



**TAT120025AC8XX**  
**TJT120025AC8XX**

**120VAC Round LED Engine and LED Engine Retrofit Kit**

- High density, high brightness chip array.
- 120V AC dedicated Input.
- LED Engine with Integrated AC Direct Driver. No DC Driver.
- Available in standard CCT's
- 80 CRI standard and 90 CRI available
- UL Recognized AC Engine Component
- UL Classified AC Retrofit Kit
- Energy Star Listed Luminaire 2.0

**General Ratings**

Input Voltage	120VAC (108~132VAC); 50/60 Hz
Input Current	~.21A
Input Power	25WAC Nominal
Input PF	> 0.97
THD	< 20%
Max Lumen Output @ Full Power	2250 lumens @ 4000K / 80 CRI*
Beam Angle	120°
CRI	80 (standard), 90
Operating Ambient Temperature Range (Ta)	Engine: -35 to +50°C
Maximum Engine Case Temperature (Tc) Plate	75°C / 167°F <b>Note:</b> Exceeding max will void warranty and reduce product life
Estimated Lumen Maintenance (L70)	50,000 hours at max Tc Plate
Color Consistency	Binning per ANSI C78.377-2008; 4 SDCM
Overall Size	9.5" diameter x 0.56" H
Weight	0.88 lbs
Maximum Screw Installation Torque	35 inch - ounces
Safety/Compliance	Engines: E477266 cURus Kits: E365124 cULus RoHS Compliant Dry & Damp Location IC Over Temperature Control
Protective Lens	Clear Polycarbonate
PCB Material	MCPCB
Warranty	5 years

**Caution:** Fulham recommends the Hi-pot test is performed with DC voltage on the AC Engines. See Notes on page 4.

\* At Tc Engine = 25°C



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

AC Engine Retrofit Kit  
only: Hardware and Labels



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Part Number Matrix

**T A T 120 025 AC 8 XX**

	Compliance	Engine Input Voltage	Engine Input Power	Configuration	Color Temperature
	A = AC Engine	120* = 120VAC	025* = 25W	8 = 80 CRI	27 = 2700K 30* = 3000K 35 = 3500K 40* = 4000K 50 = 5000K
	**J = AC Engine Retrofit Kit Classified				

\* Indicates standard engine options. All others are built to order.  
\*\* AC Engine Kits (TJ) is only intended for closed type luminaires; the diffuser must be made of glass.

Electrical and Optical Specifications

Color Temperature	LED Engine Part Number	Input Power	Nominal Luminous Flux @ 90 CRI	Nominal Luminous Flux @ 80 CRI	Engine Efficacy @ 80 CRI
3000K	TAT120025AC830 TJT120025AC830	25W	1870	2125	85 lm/W
4000K	TAT120025AC840 TJT120025AC840	25W	1995	2250	90 lm/W

- 1) Electrical and optical specifications are based on Tc Plate = 25°C / 77°F.
- 2) Standard lumen output and efficacy is calculated for standard options. Reference CCT vs Lumen Output chart for lumen ratio calculation.
- 3) Specifications are subject to change without notice.

Thermal Specifications

	AC LED Engine	AC LED Engine Retrofit Kit****
Storage Temperature Range	-35 to 100°C	-35 to 100°C
Operating Ambient Temperature Range	-35 to 45°C	-35 to 40°C
Maximum Case Temperature (Tc) Plate	Engine : 75°C / 167°F	



