



# Installation Instructions for CLEANLIFE® LED Light Engine Kit for Sign Applications

Model Number: CL-T8XXX-XX-XXX-XXDCXX-XXX

Thank you for purchasing CLEANLIFE® LED Light Engine Kits for Sign Applications

**CAUTION:** Disconnect power to system before installing.  
CLEANLIFE® LED Light Engines for Sign Applications must be installed in accordance with NEC (National Electric Code) by a qualified installer or skilled person familiar with general construction, electrical and sign installation techniques. This kit is to be installed in listed signs only.

**WARNING:** Risk of fire or electric shock. LED Retrofit Kit installation requires knowledge of sign electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.

Risk of fire or electric shock. Install this kit only in list signs that have been identified in the installation instructions and where the input rating of the retrofit kit does not exceed the input rating of the sign.

Risk of fire or electric shock. Installation of this LED Retrofit Kit may involve drilling or punching of holes into the structure of the sign. Check for enclosed wiring and components to avoid damage to wiring and electrical parts.

Installer should examine all parts that are not intended to be replaced by the retrofit kit for damage and replace any damaged parts prior to installation of the retrofit kit.

Installers should not disconnect existing wires from lampholder terminals to make new connections at lampholder terminals. Instead installers should cut existing lampholder leads away from the lampholder and make new electrical connections to lampholder lead wires by employing applicable connectors.

Required Tools (not included)  
• Wire Strippers

**Caution!** Must be operated with a CLEANLIFE® approved UL-listed Class 2 LED driver. These products have not been evaluated for use when connected to an unapproved power supply.

**1** Disconnect power to system before installing.

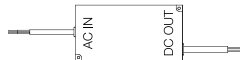
**2** Remove contents from package.

**3** Verify that the package contains all the components shown below.

1 x CLEANLIFE® LED Light Engine for Sign Applications



1 X LED Driver



4 X Wire Nuts



**4** Remove the existing fluorescent tube and dispose according to local ordinances.

**5** Locate the existing fluorescent ballast. Snip the wires as close as possible to the ballast.

**6** Remove the fluorescent ballast and dispose according to local ordinances.

**7** Install CLEANLIFE® approved SAM listed LED driver approximately where fluorescent ballast was located.

**8** Connect CLEANLIFE® approved SAM listed LED driver as shown in Figure 1. For most common installations, first connect the ground wire (if present) of the LED driver to a suitable location. Then connect the AC Line (black wire) to the AC Line (brown or blue wire) of the LED driver, and the AC Neutral (white wire) to the AC Neutral (white or blue wire) of the LED driver. Then connect the wire going to one side of the set of sockets (red wire) to the +VDC (red wire) of the LED driver, and the wires of the opposing sockets (blue wires) to the -VDC (black wire) of the LED driver.

**WARNING**—After the sign has been modified to accept CLEANLIFE® LED Light Engines for Sign Applications it will no longer operate fluorescent light tubes. Due to risk of fire or electric shock, do not install fluorescent light tubes in sign systems modified to accept CLEANLIFE® LED Light Engines for Sign Applications.

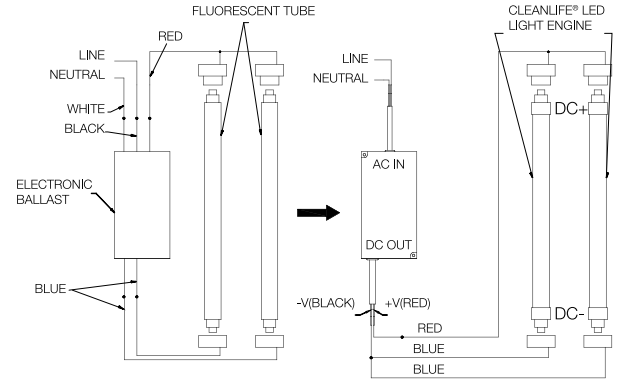


Figure 1—Common Installation Wiring

NOTE: Figure 1 shows a two lamp system. For a system with more lamps, connect one side of the set of sockets to +VDC and the opposing sockets to -VDC. For assistance regarding installation of CLEANLIFE® LED Light Engine Kits for Sign Applications in a sign system, please contact your CLEANLIFE® representative.

**9** Install the CLEANLIFE® LED Light Engine for Sign Applications with the end marked DC+ placed into the socket connected to +VDC (red wire), and the other end marked DC- placed into the opposing socket connected to -VDC (black wire). It may be useful to mark the sockets with a permanent marker "DC+" and "DC-" by following the wires for future placement.

