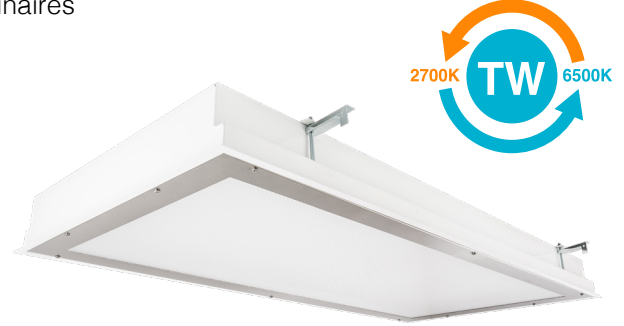


Cleanroom TL-R Troffers: TL-R-LED-TW

Tunable White 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**
- **B.A.A. & B.A.B.A Compliant & Made in the USA by a Family Owned US Corporation**
- **Available as Warm Dim or as Separately controlled intensity and CCT.**
- **Tunable white LEDs allow a full range of CCTS from 2700K - 6500K CCT.**



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.



ORDERING GUIDE

| Series | Material | Size | Row Qty. | LED Type | CCT/CRI | Control | Voltage | Optics | Options | | |
|--|----------|--|---------------------|---------------------|---------------------|---|---|--|---|---|--|
| TL-R | | | | LEDTW | | | | | | | |
| Series | Material | Size | Row Qty. | Light Source | | Control | Voltage | Optics | Options | | |
| TL-R | 3 | White 430 SS Hsg. & Polished 304 SS Door | 1x2 1' x 2' Housing | 1 | LEDTW | 80 CRI: | 10VA 0-10V Analog Control | 120V | P12ACR 0.135" P12 Prismatic Impact Resistant Acrylic (Inverted) | SW Wet Location Hub Supplied (not installed) | |
| | | | 1x4 1' x 4' Housing | 2 | | | | 277V | LEX 0.125" P12 Prismatic Polycarbonate (Inverted) | PxL * Programmed to User Specified Lumen Value. | |
| | 4 | White AL Hsg. & Polished 304 SS Door | | | | 90+ CRI: | 10VWD 0-10V Warm Dim Control | UNV | A19 0.156" A19 Prismatic Impact Resistant Acrylic (Inverted) | PxW * Programmed to User Specified Wattage Value. | |
| | | | | 2x2 2' x 2' Housing | 2 | | | 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 | 927/965 2700K-6500K | HIA 0.140" P12 Prismatic High Impact Resistant Acrylic (Inverted) | FROST 0.125" Flat Diffusing Frost Acrylic | WHIP Must Specify Length and Wire Qty | | | |
| | | | 2x4 2' x 4' Housing | 4 | | | | 2DBW 0.125" Flat Diffused Acrylic with Bi-Directional Batwing Distribution | OCCMW Internal Microwave OCC Sensor | | |
| | 7 | White AL Hsg. & White CRS Door | | | | | | | 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 | | |
| Note*: Specify Value in Ordering Notes | | | | | | | | | | | |

Note*: Specify Value in Ordering Notes

Ordering Notes, If Applicable

Cleanroom TL-R Troffers: TL-R-LED-TW

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

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 minimum 80 or 90 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 . LEDs are controllable via 0-10v dimming, see next page for control options. Consult factory for lumen output configurations not listed on spec sheets.

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.

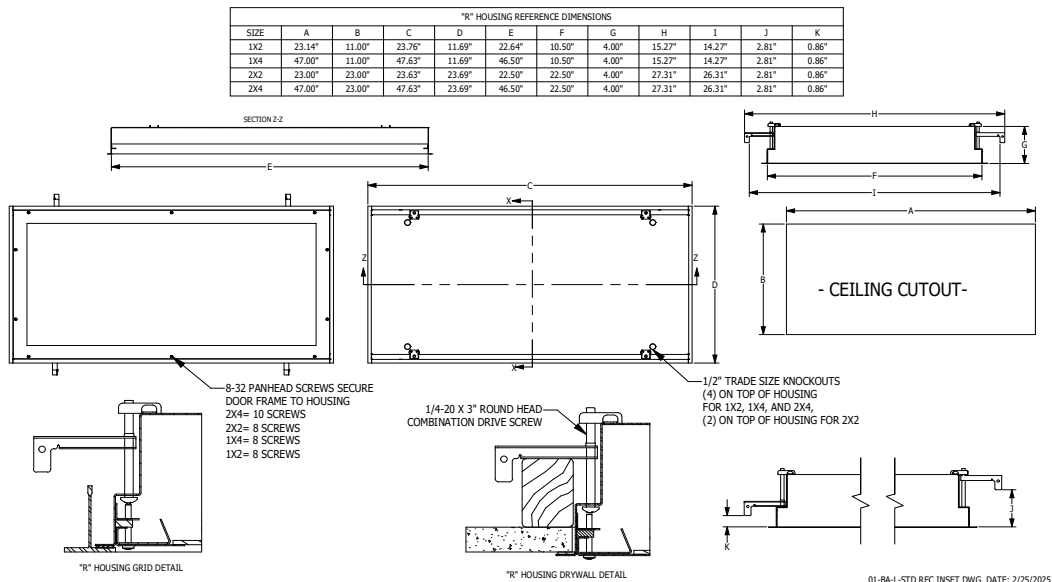
REFLECTOR: Die formed metal with high reflectance white polyester powder coat finish. Typical reflectivity 92%.