Tc Plate

Tc Plate located on engine

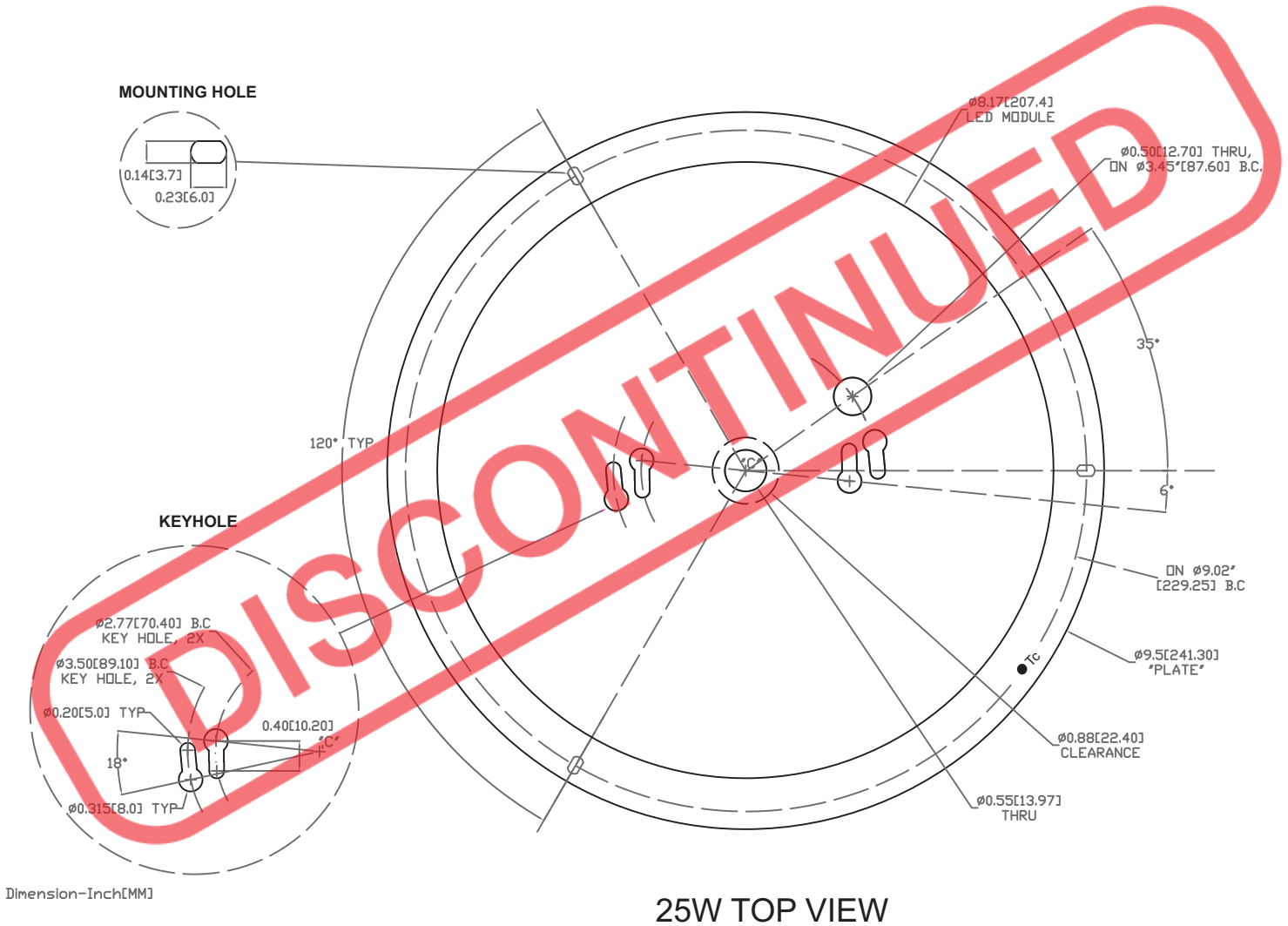
\*\*\*\*Suitable for ceiling luminaire with minimum dimensions: 10.5" diameter with a height of 1.3".

Refer to LED Engine Retrofit Kit Installation Instructions for further detail.



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Mechanical Drawings





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## Termination Notes

- If connectors are used, use stranded wire size 24 – 18 AWG, rated at a minimum 200V, minimum 105°C, and stripped to length between 6-7 mm (0.24-0.28 inches).

## Fastening Notes

- When installing by “mounting holes” (recommended), use any screw with diameter less than 0.14in. [3.6mm]. Mount on a flat surface and use all 3 mounting holes to ensure good contact between back side of Engine and mounting surface. Refer to max specified torque for installation. Suggested screw sizes: #6 or M3.5 Pan Head screw.

