Datasheet

FLM140_15W_XXX_230V_2FC_IS_rev00

- Compatible with most TRIAC dimmers
- High Power Conversion Efficiency (>0.85)
- High Power Factor (>0.99)
- Low THD (<20%)
- RoHS compliant

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1. Product Description

*** Description**

- The module is designed for the high power operation to get the high flux output applications.
- It incorporates the state of the art SMD LEDs with high reliability and semiconductor AC direct drive ICs.
- It is ideal for the indoor or down light applications.

*** Features**

- High performance, High brightness
- No emission of harmful short wavelength light(No UV radiation)
- High power conversion efficiency(>0.85)
- High power factor (>0.95)
- Low THD(< 20%)
- Low EMI
- Thermal shutdown function embedded(150℃)
- RoHS compliant

*** Product Description**

- FLM140_15W_XXX_230V_2FC_IS_rev00
- X (CRI) + XX (CCT)
- 830 : 80Ra + 3000K
- 840 : 80Ra + 4000K

*** Applications**

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2. Absolute Maximum Ratings

Parameters	Symbol	Min Value	Max Value	Unit
Maximum power dissipation	Pd	13.5-	16.5	W
Maximum operation voltage	Vop	207	253	V
Operation temperature	Top	-40	85	℃
Storage temperature	Tst	-40	100	℃

3. Electro-optical characteristics (230Vac, Ta=25℃.)

Parameters	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Flux	**Φv**		1260		lm	2700K
			1350		lm	3000K
			1390		lm	3500K
			1450		lm	4000K
			1550		lm	5000K
Efficiency	**lm/W**		84		lm/W	2700K
			90		lm/W	3000K
			93		lm/W	3500K
			97		lm/W	4000K
			103		lm/W	5000K
Correlated Color Temperature	**CCT**	2700 (MacAdam 3Step)			K	
		3000 (MacAdam 3Step)			K	
		3500 (MacAdam 3Step)			K	
		4000 (MacAdam 3Step)			K	
		5000 (MacAdam 3Step)			K	
Color Rendering Index	**CRI**	80			-	
Viewing Angle FWHM	**2θ1/2**		120		deg	
Operation Voltage	**Vop**	207		253	V	
Power Dissipation	**Pd**	13.5	15	16.5	W	
Operation Frequency	**Fop**	50/60			Hz	
Power Factor	**PF**	>0.97				
Current THD	**ATHD**	<20			%	

(1) Φv is the total luminous flux output measured with an integrated sphere.

- Measurement accuracy : **CRI(**±3), **Φv**(±3%)

(2) Correlated Color Temperature is derived from the CIE 1931 Chromaticity diagram.

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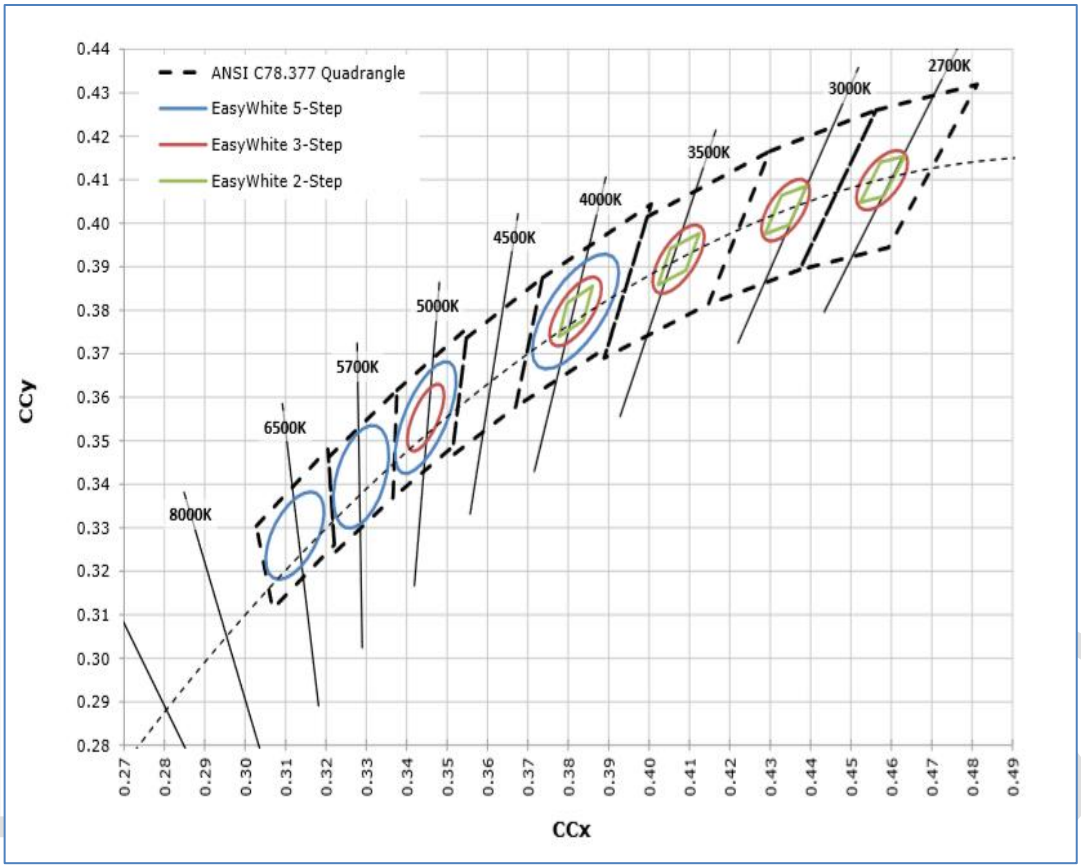
4. CIE Chromaticity Diagram

