



BNZ RIGID BAR

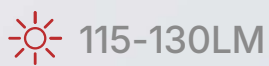
WP 12W

Model Number:1212

12 LED BACKLIT BAR

GSB | ACP BACKLIT SIGNAGE

Providing Better Solutions



Product Overview

The **NWP Series Rigid Bar** is a high-performance LED lighting solution engineered for GSB/ACP backlit signage and illuminated display applications.

Featuring **12 high-efficiency LEDs** with an ultra wide **172° beam angle**, it delivers smooth, shadow-free illumination with excellent light uniformity for both shallow and deep light boxes.

Its **IP65 protection** makes it suitable for indoor and outdoor covered signage applications.

Key Features



High brightness
upto **1560LM/BAR**



**Uniform
illumination**
with reduced
hotspots



IP65 for indoor
and outdoor
covered use



**Long operational
life** with proper
PSU loading



Suitable for
**shallow & deep
light boxes**



**2 Years
Warranty**



Ultra-wide **172°**
beam angle for
maximum spread



Easy screw-fix
installation



Constant
Voltage **12V DC**
operation

Available Colors



10000K



6500K



3000K

*Other CCT and colors available on request.

Certifications



Technical Specifications

Electrical Specifications	
Model Name	BNZ 12 LED Waterproof Rigid Bar
Model no.	1212
Input Voltage	12V DC
Power Type	Constant Voltage
LEDs per Bar	12 LEDs
LED Brightness	115-130LM / LED
Total Output	~ 1380-1560LM / BAR
IP Rating	IP65
Power Consumption	12W / BAR
Beam Angle	172°
Color Temperature (CCT)	10000K, 6500K, 3000K
Maximum Bars per Circuit	20 Bars
Operating and Mechanical Specifications	
Product Type	LED Backlit Bar
PCB Size	920 x 14.5 x 1.03 mm
Mounting Type	Screw Fixing
Construction	Injection Molded
Application Surface	GSB / ACP / Metal Box
Construction Type	Aluminum PCB with weather protection

Applications and Illumination Guidelines

GSB / ACP Backlit Boards

Recommended Board / Box Depth	
Based on wide beam spread and lumen output:	
Minimum Depth	35 mm
Ideal Depth Range	50-120 mm
Maximum Depth	180 mm
The 172° beam angle enables wider spacing and improved uniformity.	

Anti-Shadow Calculation (Recommended Spacing)

Application Depth	Box Depth	Bar / Safe Spacing
Shallow GSB Boards	35-50 mm	100-120 mm
Standard Boards	50-100 mm	120-160 mm
Deep Backlit Boards	100-180 mm	160-220 mm
Best Practices		
Use tighter spacing in ultra shallow boxes & maintain consistent grid layout.		
Avoid excessive spacing to prevent dark areas.		
Wide beam angle design reduces bar quantity in deeper boxes.		

Recommended Wiring Layout

Connection Method
Daisy-chain connection
Maximum 20 bars / PSU output
Single-side power feeding recommended
Typical Wiring Layout [12V DC PSU] Up to 20 Bars

Installation Tips
Maintain clean wire management
Avoid unnecessary wire looping
Use parallel wiring for large signboards
Ensure adequate ventilation inside the box

