

# Cleanroom TL-R Troffers

1x2, 1x4, 2x2 and 2x4 High Efficiency LED Recessed Luminaires

- **Rated IP65**
- **Suitable for ISO 3-9 Cleanspaces**
- **Suitable for 209E class 100-100,000 Cleanspaces**
- **ETL listed for Wet Locations**
- **One piece Inset Doorframe**
- **Robotically seam welded housing**
- **0-10v 1% Dimming Standard**
- **Recessed Housing suitable for Tbar Grid AND Hardlid Installations**
- **Up to 40,700 Lm Delivered @ 134Lm/Watt**
- **B.A.A. & B.A.B.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	Optics	Options
TL-R								

Series	Material	Size	Light Source			Voltage	Optics	Options	
			Row Qty.	LED Type	CCT/CRI				
TL-R	3	White 430 SS Hsg. & Polished 304 SS Door	1x2 1' x 2' Housing	1	LEDR	83 CRI:	120V	P12ACR 0.135" P12 Prismatic Impact Resistant Acrylic (Inverted)	SW Wet Location Hub Supplied (not installed)
			1x4 1' x 4' Housing	2	LEDH	830 3000K	277V	LEX 0.125" P12 Prismatic Polycarbonate (Inverted)	PxL * Programmed to User Specified Lumen Value.
	4	White AL Hsg. & Polished 304 SS Door	2x2 2' x 2' Housing	2	LEDHF	835 3500K	UNV	A19 0.156" A19 Prismatic Impact Resistant Acrylic (Inverted)	PxW * Programmed to User Specified Wattage Value.
						840 4000K	347V*	TG 0.156" Prismatic Tempered Glass (Inverted)	10KV 10KV Parallel Surge Protection (One Supplied Per Circuit)
	5	White AL Hsg. & White AL Door	OR	3		850 5000K	HIA 0.140" P12 Prismatic High Impact Resistant Acrylic (Inverted)	GTD Generator Transfer Device	
			2x4 2' x 4' Housing	4		90+ CRI:	347V Available with 10% dimming, not all options are compatible with 347V	FROST 0.125" Flat Diffusing Frost Acrylic	WHIP Must Specify Length and Wire Qty
	7	White AL Hsg. & White CRS Door		2DBW 0.125" Flat Diffused Acrylic with Bi-Directional Batwing Distribution	OCCMW Internal microwave OCC Sensor				
				LBW 0.125" Flat Diffused Acrylic with Linear Batwing Distribution	FC Fuse & Holder (One Supplied Per Circuit)				
				GH85 0.125" Flat Diffused Acrylic with Glare Suppression Distribution	EM10 10W Integral LED EM (Specify Input Voltage)				
				NOTE: P12ACR option is standard and will be provided when no other option is selected	EM20 20W Remote LED EM (Specify Input Voltage)				
					GG 1/8" Thick Grid Gasket (Provided Loose)				
	EDL -40F Electronic Driver								
	WHT White Finished Door & HSG								
	AMW Anti-Microbial White Powdercoat								
	2/ED Two Drivers/Two Circuits								
	316SS DOOR ** 316 Stainless Steel Door Frame								
	316SS HSG *** 316 Stainless Steel Housing								

Note\*: Specially Value in Ordering Notes  
Note\*\*: 316 SS Door Frame to Replace 304SS Door on Material Options 3 or 4  
Note\*\*\*: 316 SS Housing to Replace 304SS/430 SS Housing on Material Option 3

Ordering Notes, If Applicable

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## SPECIFICATIONS

**HOUSING:** One piece, hole free, robotically seam welded housing has flattened knockouts for a superior seal. Housings are available in .040" 3003 Aluminum or 20Ga 430 Stainless Steel.

**DOOR FRAME:** One piece inset door frame with seam welds regressing into housing to allowing the NSF approved microcellular 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, or 18Ga 1008 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. 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 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:** 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.