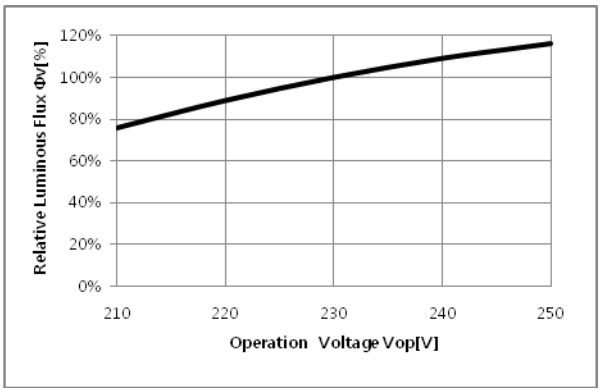
(1) Chromaticity coordinate groups are measured with an accuracy of ±0.01

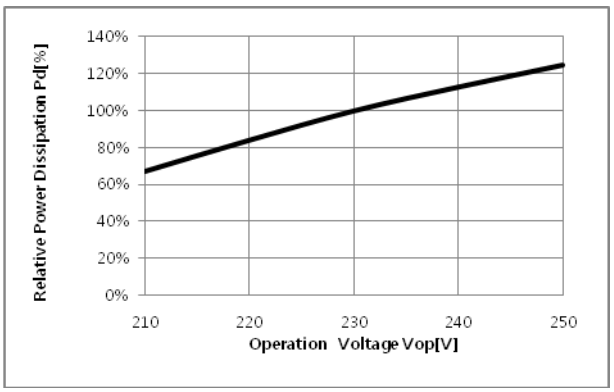


<Color and binning>

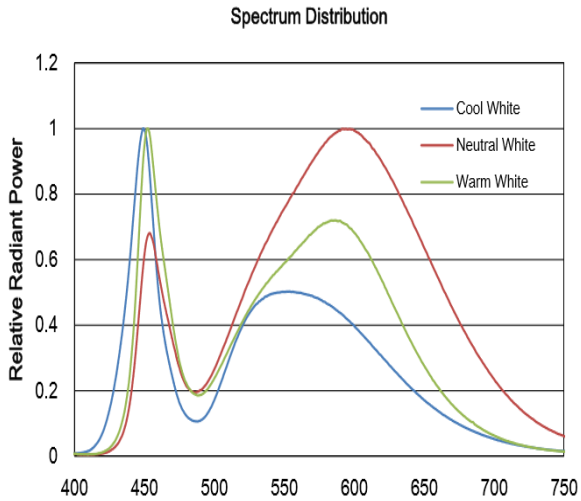
5. Chromaticity Coordinates

5-1 Voltage Characteristics(Ta=25℃)



