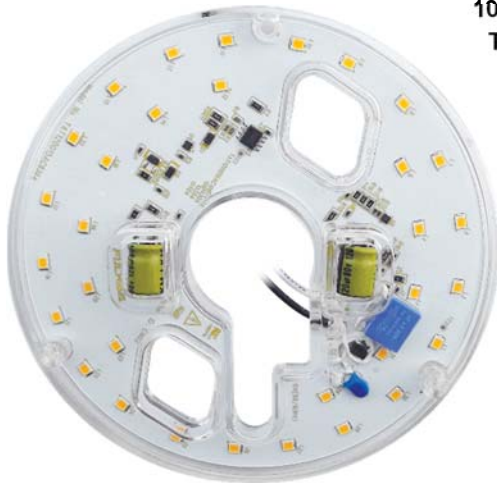
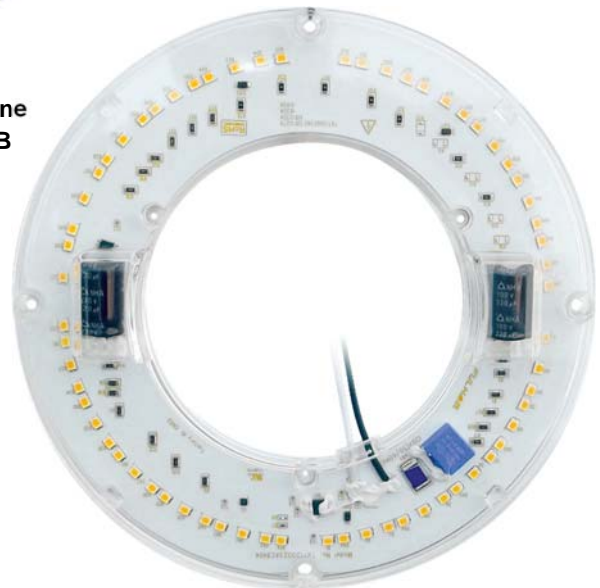




10W DirectAC Engine
TJT120010ACxyyB



15W DirectAC Engine
TJT120015ACxyyB



23W DirectAC Engine
TJT120023ACxyyB

INSTALLATION INSTRUCTIONS

120V DirectAC LED Engine Kit

TJT120010ACxyyB
TJT120015ACxyyB
TJT120023ACxyyB
TJT120010ASxyyC
TJT120010ACxyyC
TJT120015ACxyyC
TJT120023ACxyyC

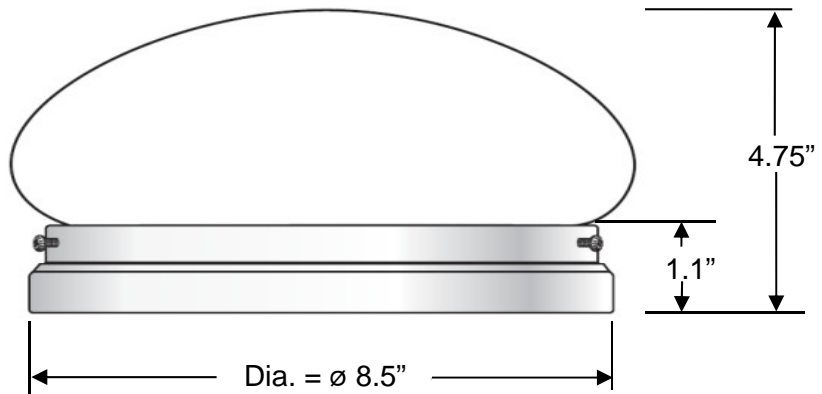
NOTE: xyx is for desired CRI & CCT; see page 3

1.0 INSTALLATION WARNINGS

1. "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."
2. "WARNING - Risk of fire or electric shock. LED Retrofit kit installation requires knowledge of luminaires electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician."
3. "WARNING - Risk of fire or electric shock. Install this kit only in the luminaires that has the construction features and dimensions shown in the photographs and/or drawings."
4. "WARNING - To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects."
5. "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."
6. "CAUTION – RISK OF FIRE. CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR."
7. "The assembly of this LED retrofit should be performed by a licensed electrician or equivalent as State or Provincial Codes and Laws dictate."
8. "THE RETROFIT KIT IS ACCEPTED AS A COMPONENT OF A LUMINAIRE WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY CSA OR AUTHORITIES HAVING JURISDICTION."

