



LEDIFY

EAGLE X SERIES

Model Number: 1304

PREMIUM LED MODULE

GSB | CHANNEL LETTERS

Providing Better Solutions

 12V DC

 IP66

 185LM

 160°



Product Overview

LEDIFY **EAGLE X SERIES** 1.8W is a premium high-brightness **12V** LED module engineered for GSB boards, acrylic channel letters, and signage applications requiring powerful illumination and superior thermal management.

Built with high-efficiency **3030 SMD LEDs**, **35-micron copper** PCB, and **1.1mm** thick PCB construction, the module delivers excellent heat dissipation, stable performance, and longer operational life.

With a wide **160°** beam angle and **185 lumens** output per module, the EAGLE X SERIES ensures highly uniform illumination with reduced module consumption and minimized shadowing.

The module is designed for **professional signage** installations where brightness, durability, and reliability are critical.

Key Features



High brightness
output upto
185LM/Module



Excellent **heat
management**
performance



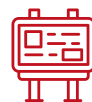
Wide **160°** beam
angle for uniform
illumination



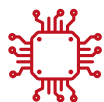
Energy
Efficient
1.8W design



3 Years
Warranty



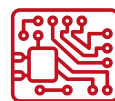
Suitable for
**professional
signage**
applications



Premium **3030
SMD LED**
Technology



1.1mm thick
PCB for
improved
durability



35-micron
copper PCB for
superior
conductivity



Stable lumens
output and **long**
operational life



IP66
waterproof
protection



**Reduces dark
patches** and
shadow lines

Available Colors

WHITE COLOR SHADES



13000K



10000K



6500K



4000K



3000K

RGB COLORS



Red



Blue



Green



Yellow

*Other CCT and colors available on request.

Certifications & Compliance



Applications

GSB Boards

Acrylic Channel Letters

Fabric Light Boxes

Large Depth Signage Applications

Premium Backlit Signage

Technical Specifications

Electrical Specifications	
Model Name	Eagle X Series
Model No.	1304
Input Voltage	12V DC
Operating Type	Constant Voltage
Power Consumption	18W / BAR
LED Type	3030 SMD
Luminous Output	185LM / Module
IP Rating	IP66
Beam Angle	160°
PCB Type	Copper PCB
PCB Thickness	1.1 mm
Heat Management	Optimised Thermal Control
Application Type	High Brightness Signage Module
Mechanical Specifications	
Housing Type	Injection Molded
Construction Type	Sealed Module Design
Mounting Type	Adhesive Tape / Screws
Thermal Design	Enhanced Heat Dissipation PCB
Illumination Type	Wide Uniform Spread
High-thickness PCB and copper layer improve heat dissipation and performance stability.	

Recommended Installation Guidelines

Letter Depth	Recommended Spacing
75-100 mm	150-170 mm
100-120 mm	130-150 mm
120-150 mm	110-130 mm
For deeper boxes (>120mm), reduce spacing to maintain smooth illumination.	
160° beam overlap ensures excellent light uniformity and minimizes hot spots.	

Power Supply Wattage Calculation (20% Margin)

Formula:

Total Watt = Number of Modules x 1.8W

Recommended PSU = Total Watt x 1.2

Example:

If 150 Modules are used:

150 x 1.8W = 270W

270W x 1.2 = 324W

Recommended PSU: **350W 12V**

Always choose the next higher standard driver size.

Recommended Wiring Layout



Connect load first, then power supply.



Use regulated 12V DC power supply.



Use parallel injection wiring for large signage.



Maintain correct polarity. (+ / -)



Keep PSU-to-module wire distances as short as possible.



Use minimum 18AWG (0.75 sqmm) cable.



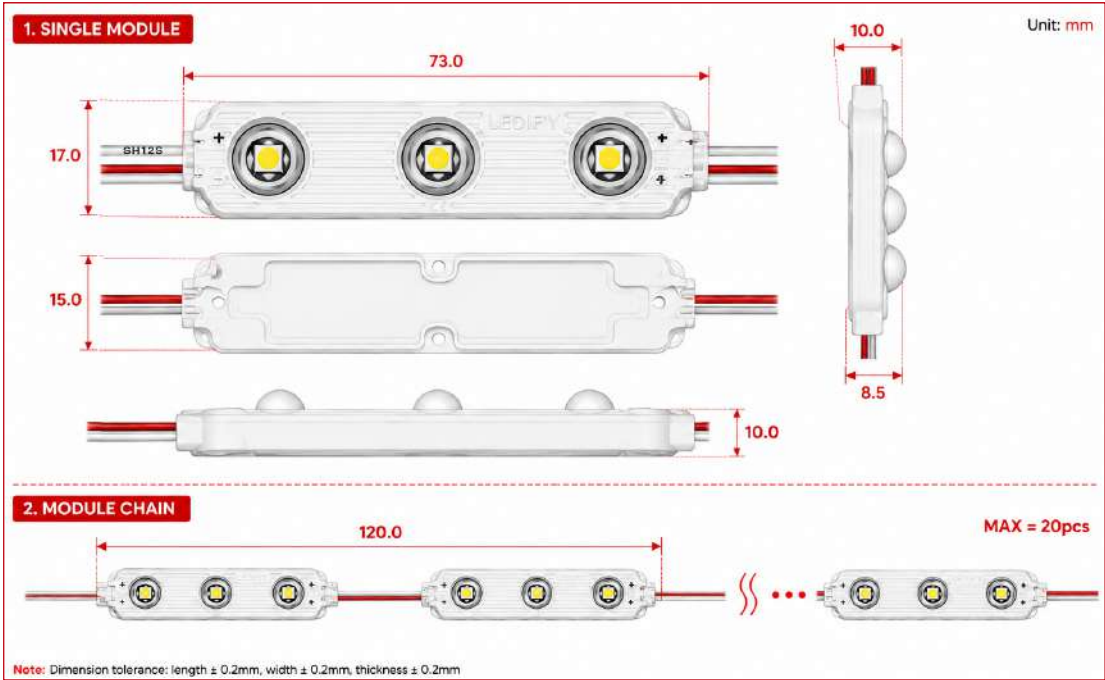
Keep long wire runs minimal to reduce voltage drop.