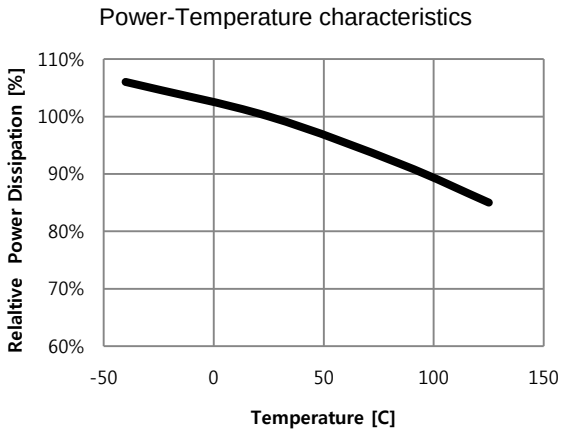


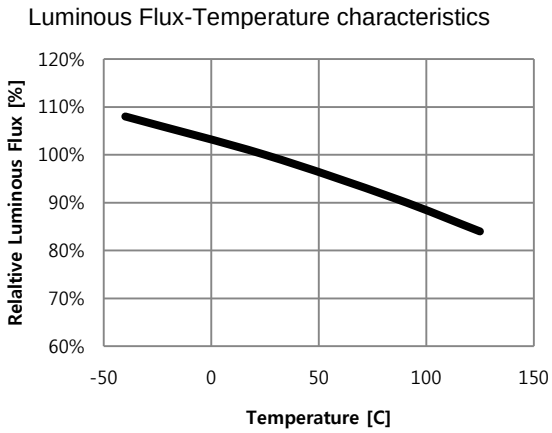
5-2 Spectrum Characteristics(Ta=25℃)