2.0 ORIGINAL LUMINAIRE DIMENSIONS

- Keep the Original Diffuser.
- Remove all the remaining original luminaire parts, hardware, and lamp in order to begin the retrofit.



Original Luminaire Dimensions
Mfr: Portfolio – Model: GL2301-WHES-I

- This DirectAC Engine Kit can retrofit any similar shaped luminaire with a diameter/height greater or equal to the minimum dimensions shown above.

3.0 REQUIRED TOOLS (Not Included)

Tool #	Description	QTY
1	Power Drill	1
2	Phillips Drill Bit (P2)	1



4.0 INCLUDED COMPONENTS

Warning: Disconnect power when servicing luminaire.

A



**10W DirectAC Engine
TJT120010ACxyyB**



**15W DirectAC Engine
TJT120015ACxyyB**



**23W DirectAC Engine
TJT120023ACxyyB**

B



C



D



***10W Mounting Plate
TLE-HSK-003**



***10W Mounting Plate
TLE-HSK-004**



***15W Mounting Plate
TLE-HSK-005**



***23W Mounting Plate
TLE-HSK-006**

ITEM	DESCRIPTION	QTY
A.	DirectAC Engine (10W, 15W or 23W)	1
B.	6-20 X 5/8" Flat Head Drilling Point Screws	4
C.	PUSH WIRE Input Power Connector	1
D.	*Optional Mounting Plate (10W, 15W or 23W)	1

DirectAC Engine Retrofit Kit Consist of:					
DirectAC Engine Retrofit Kit	DirectAC Engine: Item A	Enclosure (Lens): Item A	Hardware: Items B & C	*Mounting Plate Item D	Qty. Each
TJT120010ACxyyB	TAT120010ACxyyA	TLE-OPT-120-006	TLC-HW10	N/A	1
TJT120015ACxyyB	TAT120015ACxyyA	TLE-OPT-120-007	TLC-HW10	N/A	1
TJT120023ACxyyB	TAT120023ACxyyA	TLE-OPT-120-008	TLC-HW10	N/A	1
TJT120010ACxyyC	TAT120010ACxyyA	TLE-OPT-120-006	TLC-HW10	TLE-HSK-003	1
TJT120010ASxyyC	TAT120010ACxyyA	TLE-OPT-120-006	TLC-HW10	TLE-HSK-004	1
TJT120015ACxyyC	TAT120015ACxyyA	TLE-OPT-120-007	TLC-HW10	TLE-HSK-005	1
TJT120023ACxyyC	TAT120023ACxyyA	TLE-OPT-120-008	TLC-HW10	TLE-HSK-006	1

Where xyy may be the following:

x: CRI 8=80, 9=90

yy: CCT 27=2700K, 30=3000K, 35=3500K, 40=4000K, 50=5000K, 57=5700K, 65=6500K

*** Optional (not required) item may be purchased for all DirectAC Engine Models.**

Please refer to DirectAC Engine spec sheets for more details.

5.0 ORIGINAL LUMINAIRE

Warning: Disconnect power when servicing luminaire.



Figure A: Original Luminaire Housing



Figure B: Original Diffuser



Figure C: Grounding Assembly

Original Luminaire Disassembly:

1. Remove all hardware and original electronic components from the luminaire. See Figure A.
2. Parts to be kept include:
 - Original Luminaire Housing (Figure A)
 - Original Diffuser (Figure B)
 - Grounding Cable is to be kept intact (Figure C)

6.0 RETROFIT KIT ASSEMBLY

Warning: Disconnect power when servicing luminaire.

1. Center the DirectAC Engine (A) in the luminaire so that the line voltage cables are aligned with the flared hole found in the luminaire (Figure 4).
2. Use the supplied self-drilling screws (B) to attach the DirectAC Engine (A) to the luminaire's housing (Figure 5).
3. Feed line voltage cables from the DirectAC Engine (A) through the flared hole found in the luminaire (Figure 6).
4. *If the optional Mounting Plate (D) was Included align the keyholes found on the Mounting Plate (D) with keyholes on the fixture and follow steps 2 & 3 for mounting and proceed with steps listed below, see figure 6A.*



