KURTZON
SPECIFICATION GRADE LIGHTING
ILLUMINATING YOUR WORLD

Cleanroom **EL Amber Troffers - Tunable White**

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

TW 2700K 6500K

- **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**
- **Narrow spectrum non filtered 590nm true amber LEDs**
- **White/Amber separately controlled circuits**
- **Available With DALI Or 0-10V Controls**
- **Made in the USA by a Family Owned US Corporation**

IK 5/10 YEAR WARRANTY · NSF · cETLus Intertek · CCEA APPROVED · ISO 5-9 (ISO 14644-1 CLASS 5) · IP55 (IEC 60529) · 209E 100 (FED STD 209E CLASS 100) · MADE IN THE USA · TW 2700K 6500K
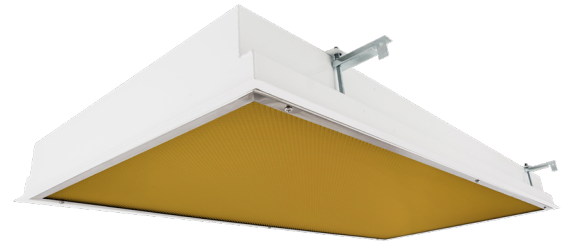
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ORDERING GUIDE

Series	Installation Type	Material	Size	Amber LED	White LED	CCT (White LED)	Control	Voltage	Options
EL									

Series	Installation Type	Material	Size	Amber LED	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 **4:** White AL Hsg. & Polished 304 SS Door **5:** White AL Hsg. & White AL Door	**1x4**: 1' x 4' Housing **MAX 3 Arrays Total** *(2 Max Per Color)*	1/YLED590 2/YLED590	1/LEDTW 2/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	**UNV**	**FC:** Fuse & Holder (One Supplied Per Circuit) **2/EDY:** Two Circuits of Yellow 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 Location 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
			2x2: 2' x 2' Housing **MAX 4 Arrays Total** OR **2x4:** 2' x 4' Housing **MAX 4 Arrays Total**	1/YLED590 2/YLED590 3/YLED590 4/YLED590	1/LEDTW 2/LEDTW 3/LEDTW				
	S: Surface	**2:** White CRS Hsg. & Polished 304 SS Door **3:** Polished 304 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	**1x4:** 1' x 4' Housing **MAX 2 Arrays Total**	1/YLED590 2/YLED590	1/LEDTW 2/LEDTW				
			2x2: 2' x 2' Housing **MAX 4 Arrays Total** OR **2x4:** 2' x 4' Housing **MAX 4 Arrays Total**	1/YLED590 2/YLED590 3/YLED590 4/YLED590	1/LEDTW 2/LEDTW 3/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 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.

AMBER LEDS: Amber LED's provide a "True amber" 590nm narrow spectrum for wavelength sensitive applications. Amber chips are not phosphor converted LEDs so there is no risk of white light leaking through deteriorated phosphor over time. Amber LEDs are switched independent of white LEDs.

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.

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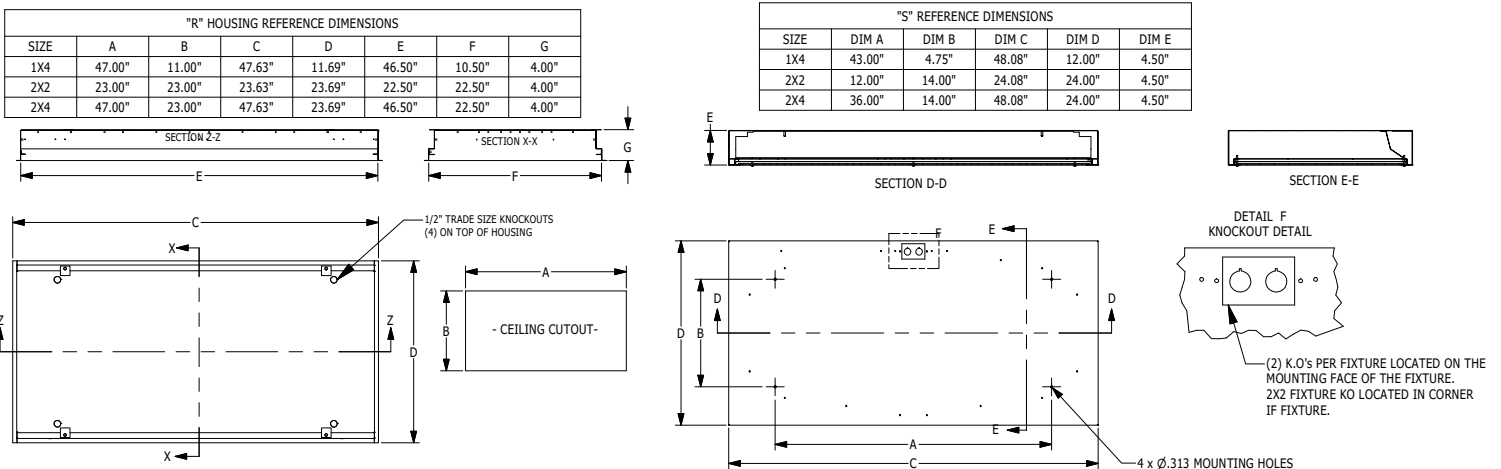
INSTALL RECESSED: One fixture suitable for Grid and Flanged installation. Accommodates 1" and 1.5" T-Bar Grid (Consult factory for 2" T-Bar Grid compatibility). Four adjustable toggle arms with holes for seismic support wire attachment. Supply entry via 1/2" trade size flattened knockouts. Non-IC installation

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

"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"	48.08"	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

A 1420 S. Talman Ave., Chicago, IL 60608   **E** customerservice@kurtzon.com   **W** www.kurtzon.com   **P** 773-277-2121

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ENERGY DATA - WHITE LED

CHANNEL-FGRS-AMBER LED TROFFER						
ENCLOSURE SIZE	LED SELECTION	80 CRI TUNABLE WHITE (4000k)			MAX AMBIENT TEMP³	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

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ENERGY DATA - COLOR LED

CHANNEL-FGRS-AMBER LED TROFFER					
ENCLOSURE SIZE	LED SELECTION	590nm (AMBER)			MAX AMBIENT TEMP³
		LUMENS	WATTS	EFFICACY	
1X4	1YLED	2,119	43	49	40°C (104°F)
1X4	2YLED	4,237	86	49	40°C (104°F)
2X2	1YLED	1,168	22	53	40°C (104°F)
2X2	2YLED	2,337	43	54	40°C (104°F)
2X2	3YLED	3,505	65	54	40°C (104°F)
2X2	4YLED	4,673	86	54	40°C (104°F)
2X4	1YLED	2,482	44	56	40°C (104°F)
2X4	2YLED	4,964	87	57	40°C (104°F)
2X4	3YLED	7,446	130	57	40°C (104°F)
2X4	4YLED	9,928	173	57	40°C (104°F)

* View previous page for energy data notes.

COLOR LED RELATIVE DISTRIBUTION

Relative Distribution | **Amber LEDs**