<Optical spectrum>

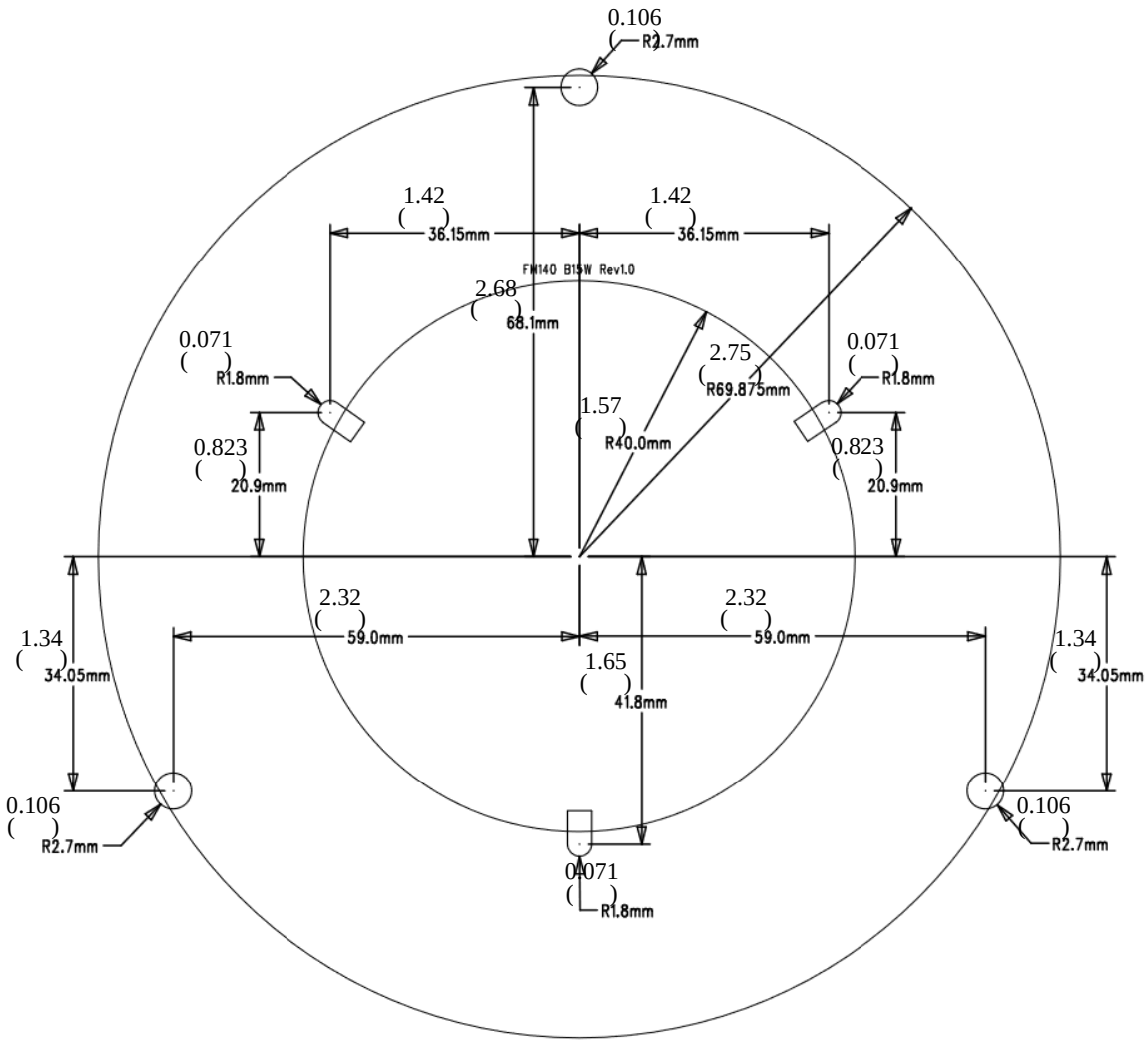
5-3 Temperature Characteristics





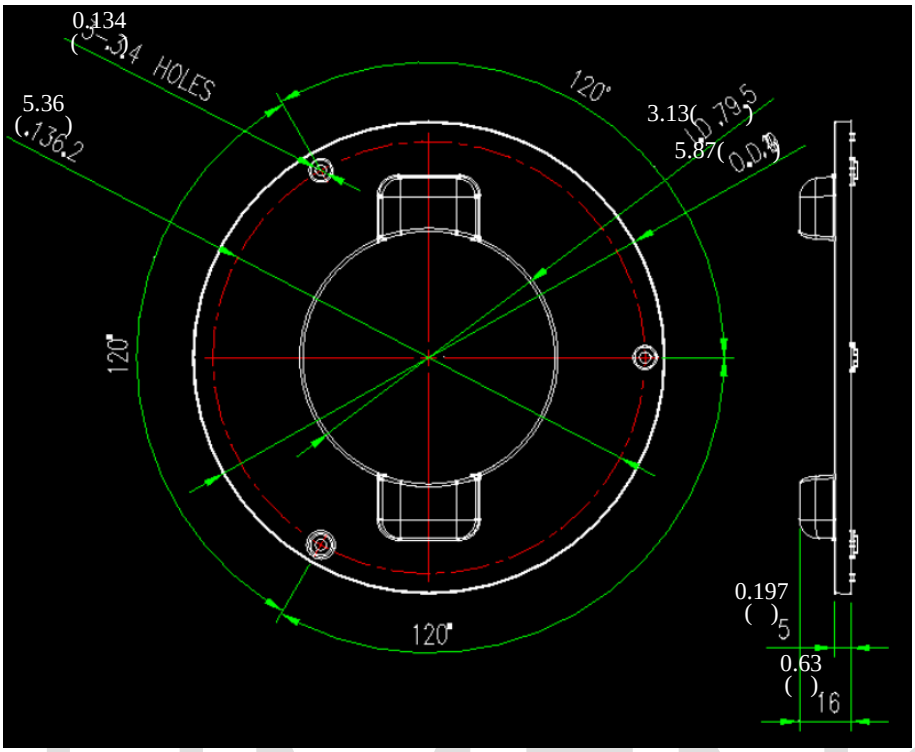
6. Outline Dimensions

15W TOP VIEW (CIRCULAR)



Dimension : Inch(mm)

15W TOP VIEW (CIRCULAR)



Unit : mm

1) Outline Diameter :
2) Tolerance - All measurements are ± 0.2 mm unless otherwise indicated.

7. Cautions

Termination notes

- If connectors are used, use standard wire size 24-18 AWG, rated at a minimum 250V, minimum 105℃, and stripped to length between 0.24-0.28 inches (6-7 mm).

Fastening notes

- When installing by “mounting holes” (recommended), use any screw with diameter less than 0.14 in. (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.

Electrical sensitive product (ESD)

- This LED product 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.

Handling Precaution

- Make sure proper discharge prior to start use.
- Do not stress mechanically and do not harm any of the front or rear surface.
- Use proper heat sink to operate.

Note

- All the information above is to be changed without notice to improve the function and performance.

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