

# Medical MRI Operating Room Troffers: ML-MRIOR-LED

1x4, 2x2 and 2x4 LED Recessed Luminaires

- For use in MRI Featured Advanced Surgical Suites
- IP65 Rating
- Non-Ferrous Construction
- One fixture suitable for Lay-in or Hard lid installations
- Row Mounting Available
- MIL-461 Compliant with purchase of filters
- B.A.A. Compliant & Made in the USA by a Family Owned US Corporation



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## ORDERING GUIDE

Series	Material	Size	Row Qty.	LED Type	CCT/CRI	Voltage	Mounting	Optics	Options
ML-MRIOR	5			LEDR		UNV			

Series	Material	Size	Light Source			Voltage	Mounting	Optics	Options									
			Row Qty.	LED Type	CCT/CRI													
ML-MRIOR	5 White Alum Hsg. & White AM Alum Door	1x4 1' x 4' Housing	1	LEDR	83 CRI:	UNV: 120V-277V*  Note: Voltage listed above is the Remote Driver input voltage. The output voltage or fixture voltage is determined by the drive but less than 60Vdc	IND Individual	SYM P12 Prismatic Lens	FC Fuse & Holder (One Supplied Per Circuit)									
			2		830 3000K					EM10 10W Integral LED EM (Specify Input Voltage)								
			2		835 3500K						PXL* Programmed to User Specified Lumen Value.							
			3		840 4000K							LBW 0.125" Flat Diffused Acrylic with Linear Batwing Distribution						
			4		850 5000K								PxW* Programmed to User Specified Wattage Value.					
			2		90+ CRI:									GH85 0.125" Flat Diffused Acrylic with Glare Suppression Distribution				
		3	935 3500K	10KV 10KV Parallel Surge Protection (One Supplied Per Circuit)														
			940 4000K		AB20 0.125" Flat Diffused 20 Degree Asymmetric Distribution													
			950 5000K												GG 1/8" Thick Grid Gasket (Provided Loose)			
																CRM Continuous Row Mount	Note: SYM option is standard and will be provided when no other option is selected	
																		CRM suitable for hardlid ceilings only

Ordering Notes, If Applicable

**Required Accessories Ordered Separately**

MRIF3	Three circuit filter for 3 fixtures
MRIF6	Entrance filter for 6 fixtures
MRIF9	Entrance filter for 9 fixtures

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## SPECIFICATIONS

**HOUSING:** One piece, seam welded, hole free .040" 3003 aluminum construction. Complete construction is non-magnetic.

**DOOR FRAME:** .040" 3003 aluminum one piece inset door frame hinged to housing with two stainless steel cables. Secured by captive stainless steel screws.

**GASKETS:** Extruded closed cell Nitrile gasketing located at interface of door and housing. Silicone seal between lens and door frame. 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 "SYM" lens provided is a 12 Prismatic Acrylic Lens. ASY Lens option provide a linear prismatic lense with 20 degree beam distribution with frosted overlay. Both SYM & ASY options are installed with the smooth side of the lens facing the room for easy clean-ability. Other optics options are available.

**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:** Constant current static low voltage DC provided from included remote driver. Driver is designed to operate without affecting the measurement equipment. Drivers are 0-10v dimming standard and are supplied with the fixtures in an remote enclosure. Proprietary MRI Entrance filters comply with MIL-461 for conducted emissions and must be purchased separately.

