



IMPORTANT SAFETY WARNINGS



This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

Ce produit doit être installé selon le code d'installation pertinent, par une personne qui connaît bien le produit et son fonctionnement ainsi que les risques inhérents.

To prevent death, injury or damage to property this product must be installed in accordance to National Electric Code in the US or Canadian Electrical Code (CSA22.1) in Canada.

Pour empêcher la mort, les blessures ou les dommages matériels, ce produit doit être installé conformément aux normes NEC du Code canadien de l'électricité (CSA22.1) au Canada.

Danger – Risk of shock – Disconnect power before installation *Danger – Risque de choc – Couper l'alimentation avant l'installation.*

Suitable for damp locations. *Convient aux emplacements humides.*

Wait until the lamp(s) have cooled down before retrofitting or servicing the fixture.

Attendez que la lampe ait refroidi avant de rééquiper ou d'entretenir le luminaire.

The retrofit kit is to be installed only in UL listed signs. *Le kit d'adaptation doit être installé uniquement sur les panneaux homologués UL.*

Use only certified UL wires and connectors. *Utilisez uniquement des fils et des connecteurs certifiés UL.*

Warning – 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.

Attention – Risque d'incendie, risqué de choc. L'installation de ce kit de conversion LED peut impliquer le perçage ou le poinçonnage de trous dans la structure du panneau. Vérifiez le câblage et les composants inclus pour éviter d'endommager le câblage et les composants électriques.

Warning – Risk of fire or electric shock. Install this kit only in host 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.

Attention – Risque d'incendie, risqué de choc. N'installez ce kit que dans les panneaux d'accueil identifiés dans les instructions d'installation et dans les cas où l'indice d'entrée de la trousse de conversion ne dépasse pas la valeur nominale d'entrée du panneau.

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.

ATTENTION - Risque d'incendie ou de choc électrique. L'installation du kit de modification de LED nécessite la connaissance des systèmes électriques de signalisation. S'il n'est pas qualifié, ne tentez pas l'installation. Contactez un électricien qualifié.

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.

L'installateur doit examiner toutes les pièces qui ne sont pas destinées à être remplacées par le kit d'adaptation en cas de dommages et remplacer les pièces endommagées avant l'installation du kit d'adaptation.

WARNING - To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

ATTENTION - Pour éviter tout dommage au câblage ou toute abrasion, ne pas exposer le câblage aux bords de la tôle ou à d'autres objets pointus.

“Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.”

“Ne pas faire ou modifier des trous ouverts dans un boîtier de câblage ou de composants électriques lors de l'installation du kit.”

“Repair and seal any unused openings in the electrical enclosure. Openings greater than 12.7-mm (1/2-in) diameter require a metal patch secured by screws or rivets and caulked with non-hardening caulk. Smaller openings may be sealed with non-hardening caulk.”

“Réparer et sceller les ouvertures non utilisées dans le boîtier électrique. Les ouvertures de plus de 12,7 mm (1/2 po) de diamètre nécessitent une pièce de métal fixée par des vis ou des rivets et masticée avec du mastic non durcissant. Les plus petites ouvertures peuvent être scellées avec des calfeutrage durci.”

RETROFIT COMPONENTS

LED Modules:

TDXL2 Single-Sided Module (Figure 1a)

TDXL2 Double-Sided Module (Figure 1b)

Class 2 Power Supply:

PSB-1-24-96 (Figure 2b)

Sign Box Label 1 (Figure 3)

Sign Box Label 2 (Figure 4)



Figure 1a



Figure 1b



Figure 2b

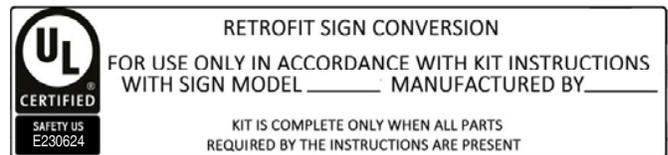


Figure 3

WARNING: RISK OF FIRE OR ELECTRIC SHOCK.

THIS SIGN HAS BEEN MODIFIED
TO OPERATE LED LAMPS.

**DO NOT ATTEMPT TO OPERATE FLUORESCENT
LAMPS IN THIS SIGN.**

Figure 4

THE FIELD INSTALLATION OF THIS LED RETROFIT KIT INTO A SIGN IS SUBJECT TO THE ACCEPTANCE OF THE AUTHORITY HAVING JURISDICTION.