Figure 4



Figure 5



Figure 6

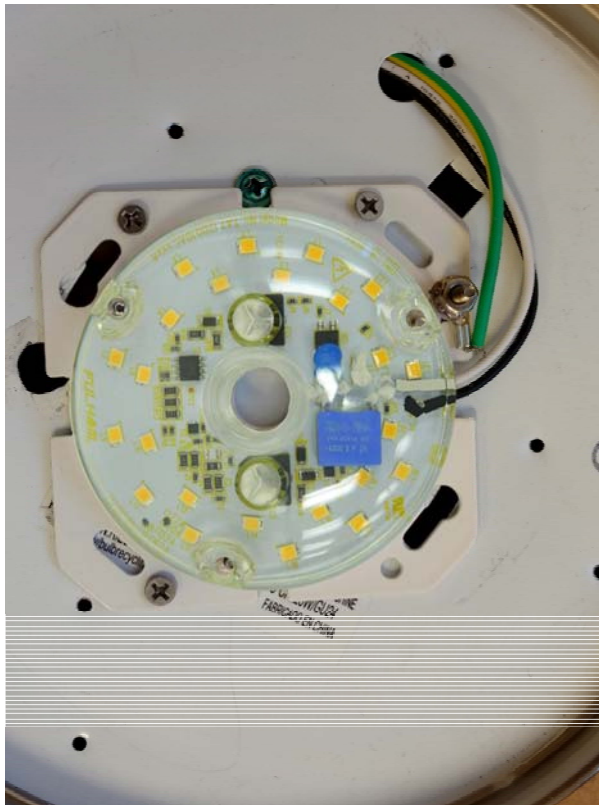


Figure 6A

6.1 RETROFIT KIT ASSEMBLY

Warning: Disconnect power when servicing luminaire.

5. Completed assembly should look like Figure 7.
6. Place the provided labels on the outer areas of the luminaire where DirectAC Engine (A) was just installed. Labels must be clearly visible and should not be obscured by line voltage cables. See Figure 7 and Illustration 1.
7. Luminaire is now ready to be installed. Please see below for instructions on connecting line voltage to the luminaire.
8. Re-attach and secure the lens once installation is completed, retrofit should look like (Figure 8).

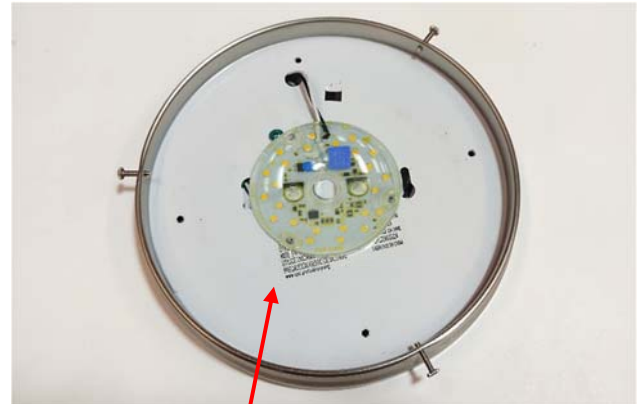


Figure 7

NOTICE - THIS LUMINAIRE HAS BEEN MODIFIED AND CAN NO LONGER OPERATE THE ORIGINALLY INTENDED LAMP. (WITH RESPECT TO FIRE AND SHOCK ONLY) FOR USE ONLY WITH PRODUCTS DESCRIBED AND INSTALLED IN ACCORDANCE WITH THE INSTRUCTION PROVIDED WITH THIS RETROFIT KIT.

CAUTION: THIS LUMINAIRE HAS BEEN MODIFIED TO OPERATE LED LAMPS. DO NOT ATTEMPT TO INSTALL OR OPERATE FLUORESCENT LAMPS IN THIS LUMINAIRE.

Illustration 1



Figure 8

Connecting power to the DirectAC Engine:

- 1) Connect the green wire (Ground) from the luminaire housing and (if included) the Mounting Plate (D) to the Ground that is being fed by the power source. Connect these wires by using a wire connector with a minimum 18 AWG rating.
- 2) Connect the white wire (Neutral) from the DirectAC Engine (A) to the Neutral that is being fed by the power source. Connect these two wires by using the provided connector (C) or an equivalent connector with a minimum 18 AWG rating.
- 3) Connect the black wire (Line) from the DirectAC Engine (A) to the Line being fed by the power source. Connect these two wires by using the provided connector (C) or an equivalent connector with a minimum 18 AWG rating.

7.0 WARRANTY

- Please refer to DirectAC Engine spec sheet for warranty information.