

# Specification

## EdiLex AC Ultra-Low Flicker Module 230V Datasheet

**5ELACE2T23183001**

**5ELACE2T23184001**

**5ELACE2T23185701**

**5ELACE2T23243001**

**5ELACE2T23244001**

**5ELACE2T23245701**

Edison		Customer
Drawn	Approval	Approval

## General Information

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# EdiLex AC Module 18W/24W 230V Series

## Introduction

Edison Opto advanced a variety of AC modules, such as ceiling light module and down light module.

With reference to the property, these Modules have been driven by AC power, so that products are not external drivers needed.

Therefore, the power cost and volume of the lamp is significantly reduced by the design of AC Modules and makes design flexibility with AC source lighting.

## Features

- Connects directly on AC Mains voltage
- High Power Efficiency & Factor
- Miniaturization design
- 3-Step MacAdam
- Percent Flicker under 10%

## Applications

- Down Light
- Wall Light
- Pendant Light
- Ceiling Light

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## Product Nomenclature

$\frac{5}{X1}$      $\frac{ELA}{X2-X4}$      $\frac{C}{X5}$      $\frac{E}{X6}$      $\frac{2T}{X7-X8}$      $\frac{23}{X9-X10}$      $\frac{XX}{X11-X12}$      $\frac{XX}{X13-X14}$      $\frac{XX}{X15-X16}$

X1 Item	X2-X4 Module Application		X5 Dimensions		X6 IC	X7-X8 LED Item		X9-X10 Voltage			
5	Module	ELA	EdiLex AC	C	Circle	-	-	2T	PLCC	23	230V

X11-X12 Power Consumption		X13-X14 Emitting color		X15-X16 Serial Number	
18	18W	30	3000K	-	-
24	24W	40	4000K		
		57	5700K		

## Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Value	Unit
Input Voltage	$V_{in}$	230	Vac
Operating Frequency	f	50/60	Hz
Power Factor	PF	>0.95	-
Viewing Angle	$2\theta_{1/2}$	120	deg.
Min. Surge Voltage	$V_s$	1000	V
Percent Flicker	-	10	%

## 18W Series

Typ. Power Consumption (W)	Color	Order Code	CCT (K)	Typ. Luminous Flux (lm)	Min. CRI	Number of LEDs
18	Warm White	5ELACE2T23183001	3000	1520	80	29
	Neutral White	5ELACE2T23184001	4000	1600		
	Cool White	5ELACE2T23185701	5700	1600		

## 24W Series

Typ. Power Consumption (W)	Color	Order Code	CCT (K)	Typ. Luminous Flux (lm)	Min. CRI	Number of LEDs
24	Warm White	5ELACE2T23243001	3000	2200	80	58
	Neutral White	5ELACE2T23244001	4000	2310		
	Cool White	5ELACE2T23245701	5700	2310		

### Notes:

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

## Absolute Maximum Ratings

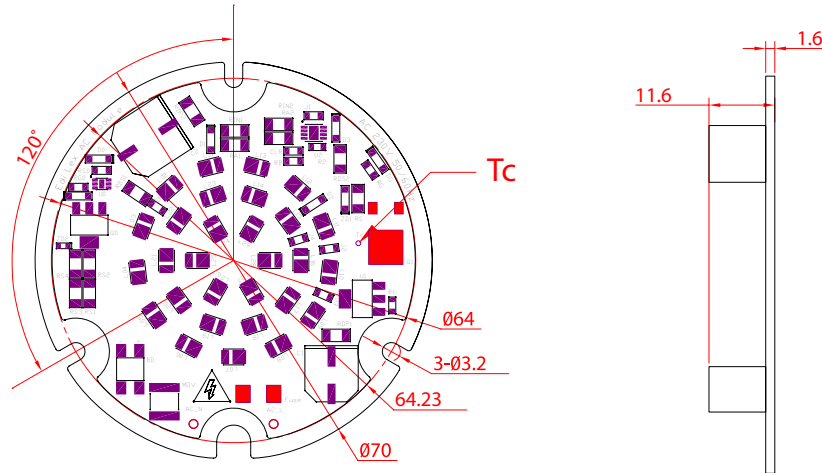
Parameter	Symbol	Value	Unit
Input Voltage	V <sub>in</sub>	264	Vac
Power Consumption	P	19.8/26.4	W
Operating Temperature	T <sub>opr</sub>	-30 ~ 85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ 100	°C
Thermal Measurement Point	T <sub>c</sub>	85	°C

