 SCREWS
2X2= 8 SCREWS
1X4= 12 SCREWS

4 X Ø0.313 MOUNTING HOLES

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.

SURFACE DETAIL

01-CA-L-STD OVERLAPPING DWG. DATE: 9/26/2017

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Cleanroom **KL-S Blue Troffers**

1x4, 2x2 and 2x4 Blue/White LED Surface Luminaires

ENERGY DATA- WHITE LED

SURFACE & RECESSED OVERLAP 2 CIRCUIT TROFFER (APPROX[1] LUMENS DELIVERED)									
ENCLOSURE SIZE	LIGHT PACKAGE	83 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	2,974	29	103	45°C (113°F)	2,868	29	99	45°C (113°F)	0-10V 1%
1X4	1LEDH	5,740	57	101	40°C (104°F)	5,490	57	96	40°C (104°F)	0-10V 1%
1X4	2LEDR	**5,948**	**55**	**108**	45°C (113°F)	**5,736**	**56**	**103**	45°C (113°F)	0-10V 1%
1X4	1LEDHF	9,020	77	117	35°C (95°F)	7,773	92	84	35°C (95°F)	0-10V 1%
1X4	2LEDH	**11,493**	**109**	**106**	35°C (95°F)	**10,980**	**109**	**101**	35°C (95°F)	0-10V 1%
1X4	EM10	1010-1170	4	NA	40°C (104°F)	850-1030	4	NA	40°C (104°F)	NA
2X2	1LEDR	1,808	15	121	45°C (113°F)	1,521	15	101	45°C (113°F)	0-10V 1%
2X2	1LEDH	3,106	29	107	40°C (104°F)	2,964	29	102	40°C (104°F)	0-10V 1%
2X2	2LEDR	3,165	29	109	45°C (113°F)	3,042	29	105	45°C (113°F)	0-10V 1%
2X2	1LEDHF	4,630	39	119	40°C (104°F)	4,106	46	89	40°C (104°F)	0-10V 1%
2X2	3LEDR	**4,747**	**42**	**113**	45°C (113°F)	**4,563**	**42**	**109**	45°C (113°F)	0-10V 1%
2X2	2LEDH	6,213	55	113	40°C (104°F)	5,928	55	108	40°C (104°F)	0-10V 1%
2X2	2LEDHF	9,260	77	120	40°C (104°F)	8,212	92	89	35°C (95°F)	0-10V 1%
2X2	3LEDH	**9,319**	**80**	**116**	40°C (104°F)	**8,892**	**81**	**110**	35°C (95°F)	0-10V 1%
2X2	3LEDHF	13,890	115	121	35°C (95°F)	12,319	138	89	35°C (95°F)	0-10V 1%
2X2	EM10	1070-1210	4	NA	40°C (104°F)	890-1110	4	NA	40°C (104°F)	NA
2X4	1LEDR	3,431	29	118	45°C (113°F)	3,280	29	113	45°C (113°F)	0-10V 1%
2X4	1LEDH	6,744	57	118	40°C (104°F)	6,408	57	112	40°C (104°F)	0-10V 1%
2X4	2LEDR	6,864	55	125	45°C (113°F)	6,567	56	117	45°C (113°F)	0-10V 1%
2X4	1LEDHF	9,840	77	128	40°C (104°F)	8,872	93	95	40°C (104°F)	0-10V 1%
2X4	3LEDR	**10,295**	**83**	**124**	45°C (113°F)	**9,851**	**83**	**119**	45°C (113°F)	0-10V 1%
2X4	2LEDH	13,488	109	124	40°C (104°F)	12,816	109	118	40°C (104°F)	0-10V 1%
2X4	2LEDHF	19,680	153	129	40°C (104°F)	17,744	187	95	40°C (104°F)	0-10V 1%
2X4	3LEDH	**20,233**	**165**	**123**	40°C (104°F)	**19,224**	**165**	**117**	40°C (104°F)	0-10V 1%
2X4	3LEDHF	29,520	229	129	35°C (95°F)	26,616	280	95	35°C (95°F)	0-10V 1%
2X4	EM10	1180-1290	4	NA	40°C (104°F)	950-1190	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.

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ENERGY DATA- COLORED LED

SURFACE & RECESSED OVERLAP BLUE LED TROFFER							
ENCLOSURE SIZE	LED SELECTION	DIMMING	475nm (BLUE)			AMBIENT TEMP RATING	
			LUMENS	WATTS	EFFICACY	MINIMUM	MAXIMUM[3]
1X4	1BLED	0-10V 1%	1,972	43	46	-20°C (-4°F)	40°C (104°F)
1X4	2BLED	0-10V 1%	3,945	86	46	-20°C (-4°F)	40°C (104°F)
2X2	1BLED	0-10V 1%	1,132	22	51	-20°C (-4°F)	40°C (104°F)
2X2	2BLED	0-10V 1%	2,264	43	53	-20°C (-4°F)	40°C (104°F)
2X2	3BLED	0-10V 1%	3,396	65	52	-20°C (-4°F)	40°C (104°F)
2X2	4BLED	0-10V 1%	4,528	86	53	-20°C (-4°F)	40°C (104°F)
2X4	1BLED	0-10V 1%	2,428	44	55	-20°C (-4°F)	40°C (104°F)
2X4	2BLED	0-10V 1%	4,856	87	56	-20°C (-4°F)	40°C (104°F)
2X4	3BLED	0-10V 1%	7,283	130	56	-20°C (-4°F)	40°C (104°F)
2X4	4BLED	0-10V 1%	9,711	173	56	-20°C (-4°F)	40°C (104°F)

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

[2] WATTAGE IS MEASURED WITH LED 840 SELECTION @ 120vAC AND Tambient = 25C. WATTAGES WILL VARY AND INCREASE WHEN ALTERNATE OPTIONS ARE SELECTED

[3] MAX AMBIENT TEMP RATING, NON-IC INSTALLATON. TEMP RATING IS WITH NO OTHER OPTIONS SELECTED. WHITE LEDS ONLY SUITABLE FOR 40C AMBIENT