



# GEN2 CLARIS LED Retrofit Kits

## 1'x1' Linear Troffers

PROJECT NAME
ORDERING #

LED Living Technology's GEN2 CLARIS LED Retrofit Kit is the next generation in energy efficient LED upgrades for linear fluorescent troffers. Payback has never made more sense with 65-80% energy savings over fluorescent lamps and up to 24 years operation once installed.

1'x1' upgrades include system efficacies ranging from 136-149lm/W, increased thermal performance for extended LED lifetimes exceeding 200,000hrs, and the integration of permanent rare-earth magnets for easy and quick installation.



### KEY SPECIFICATIONS

Housing For Upgrade LED Retrofit	1'x1' (305mm x 305mm)
Input Power	16W, 24W
Input Voltage	120-277VAC
Delivered Light Output	16W - up to 2400 lms 24W - up to 3400 lms
System Efficacy w/LED Power Supply	16W - up to 149lm/W 24W - up to 136lm/W
CRI	82-86 CRI
CCT	2700K, 3000K, 3500K, 4000K, 5000K
System Lifetime	>60,000 hours (only driver replacement required)
LED Lifetime (L80 Lumen Maintenance)	>110,000 hours [see LED Lifetime chart for kit specific]
Controls	0-10V to 10%, Triac Dimming, ELV Lutron 2-Wire, Lutron 3 Wire, PWM, Resistance
Mounting	Existing linear fluorescent fixtures, w/Permanent Neodymium Magnets, and Rapid Thermafuse Technology
Limited Warranty	7 Years LED Power Supply, 10 Years all other components.



Emergency Battery Pack Ordering Example: **CLA-EM10**

Root	Emergency Battery Pack	Mounting Options
CLA	<b>EM5</b> - >800 lumens / 5 Watts <b>EM7</b> - >1200 lumens / 7 Watts <b>EM10</b> - >1600 lumens / 10 Watts	<b>Blank</b> - Standard Integral Style No-Flex Unit <b>TM**</b> - Top Mount Non-Flex Unit <b>A**</b> - External Mount Dual Flex Unit <b>J**</b> - Box Mount Unit Single Flex Junction Box <b>R**</b> - Dual Flex w/Reflector-Mount <b>R-J**</b> - Single Flex w/Reflector-Mount

SEE PAGE 3 FOR DETAILS

\*\*Special Order

### KIT ORDERING

Example: **G2CLA-24-2-D-40-1K-11**

Model Root	Kit	Dimming	LED Color	Quantity Of Kit Per Housing	Housing Type	Lens Adders
G2CLA	<b>16-2</b> - (QTY 4) 1' Lamp, 16W up to 2400 lumens <b>24-2</b> - (QTY 4) 1' Lamp, 24W up to 3400 lumens	<b>D</b> - Standard 0-10V Low Voltage <b>T</b> - Triac / ELV <b>A</b> - Lutron 3 Wire Dimming <b>E</b> - Lutron 2 Wire Dimming *Available only in 24W	<b>27</b> - 2700K <b>30</b> - 3000K <b>35</b> - 3500K <b>40</b> - 4000K <b>50</b> - 5000K	<b>1K</b> - Standard 1 Kit <b>2K</b> - Custom 2 Kits	<b>11</b> - 1X1	<b>BLANK</b> - No Lens  <b>SL21</b> - Frosted Snap-On LED Strip Covers for Parabolic Applications

\* Lumen value are based on an LED CCT of 5000K maintaining a tolerance of +/- 5%



Copyright ©2015 LED Living Technology. All rights reserved. U.S. Pat. No. 8727566 and Patents Pending.





# GEN2 CLARIS LED Retrofit Kits

## 1'x1' Linear Troffers

### PRODUCT SPECIFICATIONS

The GEN2 CLARIS LED Retrofit Kit was designed as a powerful step-up over existing LED Upgrade retrofit kits. Power Supply Efficiency, LED Efficiency, Thermal Performance, Ease of Installation, and Controllability were all optimized and improved upon with the latest and most advanced components. Affordability through innovation, has always been LED Living Technology's design approach and with the GEN2 CLARIS LED Retrofit Kit, LLT has once again raised the bar in LED retrofit kit performance, while improving upon energy savings, and cost.

### ELECTRICAL PERFORMANCE

Input Voltage: 120-277VAC ALL LED DRIVERS  
 Frequency Range: 47 ~ 60Hz

MODEL	DIMENSIONS	CONTROL COMPATIBILITIES								PROTECTIONS	THD (TOTAL HARMONIC DISTORTION)	POWER FACTOR	AMBIENT OPERATING TEMPERATURE
		Dimmable Range	0-10V	Ω	PWM	TRIAC (120V)	ELV	Lutron 3-Wire	Lutron EcoSystem				
G2CLA-XX-X-D	L 163mm x W 43mm x H 32mm L 6.41in x W 1.69in x H 1.26in	10%	✓	✓	✓					Short Circuit/Over Current [95-108%] Over Voltage [28 ~ 35V]/Over Temp.	<20%	>.9	-40°F (-40°C) ~ 122°F (50°C)
G2CLA-XX-X-T	L 84mm x W 40mm x H 25.3mm L 3.3in x W 1.57in x H 1in	1%	✓			✓	✓			Short Circuit/Over Current/Over Temp/Output Open Load	<20%	>.9	-22°F (-30°C) ~ 122°F (50°C)
G2CLA-XX-X-A	L 359mm x W 30mm x H 25mm L 14.13in x W 1.18in x H 1in	1%						✓	✓	Short Circuit/Inrush Current limiting <2A / Over Temp/ Open Circuit Protected Output	<20%	>.9	32°F (0°C) ~ 122°F (50°C)
G2CLA-XX-X-E	L 359mm x W 30mm x H 25mm L 14.13in x W 1.18in x H 1in	5%							✓	Short Circuit/Inrush current less than NEMA 410-2011 limit/Overload-protected output/Open-Circuit Protected Output	<20%	>.9	32°F (0°C) ~ 122°F (50°C)

### THERMAL PERFORMANCE & LED LIFETIME

Information in the chart below reflects individual LED Drive Currents, Measured LED Junction Temperatures installed in troffer housing, and LED Lifetime LM80 Testing.