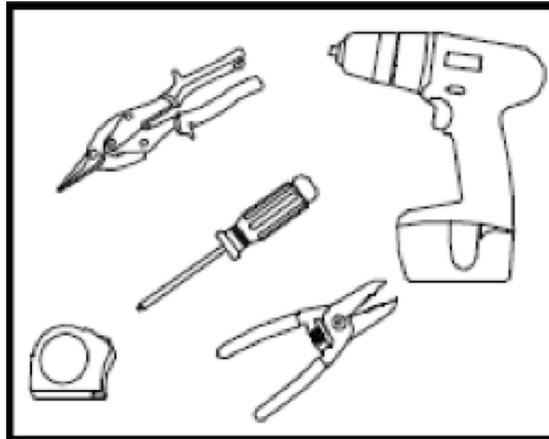
CAUTION: TURN OFF POWER TO THE SIGN BEFORE INSPECTING OR REMOVING EXISTING LIGHT SOURCE. THE POWER MUST REMAIN OFF WHILE INSTALLING THE LED RETROFIT KIT.

THE UL CLASSIFICATION MARK ON THIS LED RETROFIT KIT REQUIRES THE KIT TO BE INSTALLED IN A UL LISTED SIGN ONLY.

This procedure is for the installation or retrofit of the channel letter family of products and power supply. Licensed electricians should provide all installation and hook-up of both the primary and secondary input/outputs of the power supply. All installation and hookup should be done in accordance with all National and Local codes and permits.

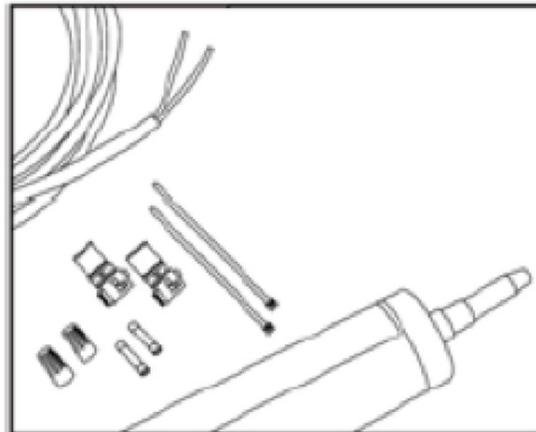
Tools Required:

- Drill
- Screwdriver
- Wire Strippers
- Wire Cutters
- Tape Measure
- Sheet Metal Scissors
- Metal Saw



Materials Required (Not Supplied):

- Solid 18 AWG NEC Class 2 Cable
- Cable Tie Downs or Zip Ties
- Wirenuts Sized For Wire Used
- #6 Sheet Metal Screws or Rivets
- Outdoor Caulk Silicone
- Isopropyl Alcohol



POWER UNIT INSTALLATION

1. All Power Supplies must be installed at least 1” above the bottom of the sign. This prevent power supplies from being submerged in water in case of water accumulation in the bottom of the sign.
2. All Power Supplies must be grounded.
3. Recommended low voltage cable between the Power Supplies and LED modules is solid 18 AWG NEC Class 2 plenum rated cable.
4. All runs through a wall must either be in a conduit or “pass-thru” to be made with Class 2 wire.
5. Determine how many modules can be powered by a single power supply, see chart “Power Supply Loads and Module Spacing”
6. Connect secondary wiring between the Power Supply and the Channel Letters per local code. See the wiring diagram in Figure 12 for wiring details.
7. Connect branch wiring per local code to all Power Supplies. Minimum primary wire size is 16AWG 300 Volt.
8. Attach Sign Box Label I (see Figure 4) and Sign Box Label II (see Figure 5) to the inside of the sign. Place the labels at a location that is visible during future servicing and will not get wet.

ADDITIONAL NOTE:

TDXL2 modules use a 24V DC power supply.

INSTALLATION INSTRUCTIONS

1. Disable power.
2. If a retrofit, disconnect power source and remove all ballasts, neon, or other light sources to be retrofitted. All materials must be disposed of in accordance to applicable laws.
3. Clean interior and exterior of the sign with isopropyl alcohol.
4. Layout the modules like neon, only without double-backs depending on the module type. Be sure to test to make sure you are satisfied before proceeding. See Power Supply Loads and Module Spacing Chart. *Note: Module Spacing Chart is based on white modules only.*
5. For power supply loading, see next page.
6. Install the length of the product by fastening mounting clips with VHB tape or mechanically through holes in the clip, or both. Add silicone for additional security if desired.

