KEYSTONE SINCE 1945 LIGHT MADE EASY®

EXTERNAL DRIVE LED
TYPE C LED TUBES

KT-LED8T5HE-24G-8XX-E / G2 | KT-LED10T5HE-36G-8XX-E / G2
KT-LED12T5HO-24G-8XX-E / G2 | KT-LED15T5HO-36G-8XX-E / G2
T5 LED LAMPS

INSTALLATION AND OPERATING INSTRUCTIONS

PLEASE FIND A QUALIFIED ELECTRICIAN FOR INSTALLATION. Please read the instructions before you install and use the luminaire.

General: All electrical connections must be in accordance with local and National Electrical Code (N.E.C.) standards. If you are unfamiliar with proper electrical wiring connections, obtain the services of a qualified electrician. Remove the trim from the box and make sure that no parts are missing.

Warning: Risk of fire or electric shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of LED retrofit kit. Check for enclosed wiring and components.

Avertissment : Risque d'incedie ou de choc electrique. La cablage des luminaires, les blocs d'alimentation ou les autres composants electriques peuvent subir des dommages lors du percage en vue d'installer la quincaillaerie d'un necessaire de modernisation. Verifier si les cables et les composants sont endommages.

Warning: Risk of fire or electric shock. LED retrofit kit installation requires knowledge of luminaire electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.

Avertissment : Risque d'incedie ou de choc electrique. L'installation de ce necessaire de modernisation exige une personne familiere avec la construction et le fonctionnement du systeme electrique du luminaire et des risques associes. Toute personne qui n'est pas qualifiee ne doit faire aucune tentative d'installation et doit contracter une personne qualifiee.

Warning: Risk of fire or electric shock. Install this kit only in luminaries that have construction features and dimensions shown in the photographs and/or drawings and where the input rating of the retrofit does not exceed the input rating of the luminaire.

Avertissment : Risque d'incedie ou de choc electrique. N'installer ce necessaire que dans les luminares dont les caracteristiques de construction et les dimensions sont conforme a celles illustrees dans les photos et/ou les dessins et dont la puissance d'entree nominale du necessaire de modernisation ne depasse pas celle du luminaire.

Warning: Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation. Do not leave any other open holes in an enclosure of wiring or electrical components.

Avertissment : Seuls les ouvertures indiquees dans les photos et/ou les dessins peuvent etre faits ou modifies a la suite de l'installation du necessaire. Il est interdit de laisser d'autres ouvertures dans un boitier de cablage ou de composants electriques.

Warning: To prevent wiring damage or abrasion, do not expose wiring edges of sheet metal or other sharp objects.

Avertissment : Afin de prevenir l'endommagement ou l'abrasion des cables, eviter tout contact entre ces derniers et le bord d'un object tranchant tel qu'une tole.

THE RETROFIT KIT IS ACCEPTED AS A COMPONENT OF A LUMINAIRE WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY AUTHORITIES HAVING JURISDICTION. PRODUCT MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH THE APPLICABLE AND APPROPRIATE ELECTRICAL CODES. THE INSTALLATION GUIDE DOES NOT SUPERSEDE LOCAL OR NATIONAL REGULATIONS FOR ELECTRICAL INSTALLATIONS.
LUMINAIRE LORSQUE LA PERTINENCE DE LA COMBINAISON DOIT ê TRE D é TERMIN é E PAR LES AUTORIT é S COMP é TENTES. CE PRODUIT DOIT ê TRE MIS EN PLACE PAR UN é LECTRICIEN QUALIFI é CONFORM é MENT AUX CODES é LECTRIQUES APPROPRI é S APPLICABLES. LE GUIDE D'' INSTALLATION NE SUPPLANTE PAS LES R è GLEMENTS LOCAUX OU NATIONAUX EN MATI è RE D' INSTALLATIONS é LECTRIQUES

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.

Les installateurs ne devraient pas debrancher le cablage existant des bornes de douilles de lampes en vue d'etablir d'autres connexions a ces bornes. Les installateurs devraient plutot couper les fils de raccordement des douilles de lampes existants a distance de la douille et stablir de nouveayx branchements electriques aux fils de raccordement de la douille en utilisant des accords convenant a cette utilisation.

Warning: Specification data is based on tests performed in a controlled environment and represents relative performance. Actual performance can vary depending on operating conditions. Application and performance data subject to change without notice. All specifications are normal unless noted otherwise.