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

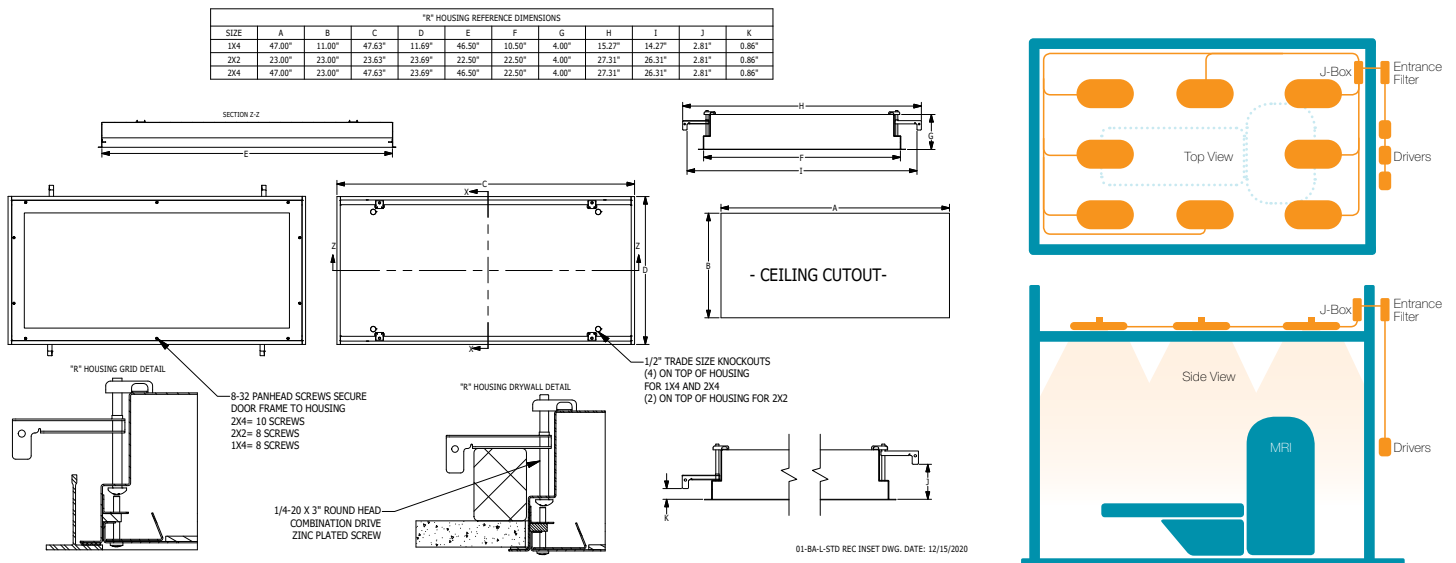
**INSTALLATION:** Fixtures are supplied with .875" flattened knockouts for supply entry. Recessed housings have (4) swing out toggle arms that are used to draw the fixture in to the ceiling for hard lid installation without the need for a yoke hanger. The toggle arm adjuster bolts are accessible from 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:** Suitable for recessed Non-IC installation into covered ceilings. 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.

**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. This product is Buy American Act (B.A.A.) compliant.

## PRODUCT DRAWINGS



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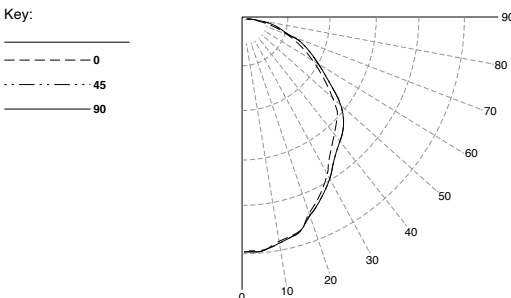
## ENERGY DATA

INSET MRI-FGRS-LED TROFFER (APPROX <sup>1</sup> LUMENS DELIVERED)										
ENCLOSURE SIZE	LIGHT PACKAGE	80 CRI (3000K - 5000K)				90 CRI (3500K, 4000K)				STANDARD DIMMING
		LUMENS	WATTS <sup>2</sup>	EFFICACY <sup>3</sup>	MAX AMB TEMP	LUMENS	WATTS <sup>2</sup>	EFFICACY <sup>3</sup>	MAX AMB TEMP <sup>4</sup>	
1X4	1LEDR	3,034	29	105	45°C (113°F)	2,924	29	101	45°C (113°F)	0-10V 1%
1X4	2LEDR	<b>6,067</b>	<b>55</b>	<b>110</b>	45°C (113°F)	<b>5,848</b>	<b>56</b>	<b>105</b>	45°C (113°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	<b>4,479</b>	<b>42</b>	<b>107</b>	45°C (113°F)	<b>4,321</b>	<b>42</b>	<b>103</b>	45°C (113°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	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	<b>10,077</b>	<b>83</b>	<b>122</b>	45°C (113°F)	<b>9,642</b>	<b>83</b>	<b>116</b>	45°C (113°F)	0-10V 1%
2X4	EM10	1221-1340	4	NA	40°C (104°F)	950-1160	4	NA	40°C (104°F)	NA

- <sup>1</sup> DELIVERED LUMEN DATA IS EXTRAPOLATED FROM MEASURED DATA @25C WITH NO EXTRA OPTIONS. VARIANCES WILL OCCUR WHEN OPTIONS ARE CHOSEN
- <sup>2</sup> WATTAGE IS MEASURED WITH 4000K SELECTION @ 120VAC AND Tambient = 25C. WATTAGES MAY VARY WITH ALTERNATE CONFIGURATIONS
- <sup>3</sup> EFFICACY CALCULATED USING 4000K CCT DATA.
- <sup>4</sup> MAX AMBIENT TEMP RATING, NON-IC INSTALLATION. TEMP RATING MAY VARY WITH SPECIFIED DRIVERS OR ANY NON STANDARD SELECTION
- <sup>5</sup> 90 MINUTE 10W EMERGENCY DRIVER; LUMENS CALCULATED BASED ON FIXTURE EFFICACY.

## PHOTOMETRICS

### SYMMETRIC



### ASYMMETRIC