## Electrostatic Sensitive Product (ESD)

- Fulham LED products should be handled with proper measures to protect against any potential ESD damage.
- When servicing, personnel should be grounded and direct contact with LED should be avoided.

## Thermal Management

- Proper thermal management must be employed to ensure life and reliability of product.
- Use of thermal grease, paste, pad, or other thermally conductive interface is highly recommended.

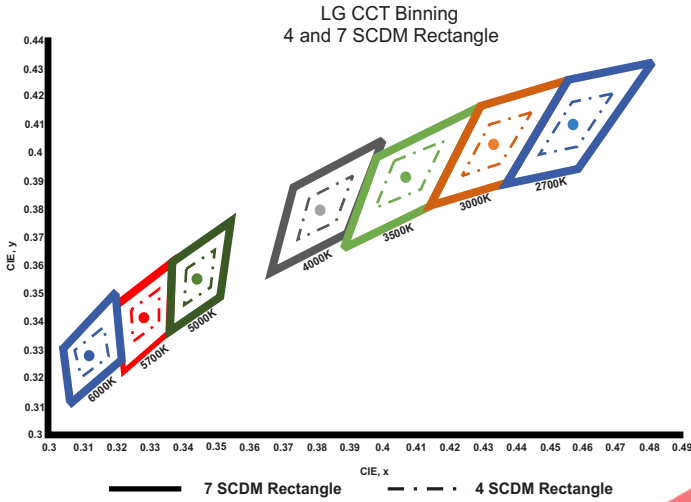
## Recommendations for Hi-pot Testing

- Fulham recommends NOT to use AC voltage during Hi-pot test. AC Hi-pot voltage conducts leakage current through stray capacitances. As a result, components within the AC Engine could be damage even without any breakdowns being observed during AC Hi-pot testing.
- Fulham recommends to use DC voltage during Hi-pot Test. With DC voltage minimal leakage current occurs, making it safer for the components.
- Contact your Fulham representative if further clarification is needed.



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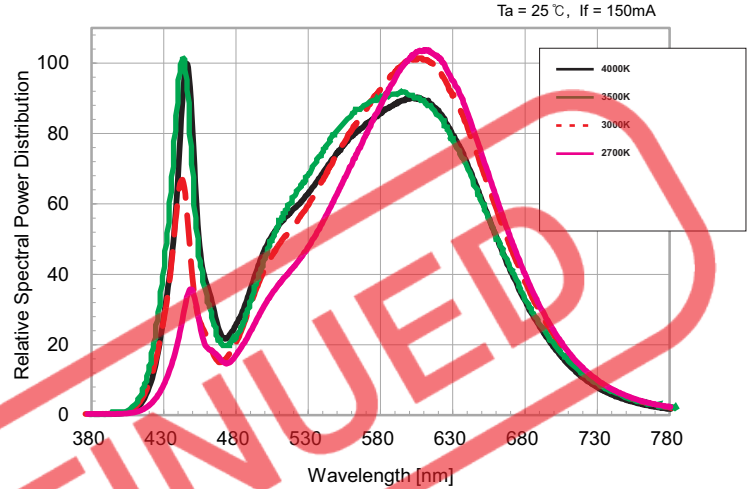
**Color and Binning**



Ref. LG Chromaticity Diagram  
For reference only. For more detailed info, contact factory.

**Optical Spectrum\*\*\***

▪ Spectrum



\*\*\* Value varies depending on product type and color rank  
Ref. LG 3030N  
LED Catalogue 2015  
For reference only. For more detailed info, contact factory.

**Thermal De-Rating**

**CCT vs Luminous Flux**

Ambient Temperature (Ta)	Thermal De-rating Multiplier
25°C	1
30°C	0.991
35°C	0.989
40°C	0.980
45°C	0.975
50°C	0.970
55°C	0.960
60°C	0.950

CCT	Luminous Flux Ratio
2700K	0.87
3000K	0.93
3500K	0.96
4000K	1.00
5000K	1.07

Ref. LG 3030N  
LED 3030N Spec Sheet  
For reference only. For more detailed info, contact factory.

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