**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.

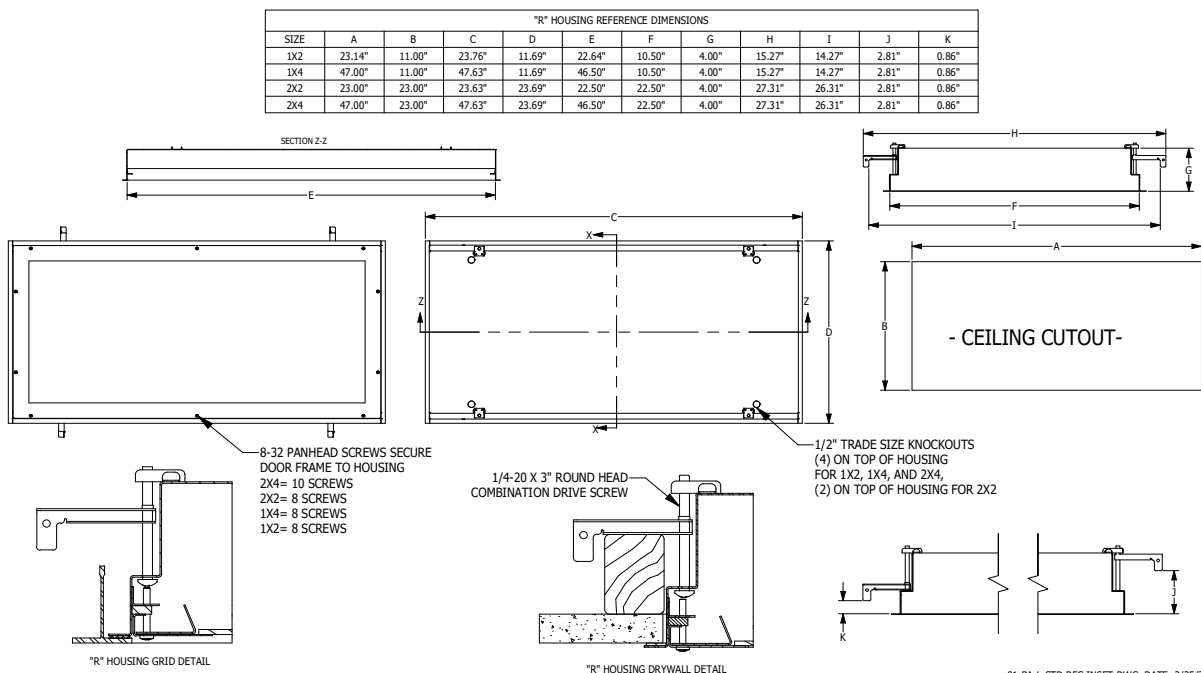
**REFLECTOR:** Die formed metal with high reflectance white polyester powder coat finish. Typical reflectivity 92%.

**INSTALLATION RECESSED:** Suitable for recessed Non-IC installation into covered ceilings. 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. Confirm ceiling compatibility with dimension drawings below.

**FINISH:** Stainless steel door frames are satin polished unless WHT or AMW options are selected. All other materials are provided with gloss high reflectance white polyester powdercoat with 1000hr salt spray test per ASTM B117. AMW option provides a white anti-microbial polyester powder coat to all exposed surfaces.

**LISTINGS:** 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 3 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 Series is both Build America Buy America (B.A.B.A.) & Buy American Act (B.A.A.) compliant.

## PRODUCT DRAWINGS



# Cleanroom TL-R Troffers

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## ENERGY DATA

SURFACE & RECESSED INSET 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	
1X2	1LEDR	1,456	15	97	45°C (113°F)	1,404	15	94	45°C (113°F)	0-10V 1%
1X2	2LEDR	2,912	29	100	45°C (113°F)	2,807	29	97	45°C (113°F)	0-10V 1%
1X2	2LEDH	5,642	55	103	35°C (95°F)	5,389	55	98	35°C (95°F)	0-10V 1%
1X2	2LEDHF	8,326	77	108	35°C (95°F)	6,938	92	75	35°C (95°F)	0-10V 1%
1X2	EM10	970-1080	4	NA	40°C (104°F)	750-980	4	NA	40°C (104°F)	NA
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	2LEDH	<b>11,754</b>	<b>109</b>	<b>108</b>	35°C (95°F)	<b>11,228</b>	<b>109</b>	<b>103</b>	35°C (95°F)	0-10V 1%
1X4	2LEDHF	<b>17,346</b>	<b>153</b>	<b>113</b>	35°C (95°F)	14,454	183	79	35°C (95°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	2LEDH	5,875	55	107	40°C (104°F)	5,601	55	102	40°C (104°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	3LEDH	<b>8,813</b>	<b>80</b>	<b>110</b>	40°C (104°F)	<b>8,402</b>	<b>81</b>	<b>104</b>	35°C (95°F)	0-10V 1%
2X2	4LEDH	11,750	109	108	40°C (104°F)	11,202	109	103	35°C (95°F)	0-10V 1%
2X2	4LEDHF	<b>17,850</b>	<b>153</b>	<b>117</b>	35°C (95°F)	14,766	184	80	35°C (95°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	2LEDH	13,261	109	122	40°C (104°F)	12,601	109	116	40°C (104°F)	0-10V 1%
2X4	4LEDR	13,436	111	121	45°C (113°F)	12,856	113	114	45°C (113°F)	0-10V 1%
2X4	3LEDH	<b>19,892</b>	<b>164</b>	<b>121</b>	40°C (104°F)	<b>18,902</b>	<b>164</b>	<b>115</b>	40°C (104°F)	0-10V 1%
2X4	4LEDH	26,522	220	121	40°C (104°F)	25,202	220	115	40°C (104°F)	0-10V 1%
2X4	4LEDHF	<b>40,740</b>	<b>305</b>	<b>134</b>	35°C (95°F)	35,344	373	95	35°C (95°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 @ 25°C WITH NO EXTRA OPTIONS. VARIANCES WILL OCCUR WHEN OPTIONS ARE CHOSEN

<sup>2</sup> WATTAGE IS MEASURED WITH 4000K SELECTION @ 120VAC AND Tambient = 25°C. 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

### P12 PRISMATIC

Key:

— 0  
- - - 45  
— 90