ONLY USE THE CONTROL PROVIDED WITH OR SPECIFIED BY THESE INSTRUCTIONS TO CONTROL THIS LAMP. THIS LAMP WILL NOT OPERATE PROPERLY WHEN CONNECTED TO A STANDARD (INCANDESCENT) DIMMER OR DIMMING CONTROL

- Suitable for dry and damp locations only
- Lamp ends can be reversed
- 0–10V dimming
- NOT FOR EMERGENCY LIGHTING

Caution: Not rated for use in Vapor Tight style fixtures. Do not install in vapor tight style fixtures. Doing so will void the warranty.

IMPORTANT LUMINAIRE INFORMATION

These LED tubes are intended to retrofit surface mount, Type IC or non-IC recessed-mount listed fluorescent luminaries that use a maximum of 4 straight tubular lamps with or without a diffuser. The minimum dimension of luminaries are tabulated below.

LED Driver #	Input			Output		
	Voltage	Frequency	Current	Voltage	Current for Each Channel	Total Channels
KTLD-2LT5HE-UV-8C-VDIM / G2	120-277Vac	50/60Hz	0.17-0.10A	36-45Vdc	185mA	2
KTLD-2LT5HE-UV-10C-VDIM / G2	120-277Vac	50/60Hz	0.22-0.12A	36-45Vdc	260mA	2
KTLD-2LT5HO-UV-12C-VDIM / G2	120-277Vac	50/60Hz	0.25-0.13A	36-45Vdc	270mA	2
KTLD-2LT5HO-UV-15C-VDIM / G2	120-277Vac	50/60Hz	0.34-0.16A	36-45Vdc	370mA	2
KTLD-4LT5HE-UV-8C-VDIM / G2	120-277Vac	50/60Hz	0.34-0.16A	36-45Vdc	185mA	4
KTLD-4LT5HE-UV-10C-VDIM / G2	120-277Vac	50/60Hz	0.44-0.24A	36-45Vdc	260mA	4
KTLD-4LT5HO-UV-12C-VDIM / G2	120-277Vac	50/60Hz	0.49-0.23A	36-45Vdc	270mA	4
KTLD-4LT5HO-UV-15C-VDIM / G2	120-277Vac	50/60Hz	0.68-0.32A	36-45Vdc	370mA	4

LED Lamp #	Input				Lamp Base	Minimum Lamp Compartment Dimensions		
	Voltage	Frequency	Current	Wattage		Lamp	Max. Lamps in Luminaire	Lampholder to Lamp Spacing
KT-LED8T5HE-24G-8XX-E / G2	36-45V	—	185mA	9W	G5	24.61 x 18.5 x 3.5 in	6	1.38 in
KT-LED10T5HE-36G-8XX-E / G2	36-45V	—	260mA	11.5W	G5	36.42 x 18.5 x 3.5 in	6	1.38 in
KT-LED12T5HO-24G-8XX-E / G2	36-45V	—	270mA	13W	G5	24.61 x 18.5 x 3.5 in	6	1.38 in
KT-LED15T5HO-36G-8XX-E / G2	36-45V	—	370mA	18W	G5	36.42 x 18.5 x 3.5 in	6	1.38 in

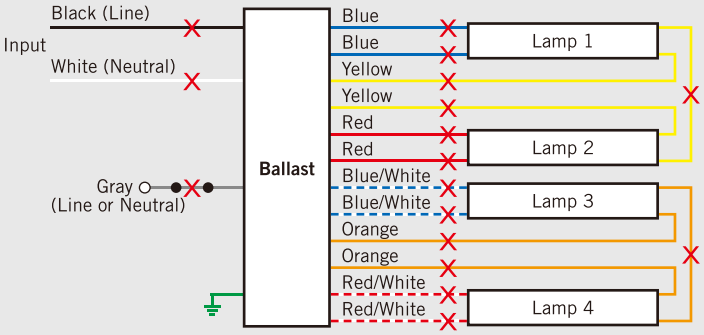
⚠ **WARNING:** Disconnect power before installing or servicing.

WIRING INSTRUCTIONS

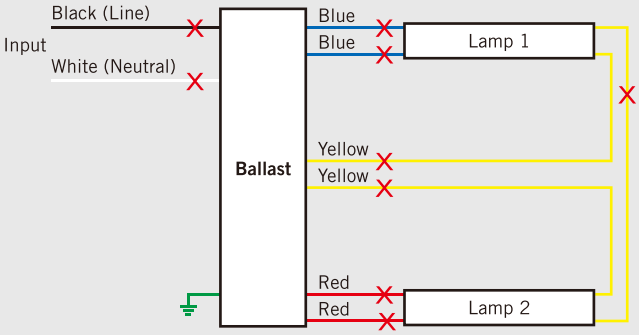
1. Shut off power.
2. Remove existing fluorescent tube(s) and diffuser (if applicable).
3. Open ballast compartment cover, cut all wires (as shown below), and remove existing ballast. Disconnect starter (if applicable).

