KURTZON
SPECIFICATION GRADE LIGHTING
ILLUMINATING YOUR WORLD

Medical **Operating Room Troffers: ML-OR-LED-QS**
2x4 High Lumen LED Recessed Luminaires with RF Filtering

3-DAY QUICK SHIP   **5-DAY** QUICK SHIP

- **For use in Operating and Exam Rooms**

- **IP65 Rating**

- **RF filtered circuits standard**

- **Asymmetric distribution standard**

- **Antimicrobial finish standard**

- **B.A.A. Compliant & Made in the USA by a Family Owned US Corporation**

- **5 Day Quick Ship For Orders Under 25 Fixtures**

- **3 Day Quick Ship For Orders Under 15 Fixtures**

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.

K 5/10 YEAR WARRANTY | NSF | ETL Intertek c US | CCEA APPROVED | ISO 5-9 ISO 14644-1 CLASS 5 | IP65 IEC 60529 | 209E 100 FED STD 209E CLASS 100 | RFI FILTERED MIL-STD-461F | 1700 PSI HOSEDOWN | BAA COMPLIANT | 3-DAY QUICK SHIP | 5-DAY QUICK SHIP

ORDERING GUIDE

Series	Material	Size	Row Qty.	LED Type	CCT/CRI	Circuits	Green LED	Voltage	Mounting	Optics	Options	Quick Ship
ML-OR		**2x4**							**IND**			

Series	Material	Size	Light Source			Circuits (white)	Green LED	Voltage	Mounting	Optics	Options	Quick Ship
			Row Qty.	LED Type	CCT/CRI							
ML-OR	5 White Alum Hsg. & White AM Alum Door	2x4 2' x 4' Housing	3	LEDR	83 CRI	1/CIR	(Optional)	120V	IND Individual	ASY Diffusing Optics Assembly With Linear Prismatic Asymmetric Distribution	EM10 10W Integral LED EM (Specify Input Voltage)	5DQS (5-Day Quick Ship)
			4	LEDH	835 3500K	2/CIR	1/GLED	277V			SYM Symmetric pattern acrylic lens	3DQS (3-Day Quick Ship)
	7 White Alum Hsg. & White AM CRS Door	NOTE: Only a total of 5 combined rows of leds can be specified.			840 4000K		2/GLED	UNV		SYM P12 Prismatic Lens With Embedded RF Grid	PxL Programmed to User Specified Lumen Value.	
					90+ CRI	Specify Qty of RF Filtered Circuits for White Light	Green LED's are provided with a dedicated RF Filtered circuit.			Note*: ASY option is standard and will be provided when no other option is selected	PxW Programmed to User Specified Wattage Value.	
					935 3500K						10KV 10KV Parallel Surge Protection (One Supplied Per Circuit)	
					940 4000K						GG 1/8" Thick Grid Gasket (Provided Loose)	

Ordering Notes, If Applicable

Medical **Operating Room Troffers: ML-OR-LED-QS**

2x4 High Lumen LED Recessed Luminaires with RF Filtering

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.

DOOR FRAME: One-Piece Inset door frame regresses into the housing to allow the 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 Aluminum or 20Ga 1008 CRS.

GASKETS: Closed microcellular Nitrile gasket with vulcanized corners making a one-piece oil and solvent resistant gasket system. GG option provides a loose 1/8" thick adhesive backed gasket intended to adhere to the top face of a suspended grid ceiling for grid profiles that do not already have gasket on them.

OPTICS: Standard ASY Lens is a 2 piece assembly consisting of a clear flat acrylic lens on the room side followed by a microprismatic asymmetric pattern lens. The clear flat room side lens is used to allow an easy to clean surface. Asymmetric distribution pattern optimized for high visibility within the surgical field and is provided with a silkscreened RF grid to absorb radiated emissions. Symmetric lens with inverted pattern & RF filtering is also available in options.

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.

ELECTRICAL: 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. Multiple internal circuits are available for scene settings, each specified circuit is provided with an RFI filter that is tested to meet MIL-STD-461. Fixtures available with 10w 90min Emergency battery backup and surge protection. Consult factory for additional options not listed.

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

INSTALLATION: Suitable for recessed Non-IC installation into covered ceilings. Fixtures are supplied with .875" flattened knockouts for supply entry. Housings have (4) swing out toggle arms that are used to draw the fixture in to the ceiling for hard lid installation without the need for a yoke hanger. The toggle arm adjuster bolts are accessible from the room side of the luminaire and the actual toggles can be used as means of establishing a seismic support for lay in ceiling installations.
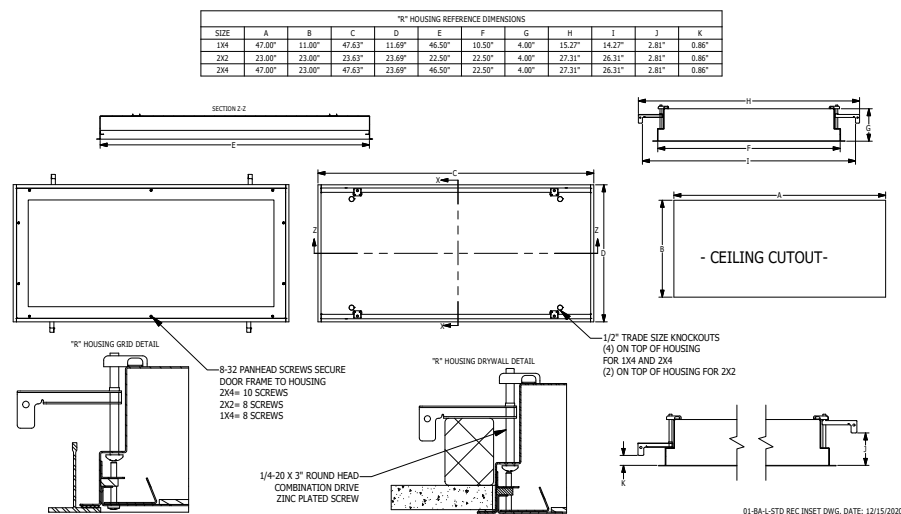
DOOR FINISH: White Dupont Alesta using Agion silver ion antimicrobial powder coat finish standard.

