



LEDIFY

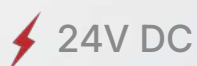
SIGMA SERIES

Model Number: F24

WATERPROOF LED MODULE

CHANNEL LETTERS | LIGHT BOXES

Providing Better Solutions



Product Overview

The LEDIFY SIGMA F24 Series is a high-efficiency, wide beam LED module designed for uniform illumination in channel letters and lightbox signage.

With a 160° crystal lens and 210 lumens output, it delivers bright, shadow-free lighting even in deeper signage applications.

Key Features



High brightness
output upto
210LM / Module



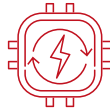
24V DC system
for safer and
stable long runs



Wide **160°** beam
crystal lens for
shadow free
lighting



Waterproof
design for indoor
& outdoor signage



**Optimized
spacing** reduces
module quantity
& power costs



3 Years
Warranty

Available Color



6500K

*Other CCT and colors available on request.

Applications

Acrylic Channel Letters

GSB / ACP Backlit Boards

Signage Lightboxes

Logo and Retail Signages

Indoor and Outdoor Illuminated Signs

Technical Specifications

Electrical Specifications	
Module Name	LEDIFY Sigma Series
Model No.	F24
Input Voltage	24V DC
Circuit Type	Constant Voltage
Power Consumption	1.5W / Module
LEDs per Module	3 LEDs
Maximum Modules / Power Supply	20 Modules (Recommended)
Optical Specifications	
Luminous Output	210LM / Module
Beam Angle	160°
Lens Type	Crystal Lens (High Diffusion & Uniform Spread)
Maximum Bars / circuit	20 Bars
Mechanical Specifications	
Module Type	Waterproof
IP Rating	IP66
Wire Length Between Modules	150 mm
Recommended Installation	Adhesive + Screw Mounting