TYPICAL BALLAST CONFIGURATIONS

4-Lamp Wiring



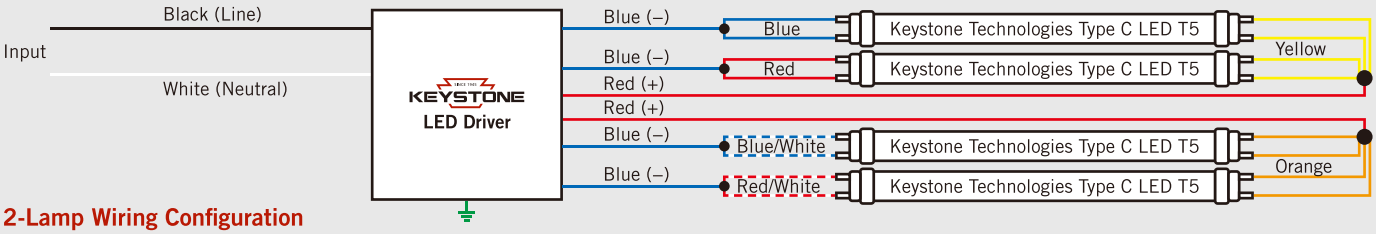
2-Lamp Wiring



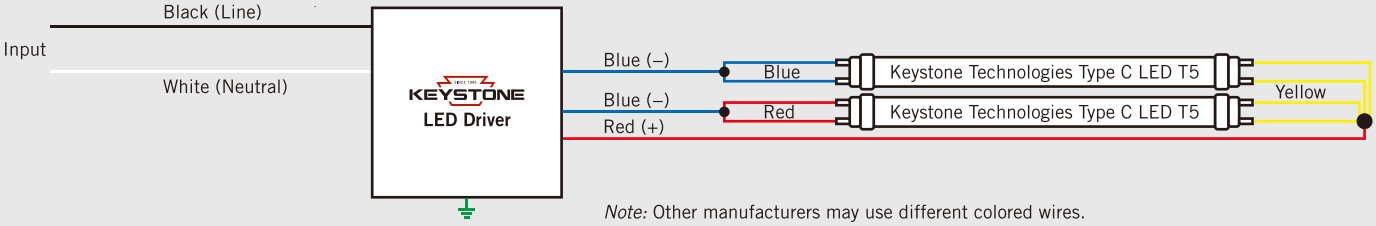
4. Check the mounting holes of ballast to see whether they are suitable to install LED driver. If not, drill new holes for mounting. Install LED driver to luminaire using screws.
5. Wire according to diagrams (as shown below). ***Note:*** **Do not leave any loose wires exposed.**

RETROFIT WIRING

4-Lamp Wiring Configuration



2-Lamp Wiring Configuration

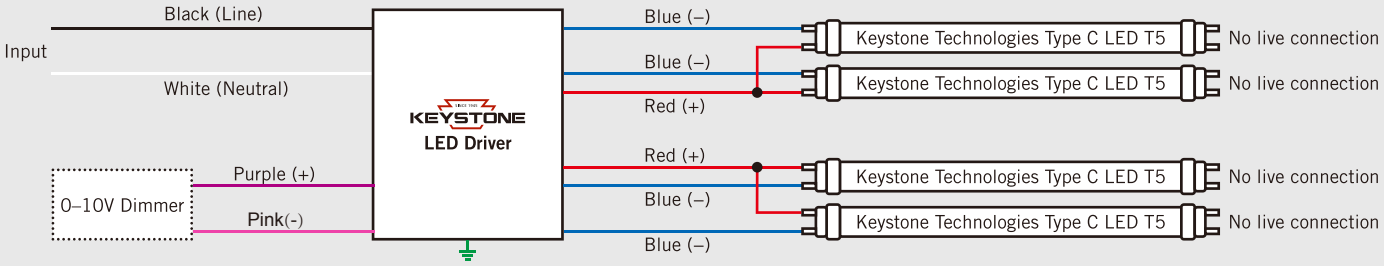


Note: Other manufacturers may use different colored wires.