Power Supply Recommendation

Power per bar = **12W**

Bars per circuit = **20 PCS**

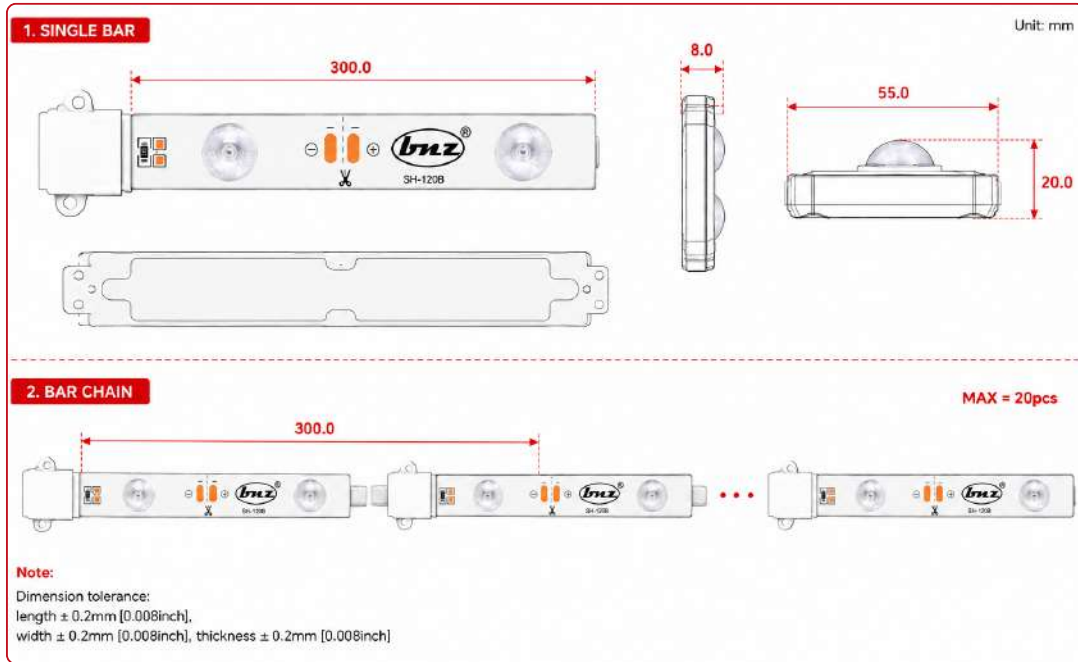
Total Load,

20 x 12W = **240W**

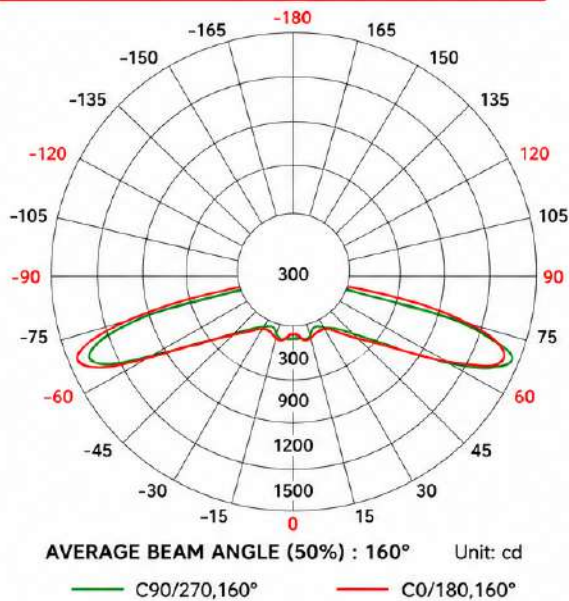
For Large signage installations, use multiple power supplies or separate PSU outputs

For improved PSU lifespan, keep loading within 89% of rated capacity.

Luminous Intensity Distribution Analysis



LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE ILLUMINANCE

CCT = 6500K

Distance	Average Illuminance	Beam Diameter
0.5m	1520 lx	142.2 cm
1.0m	380 lx	284.4 cm
1.5m	169 lx	426.6 cm
2.0m	95 lx	568.8 cm
2.5m	61 lx	711.0 cm
3.0m	42 lx	853.2 cm
3.5m	31 lx	995.4 cm
4.0m	24 lx	1137.6 cm
4.5m	19 lx	1279.8 cm
5.0m	15 lx	1422.0 cm

Beam Angle: 160°



Wattage:
12W / Module



Beam Angle:
160°



Luminous Flux:
1250 LM / Module

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

Packaging Details

Packaging Type	Quantity
Master Box	500 PCS
Product Packaging	Bulk

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.
- Do not exceed 20 bars / circuit.
- Follow spacing recommendations to avoid dark patches.
- Ensure proper ventilation and heat dissipation.
- IP65 rated for indoor and covered outdoor signage use.
- Avoid direct continuous water exposure.
- 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



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