For **LARGE INSTALLATIONS**,

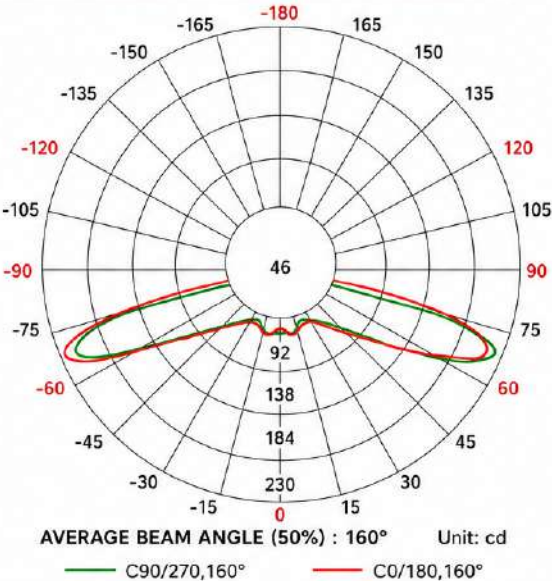


Use multiple power injection points for stable brightness performance.

Luminous Intensity Distribution Analysis



LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE ILLUMINANCE

CCT = 6500K

Distance	Average Illuminance	Beam Diameter
0.2m	210 lx	57.4 cm
0.4m	52 lx	114.8 cm
0.6m	23 lx	172.2 cm
0.8m	13 lx	229.6 cm
1.0m	8 lx	287.0 cm
1.2m	6 lx	344.4 cm
1.4m	4 lx	401.8 cm
1.6m	3 lx	459.2 cm
1.8m	2 lx	516.6 cm
2.0m	2 lx	574.0 cm

Beam Angle: 160°



Wattage:
1.8W / Module



Beam Angle:
160°



Luminous Flux:
185 LM / Module

Note: The above data is tested based on LEDIFY EAGLE X SERIES at 12V DC. Actual performance may vary depending on installation conditions.

Packaging Details

Packaging Type	Quantity
Inner Box	200 Modules
Outer Carton	2000 Modules

Attention before installation

- Before installation, check that the product parameters are consistent with the requirements. (Seeing product specifications or product labels)
- Load voltage, current power and power supply should be matched with the product.
- Follow the instructions of wiring diagram (first connect the load and then the power supply) to avoid short circuit.
- Make sure the correct connection of positive and negative poles between products and power supply. Otherwise, the LEDs do not turn on.
- Make sure the power cord firmly screwed into the terminal and a should not be pulled out by hands.
- The terminal should have insulation waterproof and anti-corrosive treatment.
- After installation, the fabric light box must be covered with cloth within 48 hours.
- Please avoid leaving the light box idle for a long time.

Important Installation Notes

- Use only regulated 12V DC power supplies.
- Avoid voltage drop in large signage boards.
- Seal exposed wire joints properly.
- Ensure proper ventilation during installation.
- Test illumination before final acrylic fixing.
- Installation should be performed by trained technicians.
- Proper heat management improves module lifespan and performance.

Warnings

- Do not disassemble or retrofit the light. Do not touch the surface of the light with a sharp object.
- Do not do live-line working during installation especially for high voltage product.
- Do not use any organic chemical solvents Use neutral glass adhesive to fix this product and it needs to be dried 24 hours in the open environment after operation.
- Treat the ends and the circuit connection points that are not connected to the main line with insulation, waterproof, and anti-corrosion in the installation.
- Use 18AWG (0.75mm² cross-sectional area) or thicker core wire to avoid adverse consequences caused by overheating, if the power cable need to lengthen.
- Make sure the input voltage meets the requirements and lines are connected correctly before lighting on.
- This product is for signage, and do not use as general lighting.
- Series connection within the maximum run.
- The length of the power cable between the power supply and the led strip should not exceed 2m. Otherwise, large circuit loss will lead to inconsistent brightness.
- Installation, maintenance and repair should be operated by a qualified technician.

Statements

- Repair should be operated by a qualified technician, if the external circuit or main line of this product is damaged.
- The parameters given in this manual are typical values and for reference only.
- All illustrations and drawings in this manual are for reference.
- This product is subject to change without notice.

Recycling

- LED lighting products belongs to electronic products, please do recycling treatment according to the relevant WEEE directives.

Common Faults and Troubleshoot

Quick Guide		
Problems	Reasons	Solutions
All LEDs can not light ON	No electric supply	Fix the short circuit problem
	Automatic power protection from the open or short circuit in output of the power supply	
	Wrong connection of power supply	
LEDs can not light on partly	Some switching mode power supplies are not powered	Correctly connection
	Power supply line error	
	Mistaken wire connection of some of products	
Brightness of LED is inconsistent or insufficient	Power overloaded	Replace with more powerful power
	Power supply circuit excessive consumption	Make sure the working voltage of the product within 25% of standard voltage, or keep balance by circuit power consumption
	Excessive quantities in series connection of the product	Reduce the quantities of the product in series connection to meet requirement
LED flicker	Connection point fault	Remove bad connection point
	Switching power supply failure	Replace a new power supply
	Wrong Installation or use of products	Please follow the instructions



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