Recommended Installation Guidelines

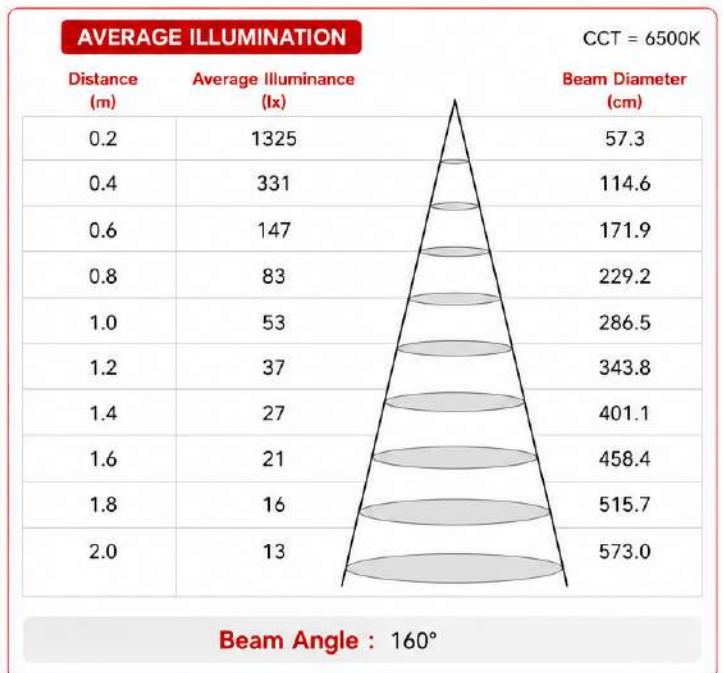
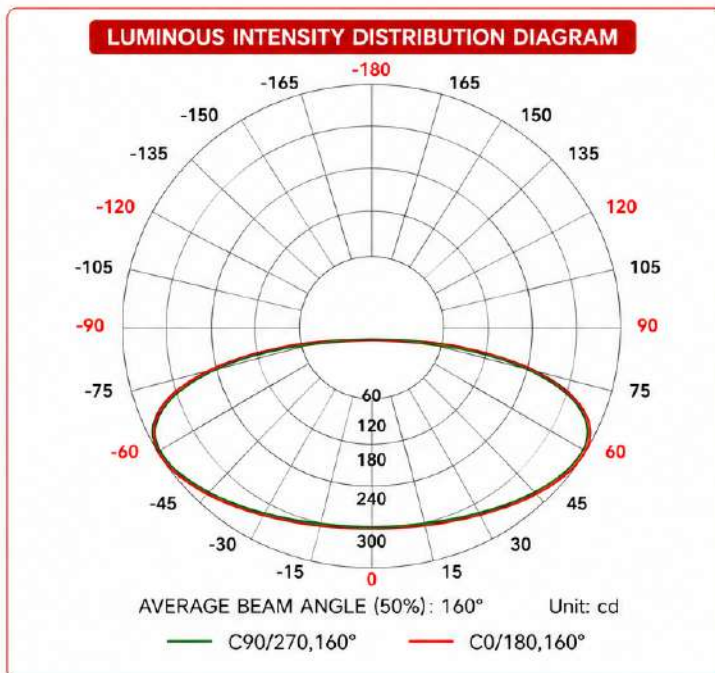
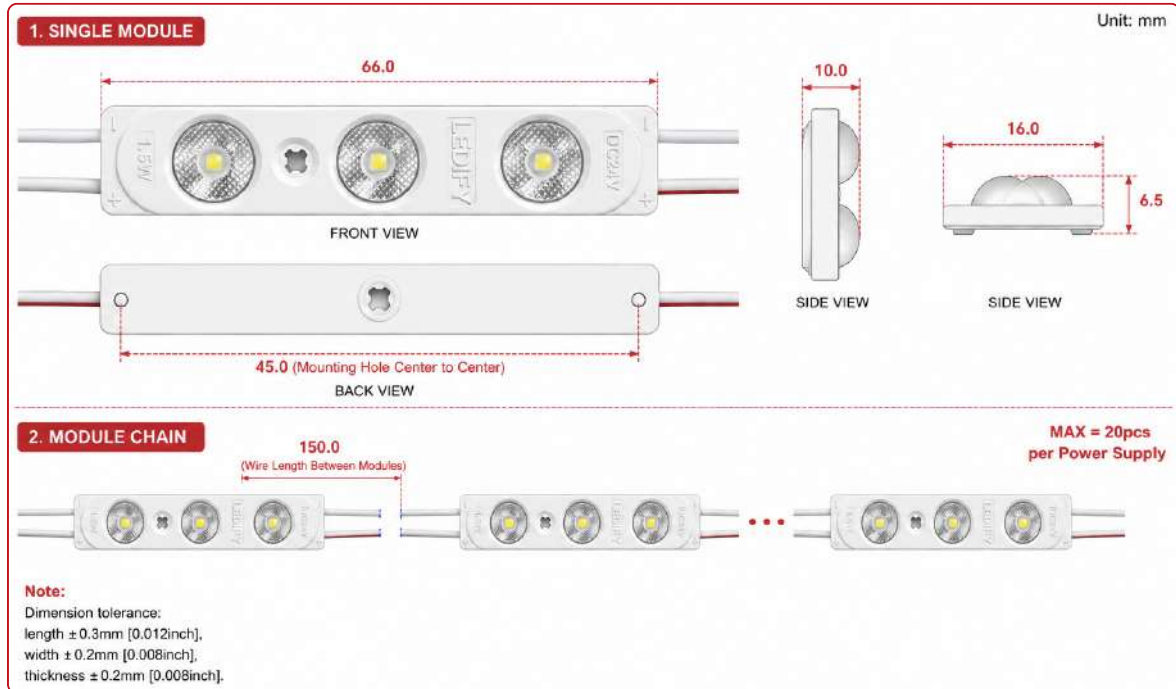
Acrylic Channel Letters

Based on 210LM output + 160° beam angle	
Minimum Letter Depth	40 mm
Ideal Depth Range	60-120 mm
Maximum Recommended Depth	150 mm
Module spacing, to avoid black shades / hot spots	
Recommended Spacing	90-120 mm
For Shallow Letters (40-60 mm)	80-90 mm spacing
For Deeper Letters (100-150 mm)	110-120 mm spacing
Ensures uniform face illumination and no dark corners or spotting on acrylic	

GSB / ACP Lightbox Applications

Recommended GSB Board Thickness	50 mm to 150 mm
Best Visual Uniformity	50 mm to 150 mm
Module spacing on GSB Board	
Recommended Spacing	100-130 mm
For Shallow Boxes (<70 mm)	90-100 mm
For Deep Boxes (>120 mm)	120-130 mm
Wide beam covers larger surface area	
Reduces LED quantity while maintaining brightness	

Luminous Intensity Distribution Analysis



Wattage
1.5W / Module



Beam Angle
160°



Luminous Output
210 lm / Module

Note: The above data is tested based on BNZ Sigma Series (24V DC – 1.5W) at 6500K.
 Actual performance may vary depending on installation conditions.

Packaging Details

Packaging Type	Quantity
Inner Box	200 Modules
Master Carton	2000 Modules (10 inner boxes)

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 24V DC constant voltage power supplies.
- Do not exceed 20 bars per circuit.
- Follow recommended spacing to prevent dark spots.
- Suitable for indoor signage applications.
- Ensure adequate heat dissipation and ventilation.
- Do not overload power supplies.
- Installation should be carried out by trained technicians.
- IP20 rated, recommended for dry indoor use.

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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