**10** Restore power to system.

## COMPATIBILITY GUIDE:

TABLE 1—LED Drivers/Light Engine Compatibility

LAMP SPECIFICATION			WATTS (MAX)	# OF LAMPS/LED DRIVER		
SIZE	REPLACES	LIGHT ENGINE MODEL NUMBER		48W DRIVER	60W DRIVER	100W DRIVER
18"	F18/T12HO	CL-T8XX-XX-XXX-18DCXX-DR17	12W	up to 4	up to 5	up to 8
24"	F24/T12HO	CL-T8XX-XX-XXX-24DCXX-DR17	18W	up to 2	up to 3	up to 5
36"	F36/T12HO	CL-T8XX-XX-XXX-36DCXX-DR17	22W	up to 1	up to 2	up to 4
42"	F42/T12HO	CL-T8XX-XX-XXX-42DCXX-DR17	35W	up to 1	up to 1	up to 2
48"	F48/T12HO	CL-T8XX-XX-XXX-48DCXX-DR17	40W	up to 1	up to 1	up to 2
60"	F60/T12HO	CL-T8XX-XX-XXX-60DCXX-DR17	50W		up to 1	up to 1
64"	F64/T12HO	CL-T8XX-XX-XXX-64DCXX-DR17	50W			up to 1
72"	F72/T12HO	CL-T8XX-XX-XXX-72DCXX-DR17	60W			up to 1
84"	F84/T12HO	CL-T8XX-XX-XXX-84DCXX-DR17	70W			up to 1
96"	F96/T12HO	CL-T8XX-XX-XXX-96DCXX-DR17	80W			up to 1
108"	F108/T12HO	CL-T8XX-XX-XXX-108DCXX-DR17	85W			up to 1
117"	F117/T12HO	CL-T8XX-XX-XXX-117DCXX-DR17	90W			up to 1
120"	F120/T12HO	CL-T8XX-XX-XXX-120DCXX-DR17	95W			up to 1

TABLE 2—CLEANLIFE® Approved Class 2 LED Drivers

MODEL	MANUFACTURER	VOLTS	WATTS	IP
T1UNV024V-100LS	Fulham	24V DC	100W	IP66
P1FC-C201A	LG Innotek	24V DC	48W	IP65
P1SN-C100A	LG Innotek	24V DC	100W	IP66
LPV-60-24	Mean Well	24V DC	60W	IP67
CLG-100-24	Mean Well	24V DC	100W	IP67
PLN-100-24	Mean Well	24V DC	100W	IP64

## 5-YEAR LIMITED WARRANTY:

CLEANLIFE® LED Light Engine Kits for Sign Applications are warranted to be free and clear of defects in materials and workmanship for a period of five years from the date of purchase. This warranty covers defects in manufacturing discovered while using the product as recommended by the manufacturer and does not apply to failures caused by acts of God or as a result of any abuse, misuse, abnormal use, or use in violation of any applicable standard, code, or instructions for use in installations. The foregoing warranty constitutes the sole and exclusive remedy of the purchaser and the sole liability of CLEANLIFE ENERGY for CLEANLIFE® LED Light Engine Kits for Sign Application warranties. NO WARRANTIES OF PERFORMANCE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE IS MADE EXPRESSLY, ORALLY OR IMPLICITLY BY CLEANLIFE ENERGY. In no event shall CLEANLIFE ENERGY be liable for any other costs, damages, including lost profits, indirect, incidental, consequential, special, or punitive damages. If a CLEANLIFE® LED Light Engine Kit for Sign Applications fails due to a defect covered by this warranty, CLEANLIFE ENERGY will, at its option, either replace the product or provide a credit equal to the current price CLEANLIFE ENERGY charges for the product. To make a warranty claim, retain the failed products and notify a CLEANLIFE ENERGY sales representative in writing within thirty (30) days of the failure.

## TROUBLE SHOOTING GUIDE:

ISSUE	SOLUTION
Light Engines do not turn on	<ul style="list-style-type: none"> <li>Check all electrical connections.</li> <li>Ensure that correct ends of the Light Engine are installed in the correct sockets (DC+ end in +VDC socket and DC- end in -VDC socket. Verify polarity with a multimeter.</li> </ul>
Light Engines flicker	<ul style="list-style-type: none"> <li>Ensure that the correct power supply is being used for your system. See Compatibility Guide section for appropriate power supplies.</li> </ul>



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