MODEL	LED JUNCTION TEMPERATURE @25C [77°F] AMBIENT	LUMEN MAINTENANCE @10,000 HRS	L80 LUMEN MAINTENANCE*	L70 LUMEN MAINTENANCE**
G2CLA-16-2	35°C	98.98%	220,000 hrs	350,000 hrs
G2CLA-24-2	41°C	97.95%	110,000 hrs	170,000 hrs

\*Time in operation hours before an LED system reaches 80% lumen maintenance.  
 \*\*Time in operation hours before an LED system reaches 70% lumen maintenance.

### COMPONENTS & MATERIALS

GEN2 CLARIS LED Retrofit Kits are RoHS Compliant, and vibration resistant. LED Boards are mounted with high performance slow-bonding thermally conductive adhesive, reinforced with permanent Neodymium magnets. All components are thermally managed, including LED power supply, for maximum system lifetime.

Table of Components

MODEL	TOTAL 10.50" LED RAPID THERMAFUSE STRIPS	QTY DRIVER	CONNECTOR BOARDS	QTY 25" JUMPER CABLES	POWER SUPPLY SCREWS	UL 1598c LABEL
G2CLA-16-2-W-XX-1K-12 G2CLA-24-2-W-XX-1K-12	4	1	1	4	2	1





# GEN2 CLARIS LED Retrofit Kits 1'x1' Linear Troffers

## EMERGENCY BATTERY PACK *CONSTANT POWER FOR UP TO 120 MINUTES WITH NO LIGHT DEGRADATION*

NEW

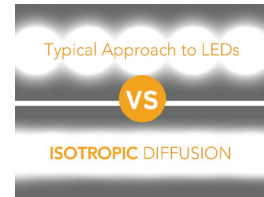
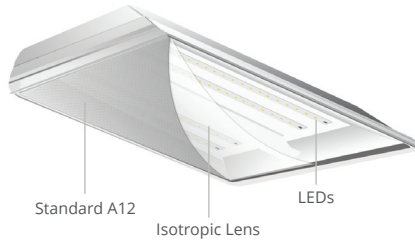


- Exceeds standard 90 minutes of illumination minimum
- Features IOTA's constant power technology for maximum sustained light output
- Able to purchase separately or at a later date and still maintain UL1598C rating
- Can be installed in past CLARIS LED Retrofit Kit Installations
- See CLA-EM Spec Sheet for specifications on new EM Battery Packs

### LENS ACCESSORIES

#### LENS24 - Prismatic Upgrade Applications

Description: This .033" thick acrylic film diffuser overlays over existing Prismatic 2x4 A12 lenses. With beam shaping isotropic diffusion, individual LED hot spots are beam shaped into one continuous line for additional eye-comfort.



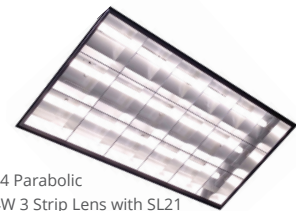
Typical Approach to LEDs  
VS Isotropic Diffusion

#### SL21 - Parabolic / Open Housing Applications

Description: Diffusion installs literally with a snap, with LED Living Technology's new and exclusive snap on frosted strip lenses. Designers will find an increased area of diffusion, as the LEDs and snap on diffuser are mounted directly to the back of the housing, effectively eliminating unsightly dark shadowing.



SL21 - Parabolic  
Snap on Lens Cover



2x4 Parabolic  
24W 3 Strip Lens with SL21

### ADDITIONAL SPECIFICATIONS

#### PHOTOMETRICS

Due to the quantity of options available we ask that you please contact an LED Living Technology lighting representative for Photometrics of your specific kit configuration. Photometrics are tested to IESNA LM-7908 standards.

#### THERMAL MANAGEMENT

LED Boards 21.3" x 1" and LED High Performance Drivers are equipped with Rapid Thermafuse Technology: thermally conductive industrial strength adhesive for recycling existing housing as effective heat sink material.

### MOUNTING

5-10 minute install. Housing maintains its UL rating with the kit installed (UL1598C). Fluorescent lamps and ballasts are removed, housing is cleaned with a 70% min. alcohol solution. LED Strips in LED Upgrade Retrofit Kit are installed in existing housing with thermally conductive adhesive reinforced with **permanent rare earth magnets**, LED Power supply is mounted underneath existing ballast cover plate. Plug and play design.

*Please refer to installation guide for complete installation instructions. Retrofit Housings will retain UL listing if complete Claris LED Retrofit kit is installed utilizing provided installation guide.*

### WARRANTY

10 Year Limited Warranty on all components with the exception of LED Power Supply.  
7 Year Limited Warranty on LED Power Supply.

