

Medical Operating Room Troffers - Tunable White

1x4, 2x2 and 2x4 Surface & Recessed High Lumen LED Luminaires with RF Filtering



- For use in Operating and Exam Rooms
- IP65 Rating
- Rf filtered circuits standard
- Green/white switching available
- Asymmetric distribution standard
- Antimicrobial finish standard
- Tunable White 2700k - 6500k CCT
- Available With DALI Or 0-10V Controls



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ORDERING GUIDE

Series	Installation Type	Material	Size	Source	CCT	Control	Green LED	Voltage	Mounting	Options
ML	OR: Recessed (Suitable for Flange & Grid) OS: Surface	3: White 430 SS Hsg. & White AM 430 SS Door	1x4: 1' x 4' Housing <i>NOTE: Only a total of 3 combined rows of leds can be specified.</i>	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	(optional) 1/GLED 2/GLED <i>Green LED's are provided with a dedicated RF Filtered circuit.</i>	120V 277V UNV	IND CRM Continuous Row Mount	FC: Fuse & Holder (One Supplied Per Circuit) EM10: 10W Integral LED EM (Specify Input Voltage) EM20: 20W Remote LED EM (Specify Input Voltage) SYM: Symmetric pattern acrylic lens SSP: Satin Polished Stainless Steel Doorframe PxL: Programmed to User Specified Lumen Value. PxW: Programmed to User Specified Wattage Value. GTD: Generator Transfer Device WHIP: Must Specify Length and Wire Qty 10KV: 10KV Parallel Surge Protection
		4: White Alum Hsg. & White AM 430 SS Door								
		5: White Alum Hsg. & White AM Alum Door	2x2: 2' x 2' Housing OR 2x4: 2' x 4' Housing <i>NOTE: Only a total of 5 combined rows of leds can be specified.</i>	1/LEDTW 2/LEDTW 3/LEDW 4/LEDTW			DALI Digital Dimming DAL-CON: Cont. CCT DALI dimming		CRM suitable for hardlid ceilings only.	

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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. Optional row mounting available must specify in options

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, 20Ga 430 Stainless Steel, or 20Ga 1008 CRS.

GASKETS: Closed microcellular Nitrile gasket with vulcanized corners making a one-piece oil and solvent resistant gasket system.

LENS: Standard Lens is a 3 piece assembly consisting of a clear flat acrylic lens on the room side followed by a linear asymmetric lens and finished with a frost overlay on top. The clear flat room side lens is used to allow an easy to clean surface. The frosted diffusing top layer provides a more evenly illuminated surface. Center lens is an Asymmetric distribution pattern optimized for high visibility within the surgical field. Symmetric lens with inverted pattern available in options.

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.

ELECTRICAL: 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 backups 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%.