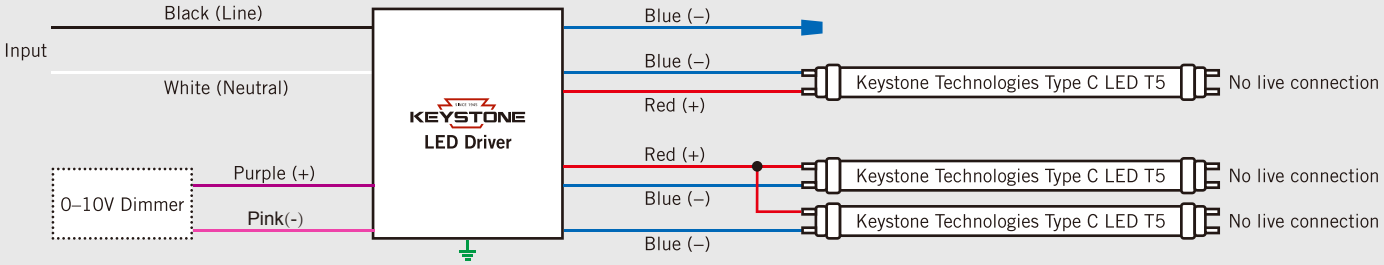
WIRING INSTRUCTIONS *(continued)*

NEW INSTALLATION: SINGLE-ENDED WIRING

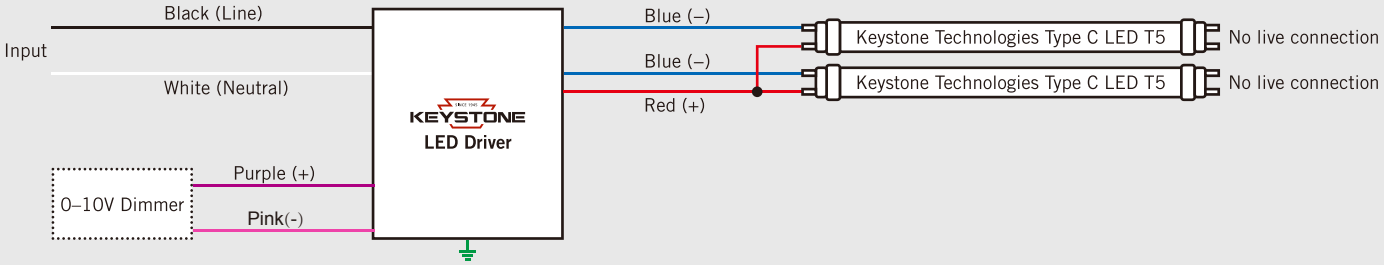
4-Lamp Wiring Configuration



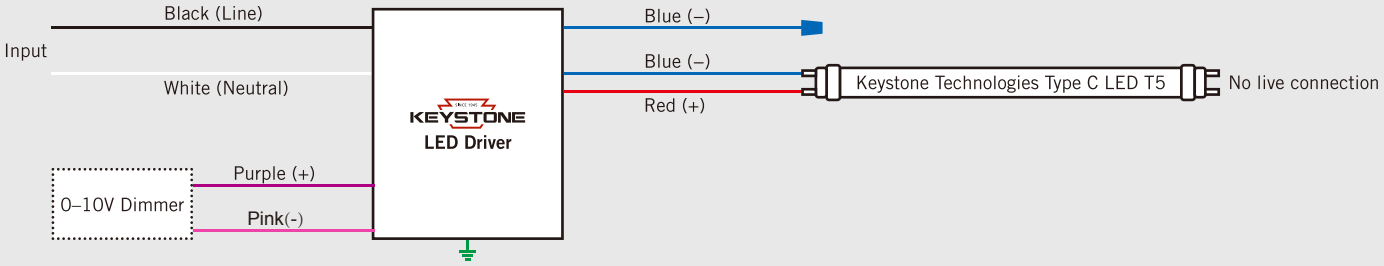
3-Lamp Wiring Configuration



2-Lamp Wiring Configuration



1-Lamp Wiring Configuration

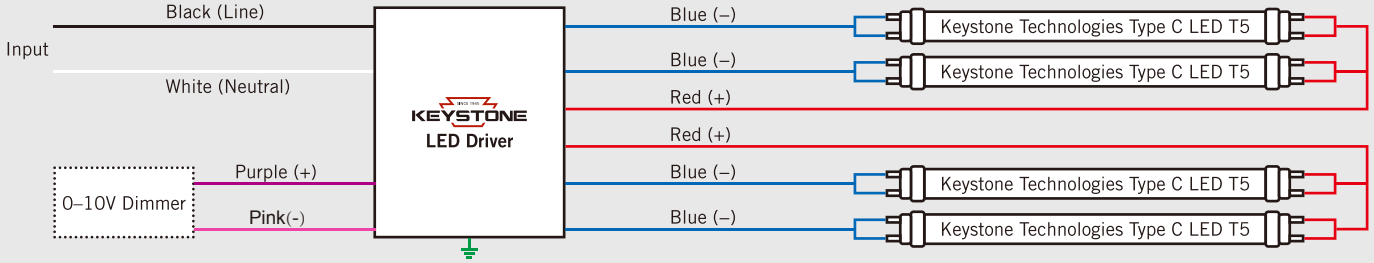


6. Close compartment cover and make sure live parts are not accessible. Affix field-applied label in a visible section inside the luminaire.
7. Install the LED tubes and cover the diffuser (if applicable).
8. Turn on power and verify that the tubes are working correctly. **If not, immediately turn off power and contact Keystone Technologies.**