LISTINGS: Military Standard 461F compliant for conducted and radiated emissions. 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 5 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 is Buy American Act (B.A.A.) compliant.

5-DAY QUICK SHIP POLICY: Quantity restriction of 25 fixtures. Once PO is received by 12:00 PM CST, shipping will occur within 5 business days. Standard freight applies. Expedited shipping to be paid by customer.

3-DAY QUICK SHIP POLICY: Quantity restriction of 15 fixtures. Once PO is received by 12:00 PM CST, shipping will occur within 3 business days. Standard freight applies. Expedited shipping to be paid by customer.

PRODUCT DRAWINGS

"R" HOUSING REFERENCE DIMENSIONS										
SIZE	A	B	C	D	E	F	G	H	I	J	K
1X4	47.00"	11.00"	47.63"	11.69"	46.50"	10.50"	4.00"	15.27"	14.27"	2.81"	0.86"
2X2	23.00"	23.00"	23.63"	23.69"	22.50"	22.50"	4.00"	27.31"	26.31"	2.81"	0.86"
2X4	47.00"	23.00"	47.63"	23.69"	46.50"	22.50"	4.00"	27.31"	26.31"	2.81"	0.86"

SECTION Z-Z

"R" HOUSING GRID DETAIL

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

"R" HOUSING DRYWALL DETAIL

1/4-20 X 3" ROUND HEAD COMBINATION DRIVE ZINC PLATED SCREW

- CEILING CUTOUT-

1/2" TRADE SIZE KNOCKOUTS
(4) ON TOP OF HOUSING
FOR 1X4 AND 2X4
(2) ON TOP OF HOUSING FOR 2X2

01-BA-L-STD REC INSET DWG. DATE: 12/15/2020

Medical **Operating Room Troffers: ML-OR-LED-QS**

2x4 High Lumen LED Recessed Luminaires with RF Filtering

ENERGY DATA

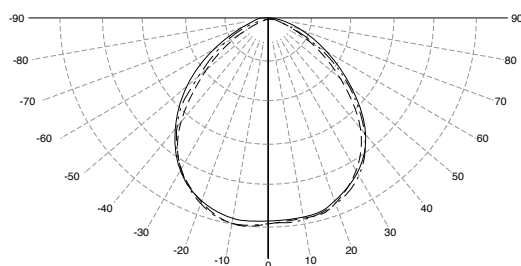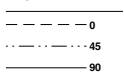| MEDICAL ASY INSET-FGRS-LED TROFFER (APPROX[1] LUMENS DELIVERED)													
ENCLOSURE SIZE	LIGHT PACKAGE	STANDARD DIMMING	LUMENS 83 CRI (3000K - 5000K)			MAX AMB TEMP[4]	EFFICACY (LM/W)		LUMENS 90+ CRI (3500K, 4000K)			MAX AMB TEMP[4]	EFFICACY (LM/W)	
			ASY	SYM	WATTS[2]		ASY	SYM	ASY	SYM	WATTS[2]		ASY	SYM
2X4	3LEDR	0-10V 1%	8,666	**10,077**	83	45°C (113°F)	104	121	8,292	**9,642**	83	45°C (113°F)	100	116
2X4	4LEDR	0-10V 1%	11,555	13,436	111	45°C (113°F)	104	121	11,056	12,856	113	45°C (113°F)	98	114
2X4	3LEDH	0-10V 1%	17,107	**19,892**	164	40°C (104°F)	104	121	16,256	**18,902**	164	40°C (104°F)	99	115
2X4	4LEDH	0-10V 1%	22,809	26,522	220	40°C (104°F)	104	121	21,674	25,202	220	40°C (104°F)	99	115
2X4	EM10	NA	1040-1150	1210-1340	4	40°C (104°F)	NA	NA	810-1000	950-1160	4	40°C (104°F)	NA	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.

6 EM10 DELIVERED LUMENS = (LUMINAIRE EFFICACY) x10

7 EM20 DELIVERED LUMENS = (LUMINAIRE EFFICACY) x20

MEDICAL ASYMMETRIC INSET-GREEN LED TROFFER (APPROX[1] LUMENS DELIVERED)					
ENCLOSURE SIZE	LIGHT PACKAGE	STANDARD DIMMING	540nm GREEN LED		
			LUMENS	WATTS[2]	EFFICACY[3]
1X4	1GLED	0-10V 1%	2,500	36	69
1X4	2GLED	0-10V 1%	5,000	72	69
2X2	1GLED	0-10V 1%	1,200	18	67
2X2	2GLED	0-10V 1%	2,400	36	67
2X4	1GLED	0-10V 1%	2,500	36	69
2X4	2GLED	0-10V 1%	5,000	72	69

PHOTOMETRICS

ASYMMETRIC

Key:
- - - - 0
- · - · - 45
——— 90

SYMMETRIC

Key:
- - - - 0
- · - · - 45
——— 90

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