### Note:

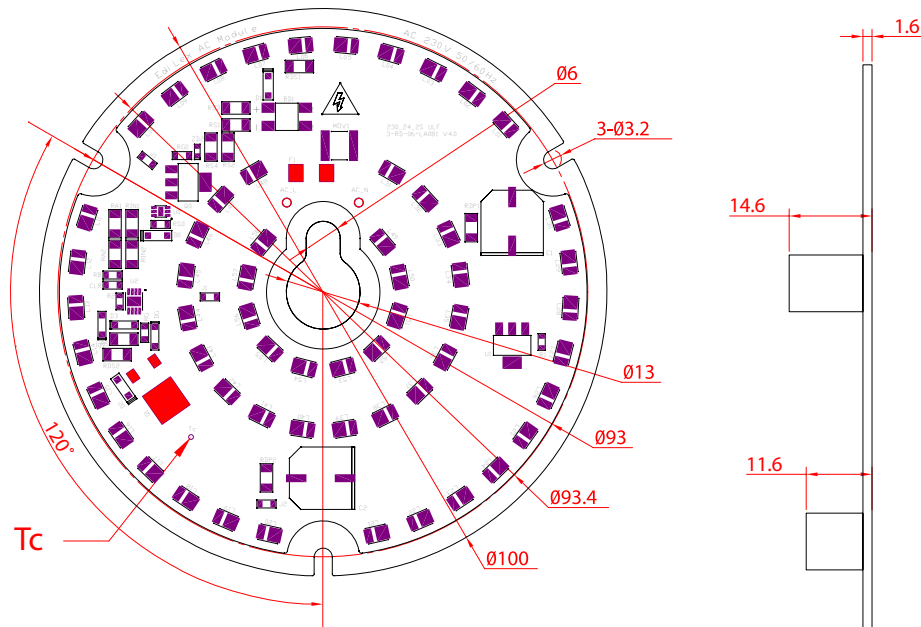
1. "Input Voltage" doesn't indicate the maximum voltage which customers use but means tolerable voltage according to each country's voltage variation rate. It is recommended that the thermal measurement point temperature(Tc) should be below 85°C.
2. The Tc recommended under 85°C while operating temperature is between -30°C~85°C.
3. When getting though voltage operation, the IC's temperature must be less than 100°C(<100°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.