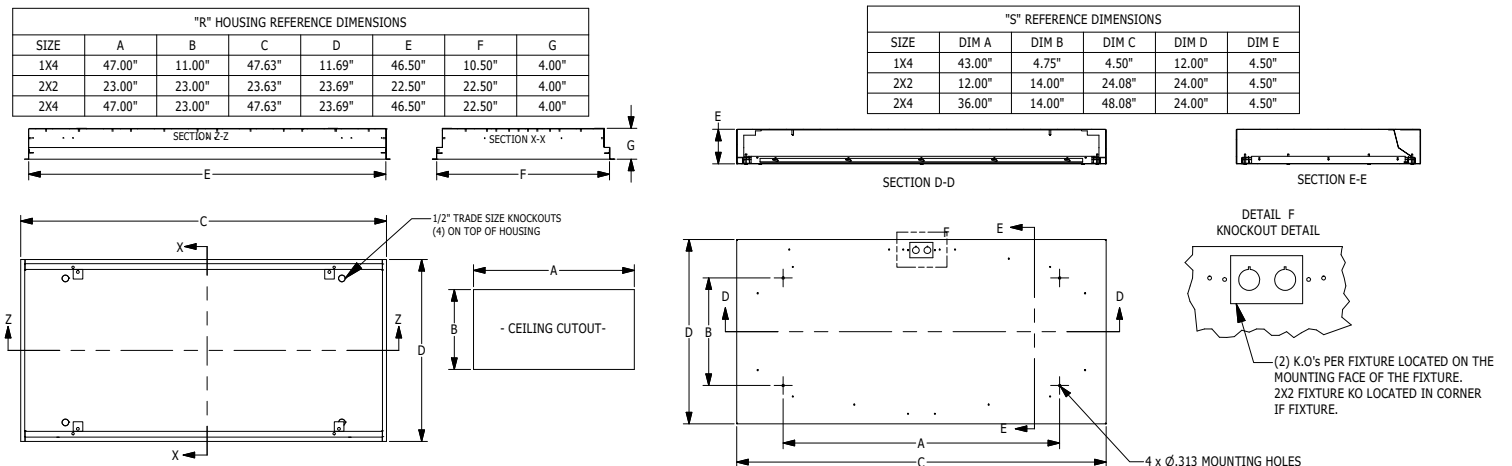
INSTALLATION: Fixtures are supplied with .875" flattened knockouts for supply entry. Recessed housings have (4) swing out toggle arms that are used to draw the fixture in to the ceiling for hard lid installation without the need for a yoke hanger. The toggle arm adjuster bolts are accessible from the room side of the luminaire and the actual toggles can be used as means of establishing a seismic support for lay in ceiling installations.

CRM: Continuous Row Mounting (CRM) option provides a means of securing luminaires to each other end to end in straight rows only. While all recessed luminaires are suitable for thru wiring, the CRM option is only available for Hard lid installation. CRM fixtures come with flanges on 2 of the 4 sides so that the luminaires can mount to each other without the appearance of a larger gap between the two fixtures. Endcaps are factory installed based upon customer provided row configuration information and the Ceiling cutouts can be determined as shown on the CRM installation instructions that can be found on our website.

DOOR FINISH: White Dupont Alesta using Agion silver ion antimicrobial powder coat finish standard. See options for polished stainless steel.

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. Drivers and LEDs are covered by a 5 year warranty, the remaining fixture is covered by a 10 year warranty.

PRODUCT DRAWINGS



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ENERGY DATA

MEDICAL ASY INSET-FGRS-LED TROFFER (APPROX ¹ LUMENS DELIVERED)							
ENCLOSURE SIZE	LIGHT PACKAGE	Tunable White 80 CRI (4000K)			AMBIENT TEMP		CCT RANGE
		ASY	SYM	WATTS ²	MINIMUM	MAXIMUM ⁴	
1X4	1LEDTW	2,950	3,325	34	-20°C (-4°F)	40°C (104°F)	2700k - 6500k
1X4	2LEDTW	5,950	6,700	68	-20°C (-4°F)	40°C (104°F)	2700k - 6500k
1X4	EM10	VARIES	VARIES	4	0°C (32°F)	40°C (104°F)	NA
2X2	2LEDTW	2,850	3,350	35	-20°C (-4°F)	40°C (104°F)	2700k - 6500k
2X2	3LEDTW	4,250	5,100	53	-20°C (-4°F)	40°C (104°F)	2700k - 6500k
2X2	4LEDTW	5,500	6,350	68	-20°C (-4°F)	40°C (104°F)	2700k - 6500k
2X2	EM10	VARIES	VARIES	4	0°C (32°F)	40°C (104°F)	NA
2X4	2LEDTW	6,800	7,600	68	-20°C (-4°F)	40°C (104°F)	2700k - 6500k
2X4	3LEDTW	10,250	11,450	103	-20°C (-4°F)	40°C (104°F)	2700k - 6500k
2X4	4LEDTW	13,650	14,900	135	-20°C (-4°F)	40°C (104°F)	2700k - 6500k
2X4	EM10	VARIES	VARIES	4	0°C (32°F)	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 INSTALLATION. 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
- 7 EM20 DELIVERED LUMENS = (DELIVERED LUMENS/LUMINAIRE WATTS)*20

MEDICAL ASYMMETRIC INSET-FGRS-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