

Specification

EdiLex AC Linear Module G3 12W Series Datasheet

5ELALN2T12123001
5ELALN2T12124001
5ELALN2T12125701

Edison		Customer
Drawn	Approval	Approval

General Information

EdiLex AC Linear Module G3 12W Series

Introduction

Edison Opto has introduced a variety of AC modules which are designed to be driven directly to AC line voltage.

Compared with the traditional LED, Edison Opto's AC modules don't need to connect external driver, so that it can help to reduce the circuit cost and the size of luminaires.

Also, users have more flexibility in luminaire design. In addition, the AC modules are grouped in 3-Step MacAdam ellipse which demonstrates Edison Opto's capability of color consistency.

Edison Opto's EdiLex AC modules can be widely used in Indoor lighting.

Features

- Connects directly on AC Mains voltage
- High Power Efficiency & Factor
- Long Life Time
- Miniaturization design
- 3-Step MacAdam
- Triac Dimming

Applications

- Wall Light
- Pendant Light



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Product Nomenclature

<u>5</u> X1	<u>ELA</u> X2-X4	<u>L</u> X5	<u>N</u> X6	<u>2T</u> X7-X8	<u>XX</u> X9-X10	<u>12</u> X11-X12	<u>XX</u> X13-X14	<u>XX</u> X15-X16			
X1 Item	X2-X4 Module Application		X5 Dimensions		X6 IC	X7-X8 LED Item		X9-X10 Voltage			
5	Module	ELA	EdiLex AC	L	Linear	-	-	2T	PLCC	12	120V

X11-X12 Power Consumption		X13-X14 Emitting color		X15-X16 Serial Number	
12	12W	30	3000K	-	-
		40	4000K		
		57	5700K		

Electro-Optical Characteristics (Ta=25°C)

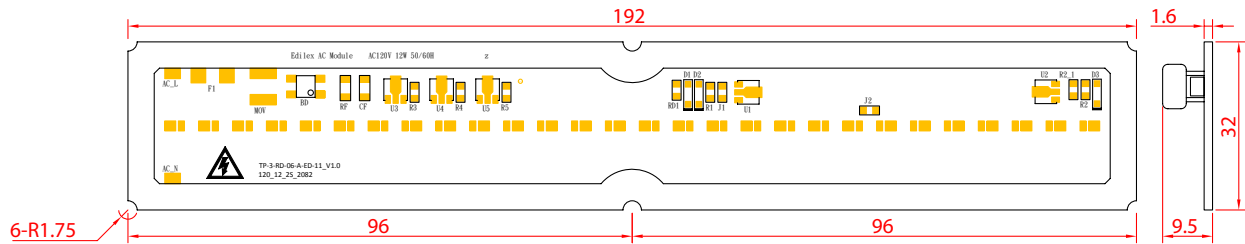
Parameter	Symbol	Value	Unit
Input Voltage	V_{in}	120	Vac
Operating Frequency	f	50/60	Hz
Power Factor	PF	>0.95	-
Viewing Angle	$2\theta_{1/2}$	120	deg.
Max. Surge Voltage	V_s	1250	V

Typ. Power Consumption (W)	Color	Order Code	CCT (K)	Typ. Luminous Flux (lm)	Input Voltage	Min. CRI	Number of LEDs
12	Warm White	5ELALN2T12123001	3000	1100	120V	80	28
	Neutral White	5ELALN2T12124001	4000	1200			
	Cool White	5ELALN2T12125701	5700	1300			

Notes:

- Luminous flux and power consumption are measured at 120Vac/230Vac, Tc=25°C
- Luminous flux has 10% tolerance.
- Power consumption has 10% tolerance.
- The hot-cold factor of Tc=25°C and Tc=65°C is 0.9.
- Surge withstand in accordance with IEC61000-4-5.