TDXL2 POWER SUPPLY LOADS AND MODULE SPACING

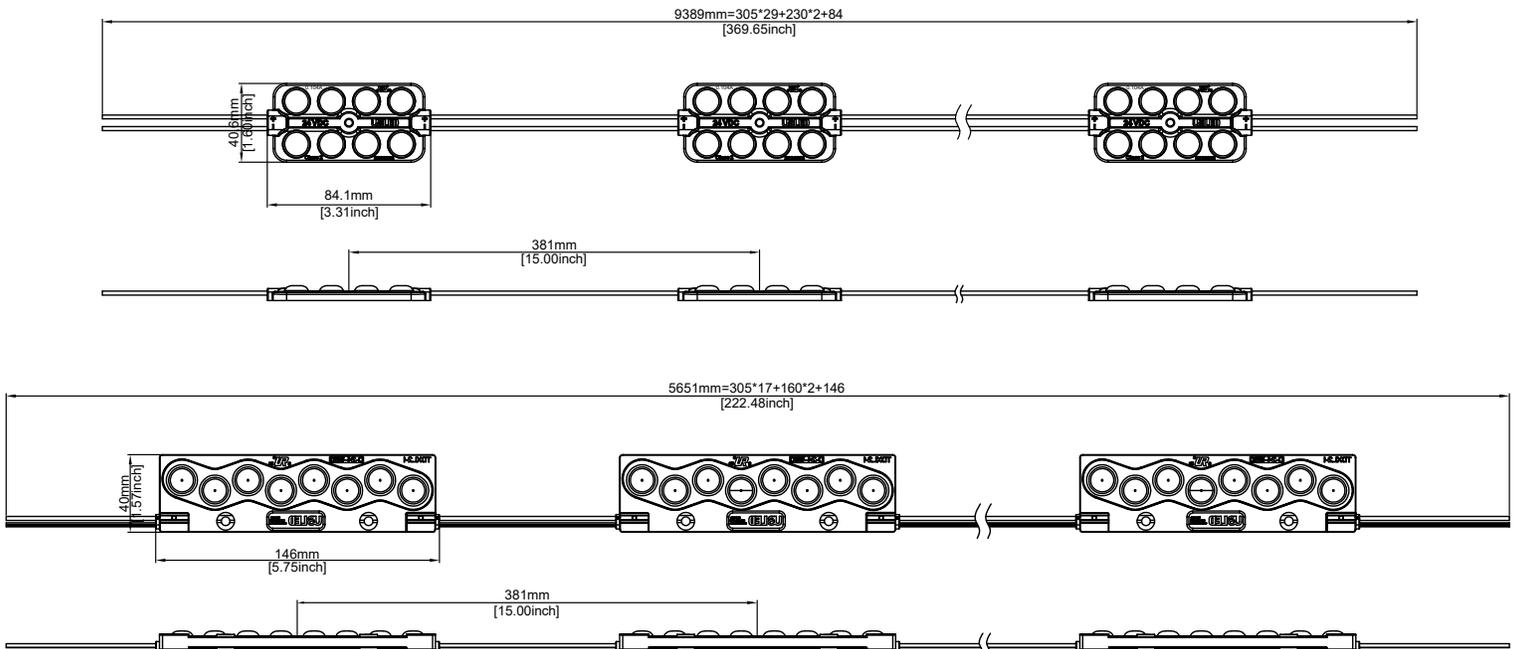
	Direction	Minimum # of Modules	Maximum # of Modules	Minimum # of Feet	Maximum # of Feet
PSB-1-24-96	Single-Sided	4 Qty.	36 Qty.	3 ft.	16 ft.
PSB-1-24-96	Single-Sided	2 Qty.	18 Qty.	8 ft.	40 ft.

Double Face Sign Cabinet Spacing Chart

Distance From Face	22"-36"	20"	18"	16"	14"	12"	10"	8"	6"
Multiple Row Spacing	24"	22"	20"	18"	16"	14"	12"	8"	6"
Module-To-Module Spacing	15"	15"	15"	15"	15"	15"	15"	15"	12"