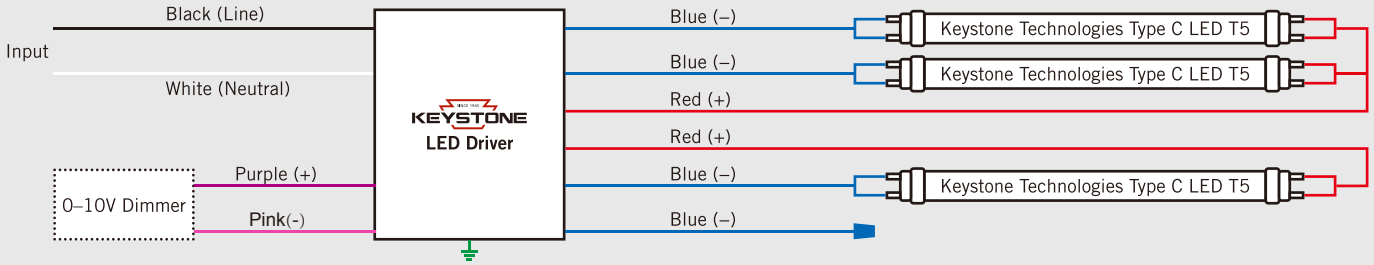
WIRING INSTRUCTIONS *(continued)*

NEW INSTALLATION: DOUBLE-ENDED WIRING

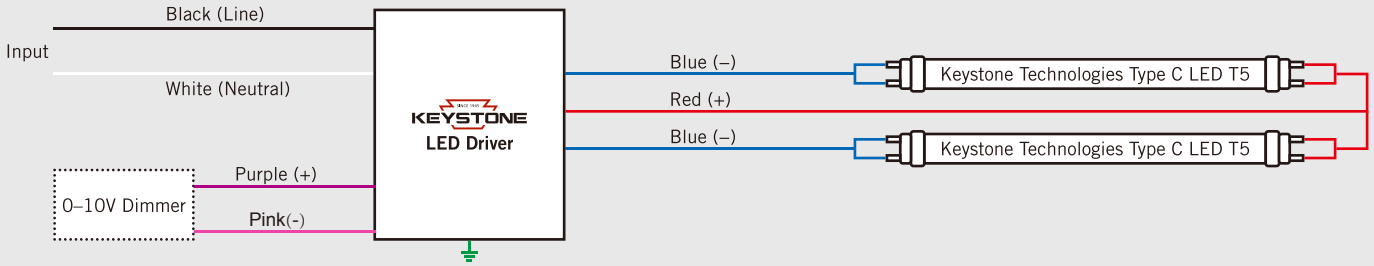
4-Lamp Wiring Configuration



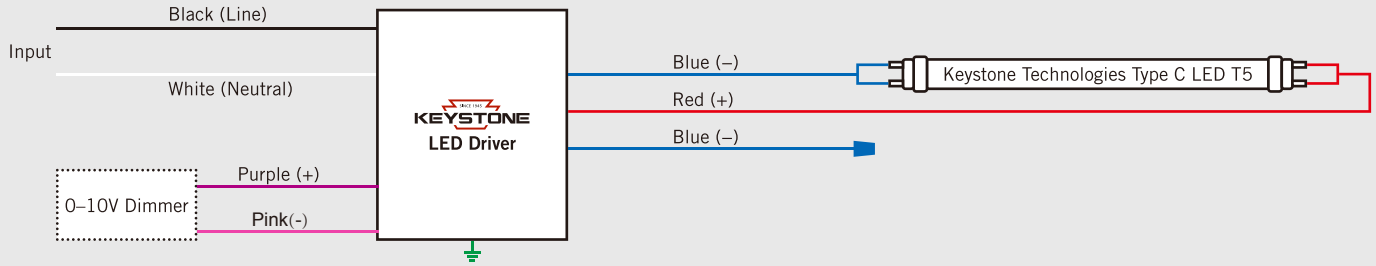
3-Lamp Wiring Configuration



2-Lamp Wiring Configuration



1-Lamp Wiring Configuration



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