## Mechanical Dimensions

### 18W Series



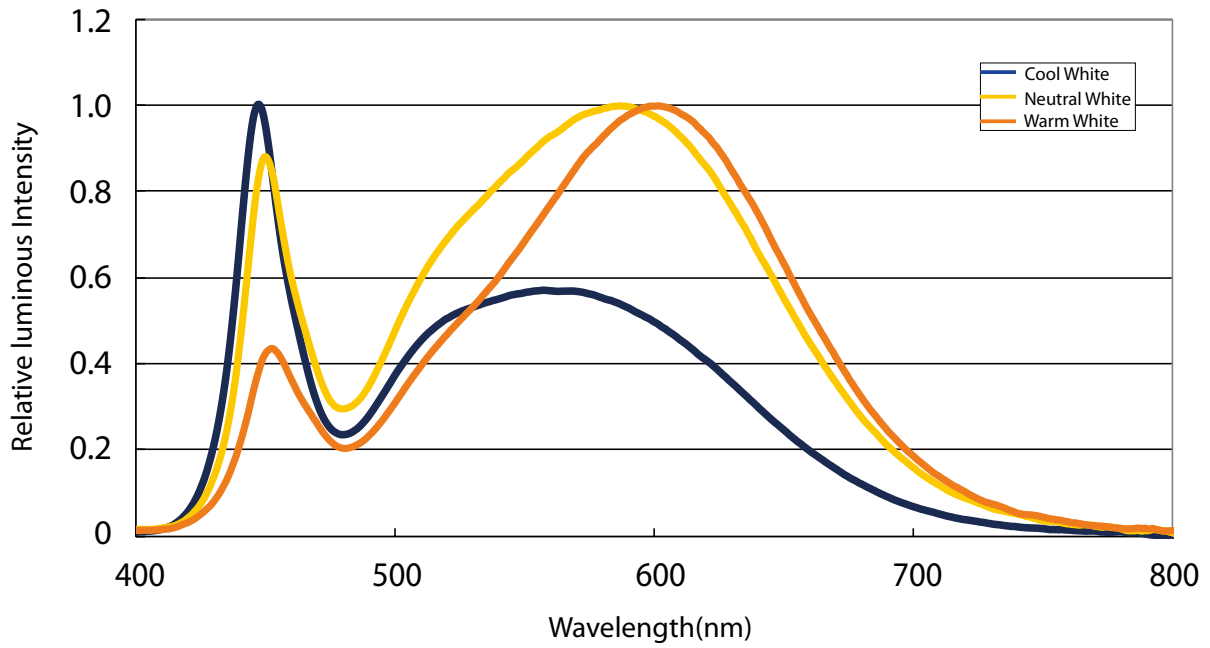
### 24W Series



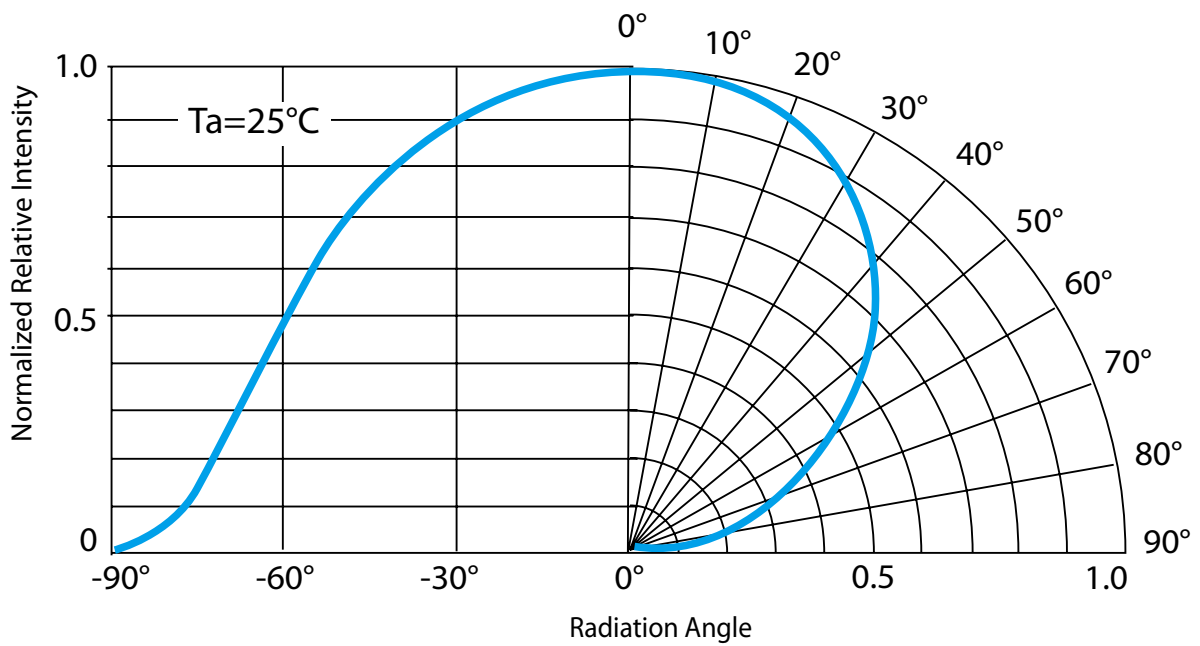
- Notes:  
 1. All dimensions are in millimeters.  
 2. Tolerance:  $\pm 0.2\text{mm}$