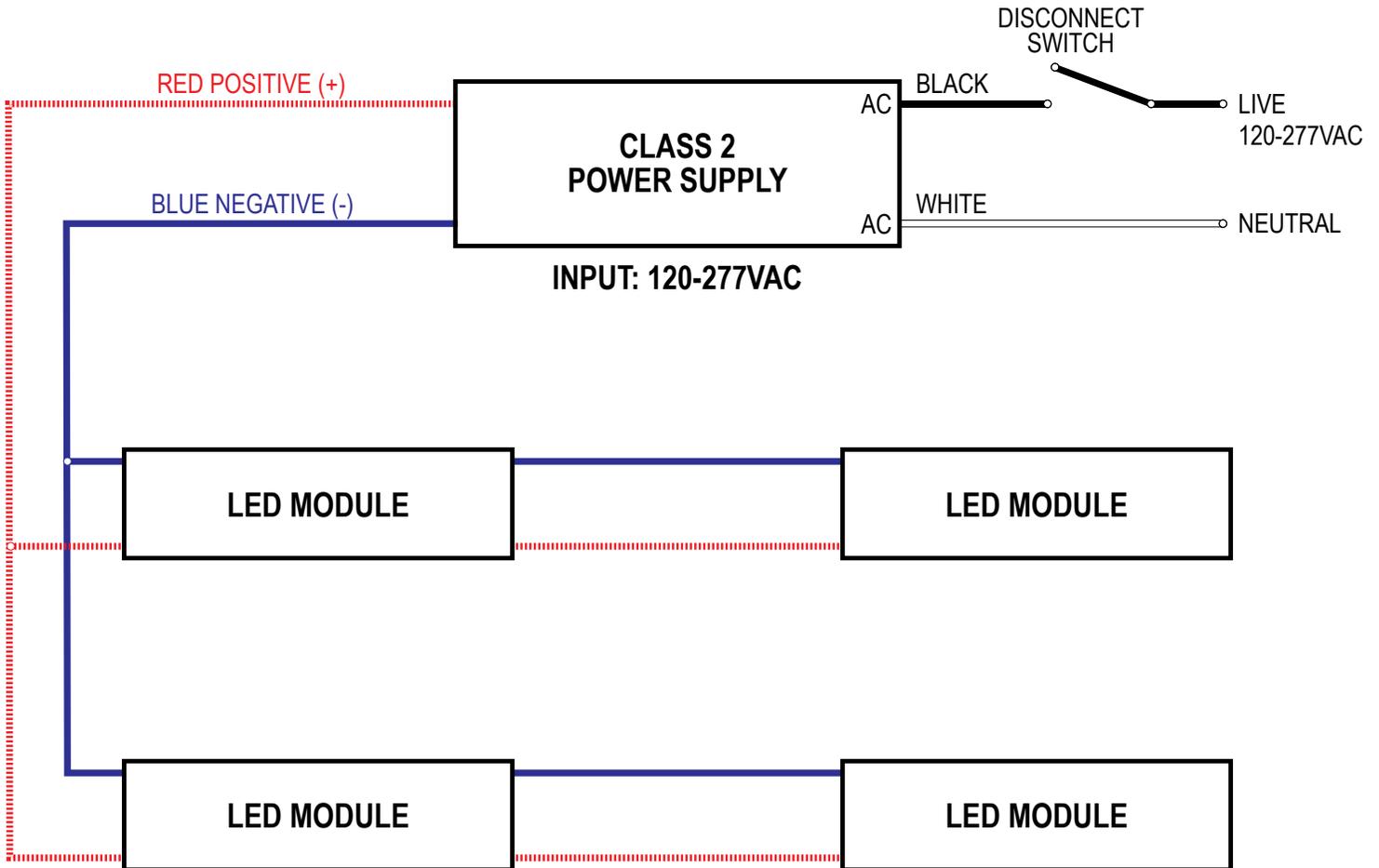
Single Face Sign Cabinet Spacing Chart

Distance From Face	11"-18"	10"	9"	8"	7"	6"	5"	4"	3"
Multiple Row Spacing	24"	22"	20"	18"	16"	14"	12"	8"	6"
Module-To-Module Spacing	15"	15"	15"	15"	15"	12"	12"	10"	7"



Specifications and dimensions subject to change without notice. | Updated 07/22/22

POWER SUPPLY AND WIRING GUIDE



TDXL2 SINGLE SIDED

Module Qty.	Amps	Watts
2	0.21	5
3	0.31	7.5
4	0.42	10
5	0.52	12.5
6	0.63	15
7	0.73	17.5
8	0.83	20
9	0.94	22.5
10	1.04	25
11	1.15	27.5
12	1.25	30
13	1.35	32.5
14	1.46	35
15	1.56	37.5
16	1.67	40
17	1.77	42.5
18	1.88	45
19	1.98	47.5
20	2.08	50
21	2.19	52.5
22	2.29	55
23	2.40	57.5
24	2.50	60
25	2.60	62.5
26	2.71	65
27	2.81	67.5
28	2.92	70
29	3.02	72.5
30	3.13	75
31	3.23	77.5
32	3.33	80
33	3.44	82.5
34	3.54	85
35	3.65	87.5
36	3.75	90

TDXL2 DOUBLE SIDED

Module Qty.	Amps	Watts
2	0.41	10
3	0.62	15
4	0.83	20
5	1.041	25
6	1.25	30
7	1.45	35
8	1.66	40
9	1.87	45
10	2.08	50
11	2.29	55
12	2.50	60
13	2.70	65
14	2.91	70
15	3.12	75
16	3.33	80
17	3.54	85
18	3.75	90