

Circadian Cleanroom KL Top Relamp Troffers: KL-R/TR-LED

2x4 & 1x4 Recessed LED Luminaires with Top and Bottom Access

- **Rated IP66**
- **Suitable for ISO 3-9 Cleanspaces**
- **Suitable for 209E class 1-100,000 Cleanspaces**
- **ETL listed for Wet Locations**
- **One piece overlapping doorframe**
- **Robotically seam welded housing**
- **0-10v 1% Dimming Standard**
- **Service to Luminare from Plenum Side of ceiling**
- **One Housing Suitable for Flange and Grid Installation.**
- **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**



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 | Voltage | Optics | Options | |
|---|---|---------------------|--------------|----------|-----------|--|--|--|--|
| KL-R/TR | | | | | | | | | |
| Series | Material | Size | Light Source | | | Voltage | Optics | Options | |
| | | | Row Qty. | LED Type | CCT | | | | |
| KL-R/TR | 1 White CRS Hsg. & White CRS Door | 1x4 1' x 4' Housing | 1 | LEDR | 83 CRI: | 120V | P12ACR 0.135" P12 Prismatic Impact Resistant Acrylic (Inverted) | SW Wet Location Hub Supplied (not installed) | |
| | | | 2 | LEDH | 830 3000K | 277V | LEX 0.125" P12 Prismatic Polycarbonate (Inverted) | PxL * Programmed to User Specified Lumen Value. | |
| | 2 White CRS Hsg. & Polished 304 SS Door | 2x4 2' x 4' Housing | | LEDHF | 835 3500K | UNV | A19 0.156" A19 Prismatic Impact Resistant Acrylic (Inverted) | PxW * Programmed to User Specified Wattage Value. | |
| | | | 2 | | 840 4000K | 347V* | TG 0.156" Prismatic Tempered Glass (Inverted) | 10KV 10KV Parallel Surge Protection (One Supplied Per Circuit) | |
| | | | 3 | | 850 5000K | | HIA 0.140" P12 Prismatic High Impact Resistant Acrylic (Inverted) | GTD Generator Transfer Device | |
| | | | 4 | | | | FROST 0.125" Flat Diffusing Frost Acrylic | WHIP Must Specify Length and Wire Qty | |
| | | | | | 90+ CRI: | *347V Available with 10% dimming, not all options are compatible with 347V | 2DBW 0.125" Flat Diffused Acrylic With Bi-Directional Batwing Distribution | OCCMW Internal microwave OCC Sensor | |
| | | | | | 935 3500K | | LBW 0.125" Flat Diffused Acrylic with Linear Batwing Distribution | FC Fuse & Holder (One Supplied Per Circuit) | |
| | | | | | 940 4000K | | GH85 0.125" Flat Diffused Acrylic with Glare Suppression Distribution | EM10 10W Integral LED EM (Specify Input Voltage) | |
| | | | | | 950 5000K | | | 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 | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P12ACR option is standard and will be provided when no other option is selected | | | | | | | | | |
| NOTE: P | | | | | | | | | |

Ordering Notes, If Applicable

Circadian Cleanroom KL Top Relamp Troffers: KL-R/TR-LED

2x4 & 1x4 Recessed LED Luminaires with Top and Bottom Access

SPECIFICATIONS

HOUSING: One piece, hole free, robotically seam welded 20Ga CRS housing has flattened knockouts for a superior seal. Gasketed top cover allows all services from above. Fully white powder coated.

DOOR FRAME: One piece door frame with welded corners overlaps the fixture allowing the NSF approved microcellular gasket to seal to the mounting surface. Door frame is hinged by aircraft cables and is supplied with captive stainless steel flush head screws to allow easy wiping of the surface. Available in 20Ga 304 Polished SS, or 18Ga 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.

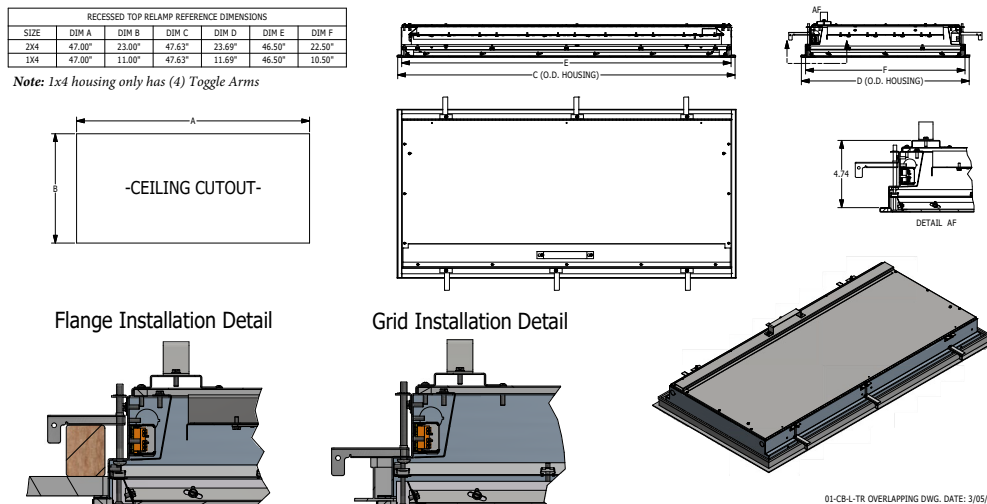
REFLECTOR: Die formed metal with high reflectance white polyester powder coat finish. Typical reflectivity 92%.