## Characteristic curve

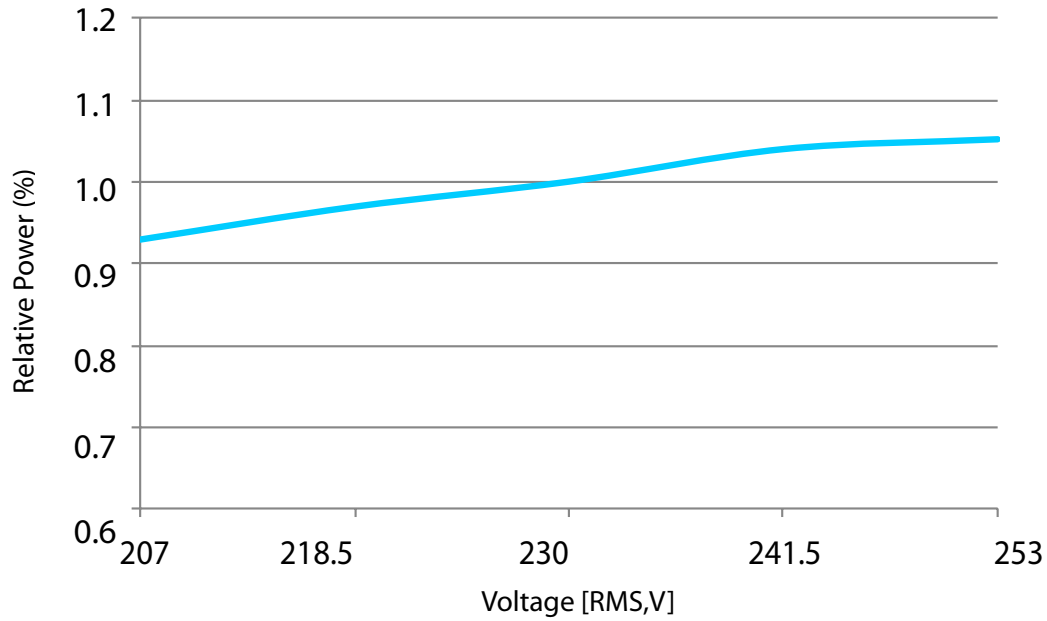
### Color Spectrum (CRI80)



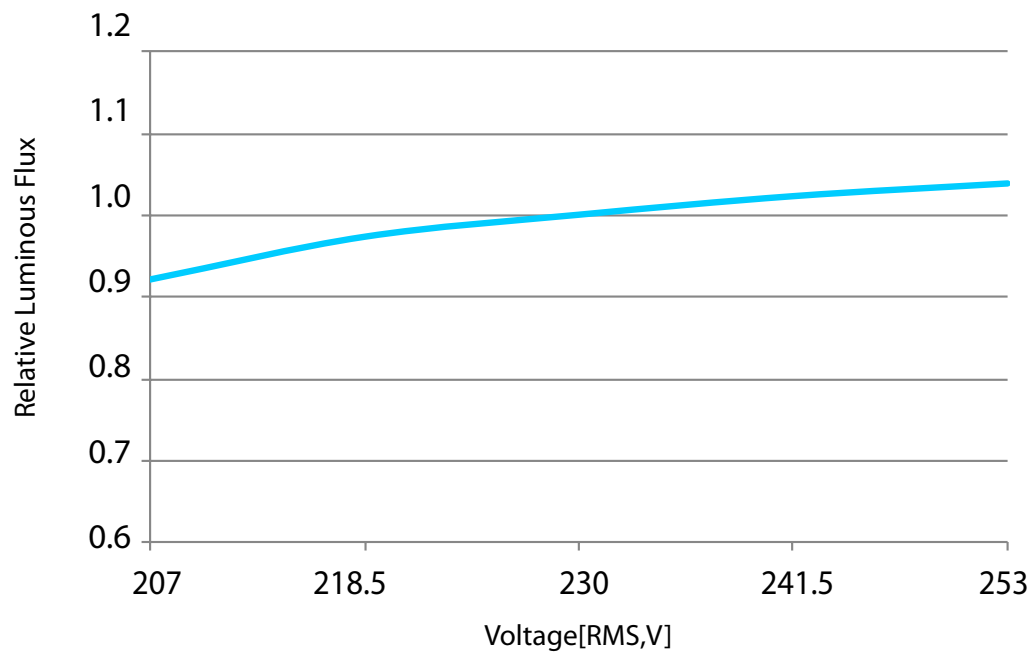
### Beam Pattern



### Relative Power Distribution vs. Voltage



### Relative Luminous flux vs. Voltage





## Caution

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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, H<sub>2</sub>S, NH<sub>3</sub>, SO<sub>2</sub>, 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

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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	2016/08/30

## 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](http://www.edison-opto.com)

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