Mechanical Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerance: $\pm 0.2\text{mm}$

Absolute Maximum Ratings

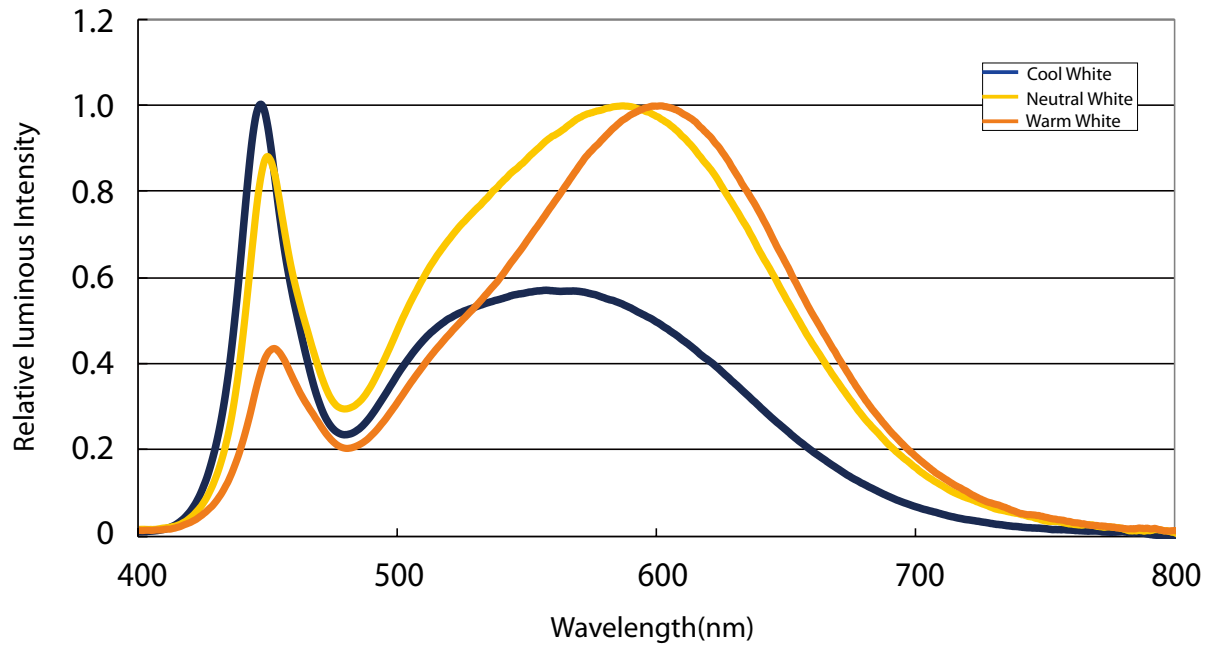
Parameter	Symbol	Value	Unit
Input Voltage	V_{in}	140	Vac
Power Consumption	P	26.4	W
Operating Temperature	T_{opr}	-30 ~ 85	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40 ~ 100	$^{\circ}\text{C}$
Thermal Measurement Point	T_c	85	$^{\circ}\text{C}$

Note:

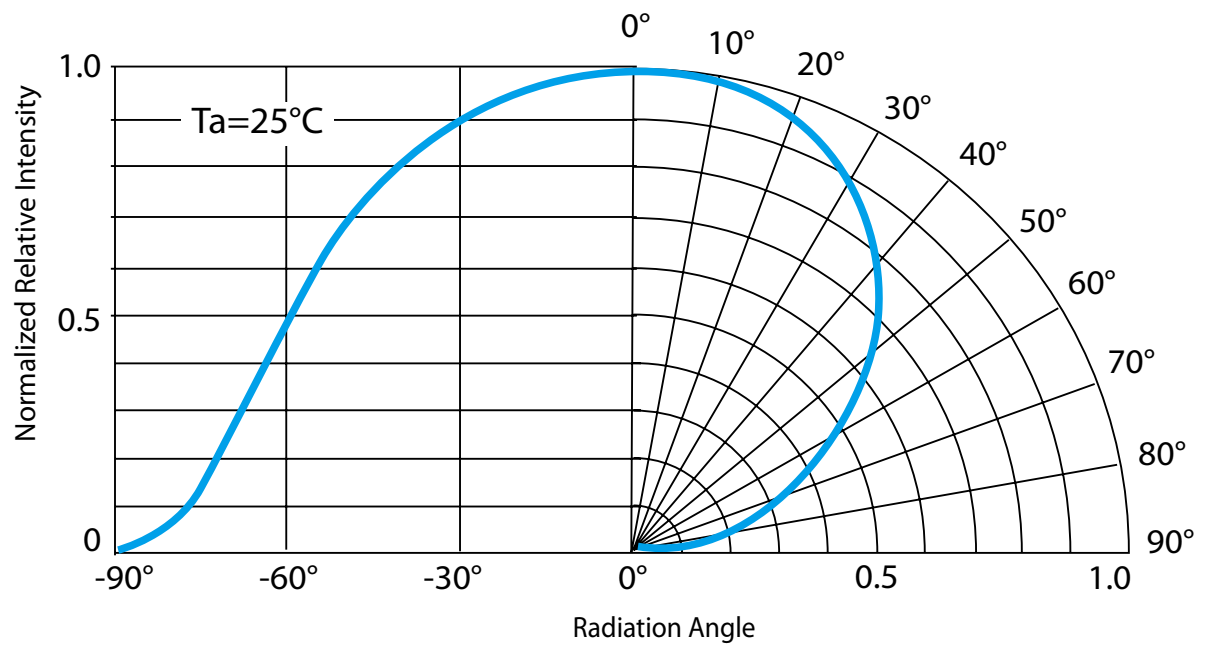
1. "Input Voltage" doesn't indicate the maximum voltage which customers use but means tolerable voltage according to each country's voltage variation rate. It is recommended that the thermal measurement point temperature (T_c) should be below 85°C .
2. The T_c recommended under 85°C while operating temperature is between $-30^{\circ}\text{C} \sim 85^{\circ}\text{C}$.
3. When getting though voltage operation, the IC's temperature must be less than 100°C ($< 100^{\circ}\text{C}$). Otherwise, IC will start overtemperature protection, and make wattage decreased.
4. The operating temperature must below 85°C for life time 35,000 hrs L70B50.

Characteristic curve

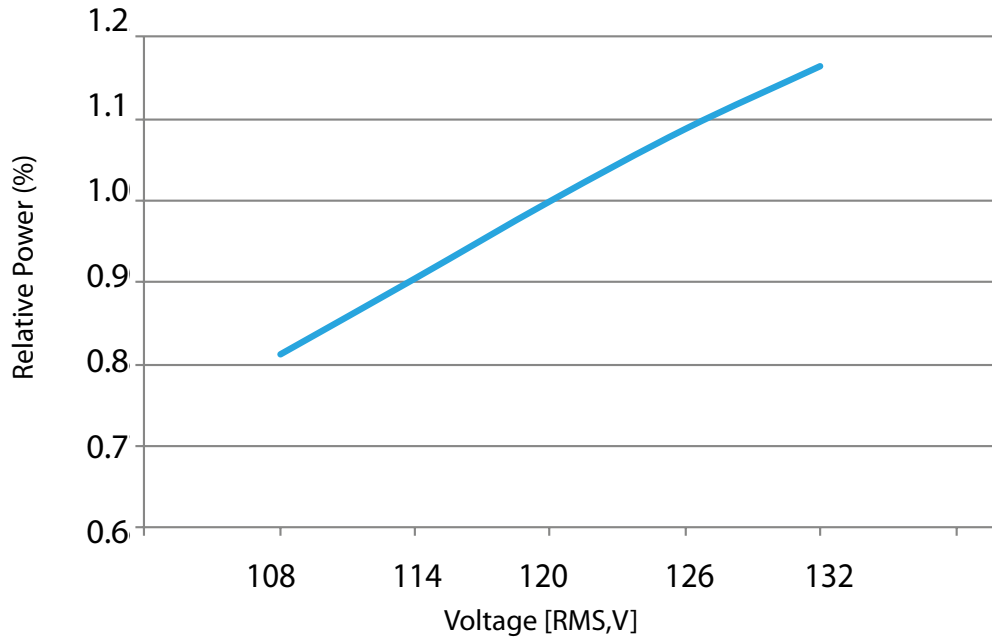
Color Spectrum (CRI80)



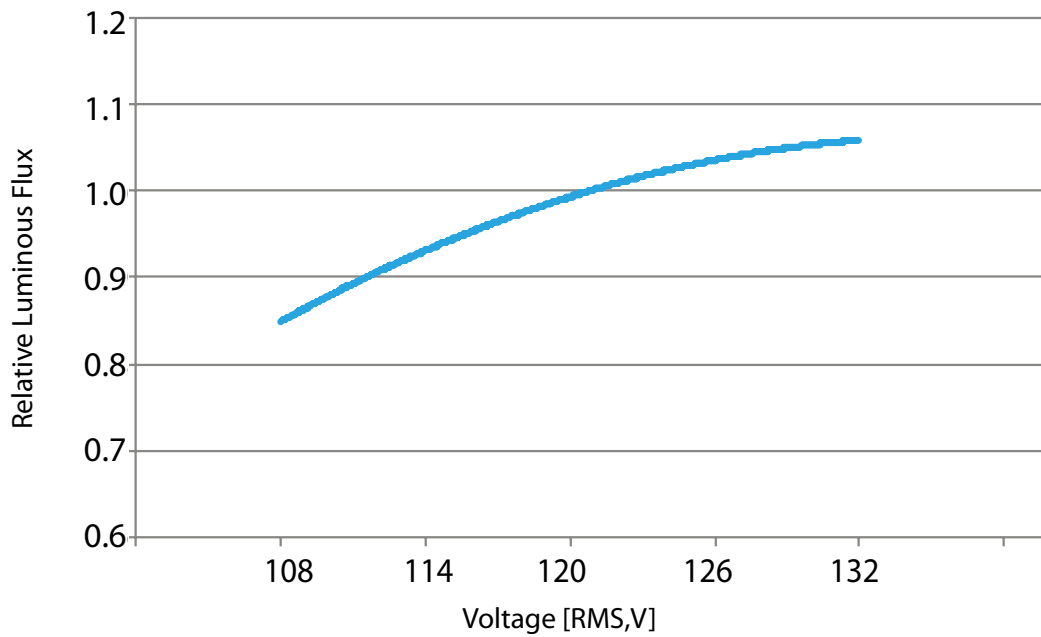
Beam Pattern



Relative Power Distribution vs. Voltage



Relative Luminous flux vs. Voltage



Caution

1. Please note that EdiLex AC Module products are driven by high voltage, therefore when operating EdiLex AC Modules should be very cautious.
2. DO NOT touch the circuit board, components or terminals with body or metal while the circuit is active.
3. DO NOT add or change wires while the circuit of AC Module is active.
4. Long time exposure to sunlight or UV should be avoided; otherwise, it may cause the discoloration of lens.
5. DO NOT use adhesives to attach the LED that outgas organic vapor.
6. DO NOT use the products with materials containing Sulfur.
7. DO NOT assemble in humid environment or the conditions of containing oxidizing gas such as Cl, H₂S, NH₃, SO₂, NOX, etc.
8. DO NOT make any modifications on the products.
9. EdiLex AC Module uses integrated circuit (IC) which can be damaged when exposed to static electricity. Please operate with antistatic device. Do not touch the product unless ESD protection is used. EdiLex AC Module can't be installed in end product unless the ESD protection is used.
10. DO NOT press the product; even a slight pressure may damage the product. The environments such as high temperatures, high humidity or direct expose to sunlight should be avoided since the product is sensitive to these conditions.
11. Storage Precautions:
 - (1) The devices should be stored in the anti-static bag.
 - (2) If the anti-static bag has been opened, please make sure to reseal the bag to avoid air and moisture infiltrate in the bag.
12. It is strongly suggested to wear rubber insulated gloves and rubber bottom shoes while operating the AC Modules.
13. DO NOT wear any conductive accessories (such as jewelry) which could accidentally get an electric shock.
14. Faults, lightning, or fast switch may cause voltage surge which surpasses the normal value.
15. The failure of internal component may cause excessive voltages.
16. DO NOT directly make the HI-POT test over 750V on the module.

Environmental Compliance

AC module series are compliant to the Restriction of Hazardous Substances Directive or RoHS. The restricted materials including lead, mercury cadmium hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ether (PBDE) are not used in AC module series to provide an environmentally friendly product to the customers.

Revision History

Versions	Description	Release Date
1	Establish order code information	2016/08/10

About Edison Opto

Edison Opto is a leading manufacturer of high power LED and a solution provider experienced in LDMS. LDMS is an integrated program derived from the four essential technologies in LED lighting applications- Thermal Management, Electrical Scheme, Mechanical Refinement, Optical Optimization, to provide customer with various LED components and modules. More Information about the company and our products can be found at www.edison-opto.com

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