INSTALLATION: Suitable for recessed NON-IC installation into grid or flange ceilings. Accommodates most 1" and 1.5" T-Bar Grid see below installation details. Four or six adjustable toggle arms with holes for seismic support wire attachment. Supply entry via 1/2" trade size flattened knockouts located at the ends of the fixture.

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: IP66 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 1 through Class 100,000 cleanspaces. NSF2 Listed for non-food zones & 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



Circadian Cleanroom **KL Top Relamp Troffers: KL-R/TR-LED**

2x4 & 1x4 Recessed LED Luminaires with Top and Bottom Access

ENERGY DATA

| RECESSED OVERLAP TOP RELAMP LED TROFFER (APPROX ¹ LUMENS DELIVERED) | | | | | | | | | | |
|--|---------------|------------------------|--------------------|-----------------------|--------------|-----------------------|--------------------|-----------------------|---------------------------|------------------|
| ENCLOSURE SIZE | LIGHT PACKAGE | 83 CRI (3000K - 5000K) | | | | 90 CRI (3500K, 4000K) | | | | STANDARD DIMMING |
| | | LUMENS | WATTS ² | EFFICACY ³ | MAX AMB TEMP | LUMENS | WATTS ² | EFFICACY ³ | MAX AMB TEMP ⁴ | |
| 1X4 | 1LED R | 2,974 | 29 | 103 | 45°C (113°F) | 2,868 | 29 | 99 | 45°C (113°F) | 0-10V 1% |
| 1X4 | 2LED R | 5,948 | 55 | 108 | 45°C (113°F) | 5,736 | 56 | 103 | 45°C (113°F) | 0-10V 1% |
| 1X4 | 2LED H | 11,493 | 109 | 106 | 35°C (95°F) | 10,980 | 109 | 101 | 35°C (95°F) | 0-10V 1% |
| 1X4 | 2LED HF | 18,046 | 153 | 118 | 35°C (95°F) | 15,546 | 183 | 85 | 35°C (95°F) | 0-10V 1% |
| 1X4 | EM10 | 1030-1180 | 4 | NA | 40°C (104°F) | 850-1030 | 4 | NA | 40°C (104°F) | NA |
| 2X4 | 2LED R | 6,864 | 55 | 125 | 45°C (113°F) | 6,567 | 56 | 117 | 45°C (113°F) | 0-10V 1% |
| 2X4 | 3LED R | 10,295 | 83 | 124 | 45°C (113°F) | 9,851 | 83 | 119 | 45°C (113°F) | 0-10V 1% |
| 2X4 | 2LED H | 13,488 | 109 | 124 | 40°C (104°F) | 12,816 | 109 | 118 | 40°C (104°F) | 0-10V 1% |
| 2X4 | 4LED R | 13,726 | 111 | 124 | 45°C (113°F) | 13,134 | 113 | 116 | 45°C (113°F) | 0-10V 1% |
| 2X4 | 3LED H | 20,233 | 165 | 123 | 40°C (104°F) | 19,224 | 165 | 117 | 40°C (104°F) | 0-10V 1% |
| 2X4 | 4LED H | 26,977 | 220 | 123 | 40°C (104°F) | 25,632 | 220 | 117 | 40°C (104°F) | 0-10V 1% |
| 2X4 | 4LED HF | 39,373 | 305 | 129 | 35°C (95°F) | 35,488 | 373 | 95 | 35°C (95°F) | 0-10V 1% |
| 2X4 | EM10 | 1230-1290 | 4 | NA | 40°C (104°F) | 950-1190 | 4 | NA | 40°C (104°F) | 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 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.

PHOTOMETRICS

P12 PRISMATIC

Report No: 20898

Total Lumens: 12,642

Wattage: 102.43

Efficacy: 123.4 (Lumens Per Watt)

Fixture Size: 1'x4'

Key:

