BNZ VURVE

1.5W LED MODULE

GSB | CHANNEL LETTERS

Providing Better Solutions

DC 12V IP66 164LM 140°

VURVE 1.5W

Product Overview

BNZ VURVE SERIES 1.5W is a high-efficiency 12V LED module engineered for GSB boards and channel letter applications.

With a 160° beam angle, optimized 160mm Centre-to-Centre (C/C) spacing, and 164 umens per module, it ensures smooth and uniform illumination with reduced spacing and lower module consumption.

The module features IP66 rated, making it suitable for both indoor and outdoor signage installations, backed by a 3-year warranty.

Key Features

- **1.5W** Energy-efficient design
- **140°** wide beam angle for uniform light
- **IP66** Waterproof Construction
- **164LM** High brightness output
- Optimized **160mm** (C/C) spacing
- **Stable** lumen performance
- **3-Year** Warranty

Available Colors

WHITE COLOR SHADES

13000K | 10000K | 6500K | 4000K | 3000K

RGB COLORS

Red | Blue | Green | Yellow

*Other CCT and colors available on request.

Electrical Specifications

Parameter	Specification
Power Consumption	1.5 W / module
Input Voltage	12V DC
Luminous Output	164 Lumens / Module
Beam Angle	140°
IP Rating	IP66
Operating Type	Constant Voltage
Maximum Series Run	20 Modules
Warranty	2 Years

Mechanical Specifications

Parameter	Specification
Module Dimensions	72 x 14.2 x 8 mm
Recommended Spacing	160mm (C/C)
Housing Type	Injection Molded, Sealed
Mounting	Adhesive Tape / Screws

160mm refers to distance from center of one lens to center of next lens.

Certifications

CE RoHS

Installation

Fix by,
Adhesive tapes or screws.

Applications

GSB Signage Boards	Glow Sign Boards	Acrylic Channel Letters	Fabric Light Box

Illumination Calculations

Letter Depth	Recommended Spacing
75-100 mm	150-160 mm (C/C)
100-120 mm	130-150 mm (C/C)
120-150 mm	110-130 mm (C/C)

For deeper boxes (>120mm), reduce spacing to maintain uniform brightness.

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Recommended Wiring Layout

- Maximum 20 Modules per series connection.
- Inject power every 20 modules.
- Use minimum 18AWG (0.75 sqmm) cable.
- Keep PSU-to-module wire under 2 meters.
- Maintain correct polarity. (+ / -)
- Connect load first, then power supply.
- For **Large Signage,** use parallel injection wiring to avoid voltage drop.

Power Supply Wattage Calculation (With 20% Margin)

Formula:

Total Watt = Number of Modules x 1.5W

Recommended PSU = Total Watt x 1.2

Example:

If 150 Modules are used:

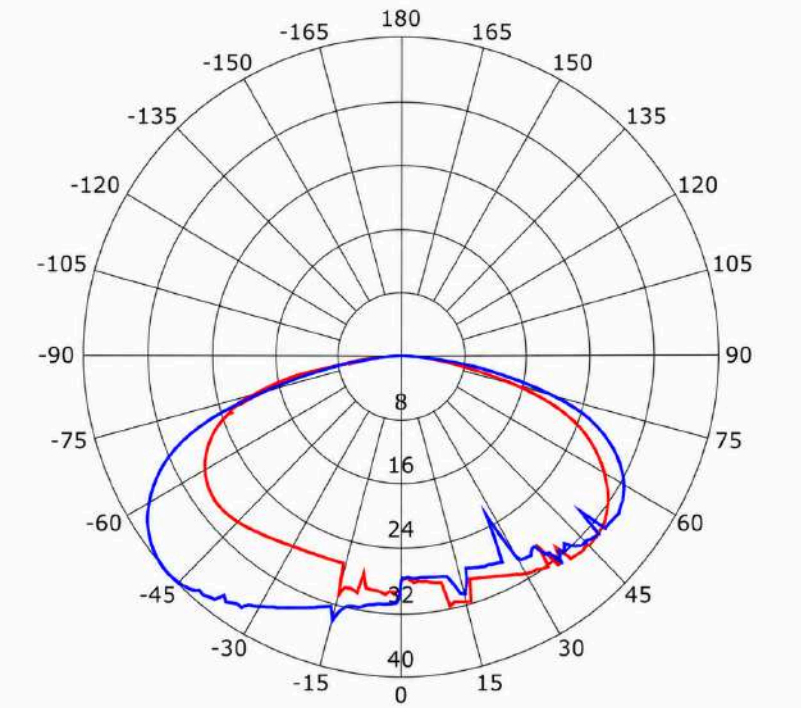
150 x 1.5W = 225W

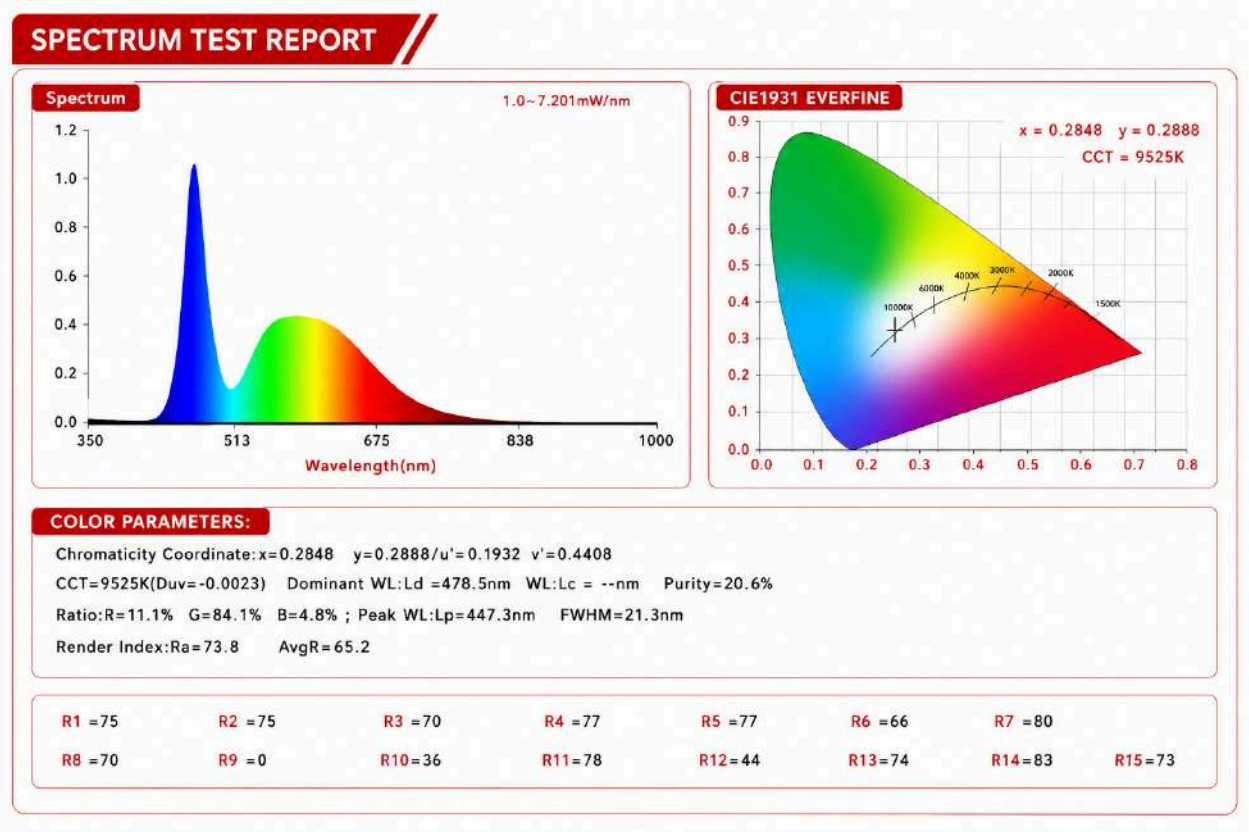
225W x 1.2 = 270W

Recommended PSU = **300W 12V**

Always select next higher standard driver rating.

Luminous Distribution Analysis





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 regulated 12V DC power supply.
- Do not exceed 20 modules in one series chain.
- Seal all exposed wire joints properly.
- Avoid voltage drop in large boards.
- Test illumination before final acrylic fixing.
- Installation should be performed by trained technician.

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 (0.75mm^2 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