



BNZ **BUTTON** **LED** 9MM SERIES

Model Number: 1212

PREMIUM LED MODULE

SIGNAGE | CHANNEL LETTERS

Providing Better Solutions

 DC 12V

 IP65

 22LM

 170°



Product Overview

BNZ **BUTTON LED 9MM** – Model 1212 is a compact and high-quality **12V** LED module specially designed for signage and decorative illumination applications.

Built with a durable **IP65** waterproof construction, the module delivers stable brightness, long operational life, and excellent visibility for both indoor and outdoor signage installations.

Its compact **9mm** button-style body makes it ideal for acrylic letters, decorative signboards, slim profiles, and intricate lighting layouts.

Designed for professional signage manufacturers, the BNZ **1212** Button LED ensures uniform illumination with low power consumption and reliable performance.

Key Features



High-Quality
LED Construction



Compact 9mm
Button-style
design



Low power
consumption
(0.2W)



Stable brightness
and **Long Life**



Easy installation
for signage work



Suitable for
indoor and
outdoor
applications



170° wide beam
angle for uniform
light distribution



Vibrant colors
and uniform
output



2 Years
Warranty

Certifications



Available Colors

WHITE COLOR SHADES



10000K | White

Warm White | 3000K



RGB COLOR SHADES



Red



Green



Blue



Yellow



Pink

*Other CCT and colors available on request.

Applications

Acrylic Sign Boards

Channel Letters

Decorative Signage & Event Lighting

Indoor / Outdoor Advertising Boards

Retail & Commercial Signage

Illumination Benefits

- Uniform and bright light output.
- Compact size for tight installation spaces.
- Reliable performance in outdoor environments.
- Low heat generation and energy efficient operation.

Button LED • Technical Specifications

Electrical Specifications	
Model Name	BNZ Button LED 9mm
Model No.	1212
Input Voltage	12V DC
Power Consumption	0.2W / Module
Luminous Flux	22LM / Module
LED Type	High Brightness LED
Beam Angle	170°
Operating Type	Constant Voltage
IP Rating	IP65
Warranty	2 Years
Mechanical Specifications	
LED Size	9mm
Housing Type	Injection Molded
Mounting Type	Push Fit / Hole Mount
Construction	Waterproof Sealed Body
Application Type	Indoor and Outdoor
Compact body design suitable for signage and decorative lighting applications.	

Recommended Wiring Layout



Use regulated 12V DC power supply.



Avoid excessive wire lengths to minimize voltage drop.



Use proper waterproof joints for outdoor installations.



Recommended for parallel injection in large installations.



Maintain correct polarity. (+ / -)

For **LARGE SIGNAGE**,



Use proper power distribution for consistent brightness across all LEDs.

Power Supply Wattage Calculation (With 20% Margin)

Formula:

Recommended PSU Wattage = (Number of LEDs × 0.2W) × 1.2

Example:

If 500 Modules are used:

$$500 \times 0.2W = 100W$$

$$100W \times 1.2 = 120W$$

Recommended PSU = **150W 12V**

Always select next higher standard driver rating.

Profile & Luminous Intensity Distribution Diagrams

PROFILE DRAWINGS

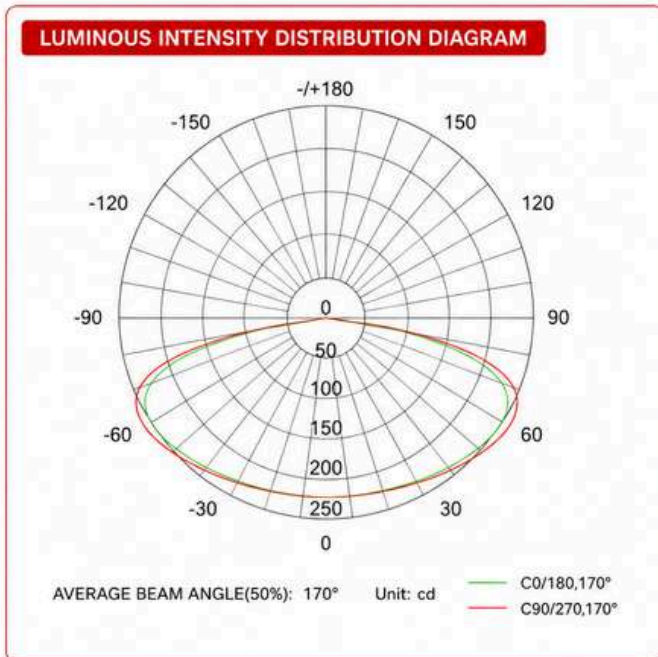
Unit: mm

1. SINGLE MODULE

2. MODULE CHAIN

Note:
Dimension tolerance: length $\pm 0.2\text{mm}$ [0.008inch], width $\pm 0.2\text{mm}$ [0.008inch], thickness $\pm 0.2\text{mm}$ [0.008inch].

TOP VIEW (ACTUAL APPEARANCE)
Actual product appearance (for reference only).



AVERAGE ILLUMINATION

CCT = 10000K

Distance	Average Illuminance	Beam Diameter
0.2m	116 lx	28.7 cm
0.4m	29 lx	57.4 cm
0.6m	13 lx	86.1 cm
0.8m	7 lx	114.8 cm
1.0m	5 lx	143.5 cm
1.2m	3 lx	172.2 cm
1.4m	2 lx	200.9 cm
1.6m	2 lx	229.6 cm
1.8m	1 lx	258.3 cm
2.0m	1 lx	287.0 cm

Height Eavg, Emax **Beam Angle: 170°** Diameter

Wattage: 0.2W / LED
Beam Angle: 170°
Luminous Flux: 22 LM / Module

Note: The above data is tested based on BNZ Button LED 9MM at 10000K. For other data, please consult sales rep.

Packaging Details

Packaging Type	Quantity
Standard Carton	10,000 PCS/BOX

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 supply.
- Ensure waterproof sealing during outdoor installation.
- Avoid reverse polarity connection.
- Test illumination before final installation.
- Keep wiring connections secure and insulated.
- Installation should be performed by trained technicians.

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