INSTALLATION: 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: TL-R-LED-TW

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

ENERGY DATA

| INSET-FGRS-LED TROFFER (APPROX ¹ LUMENS DELIVERED) | | | | | | |
|---|---------------|------------------------------|--------------------|-----------------------|--------------|---------------|
| ENCLOSURE SIZE | LIGHT PACKAGE | Tunable White 80 CRI (4000K) | | | MAX AMB TEMP | CCT RANGE |
| | | LUMENS | WATTS ² | EFFICACY ³ | | |
| 1X2 | 1LEDTW | 1,608 | 17 | 95 | 40°C (104°F) | 2700k - 6500k |
| 1X2 | 2LEDTW | 3,240 | 35 | 93 | 40°C (104°F) | 2700k - 6500k |
| 1X2 | EM10 | 930-950 | 4 | NA | 40°C (104°F) | NA |
| 1X4 | 1LEDTW | 3,350 | 34 | 99 | 40°C (104°F) | 2700k - 6500k |
| 1X4 | 2LEDTW | 6,750 | 68 | 99 | 40°C (104°F) | 2700k - 6500k |
| 1X4 | EM10 | 990* | 4 | NA | 40°C (104°F) | NA |
| 2X2 | 2LEDTW | 3,550 | 35 | 101 | 40°C (104°F) | 2700k - 6500k |
| 2X2 | 3LEDTW | 5,300 | 53 | 100 | 40°C (104°F) | 2700k - 6500k |
| 2X2 | 4LEDTW | 7,100 | 68 | 104 | 40°C (104°F) | 2700k - 6500k |
| 2X2 | EM10 | 1000-1010* | 4 | NA | 40°C (104°F) | NA |
| 2X4 | 2LEDTW | 7,650 | 68 | 113 | 40°C (104°F) | 2700k - 6500k |
| 2X4 | 3LEDTW | 11,500 | 103 | 112 | 40°C (104°F) | 2700k - 6500k |
| 2X4 | 4LEDTW | 15,350 | 135 | 114 | 40°C (104°F) | 2700k - 6500k |
| 2X4 | EM10 | 1120-1140* | 4 | NA | 40°C (104°F) | NA |

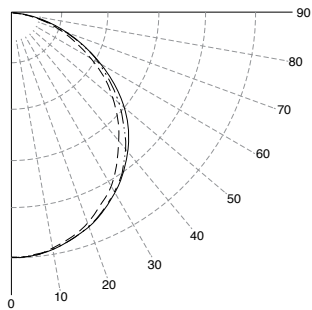
- 1 DELIVERED LUMEN DATA IS CALCULATED BASED ON STATIC WHITE PHOTOMETRY @ 4000K CCT
- 2 WATTAGE IS MEASURED WITH 4000K SELECTION @ 120VAC AND Tambient = 25C. WATTAGES MAY VARY WITH ALTERNATE CONFIGURATIONS
- 3 EFFICACY CALCULATED USING 4000K CCT DATA.
- 4 MAX AMBIENT TEMP RATING, NON-IC INSTALLATION. 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

PHOTOMETRICS

P12 PRISMATIC

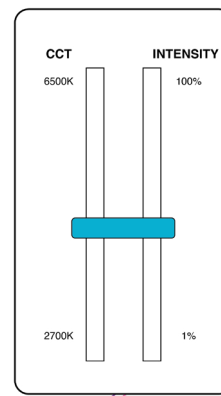
Key:

--- 0
 --- 45
 --- 90



CONTROL OPTIONS

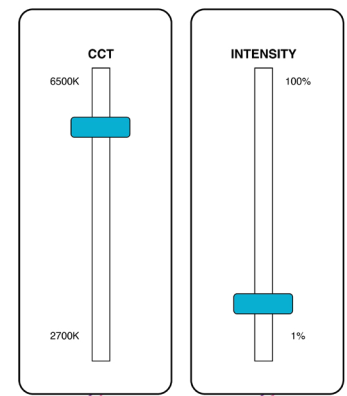
WARM DIM CONTROL



DIM -
 DIM +

Only one set of dimming Leads are required. As Intensity is increased so is the CCT. As intensity decreases the CCT decreases to warmer color Temperatures.

CONTINUOUS CCT CONTROL



DIM -
 DIM +

Two set of dimming leads are required. Intensity and CCT of light are controlled independently from one another.