



Bridgelux® Vesta-X4 Quad Channel 768W (DMX) Constant Voltage Driver

Product Data Sheet DS1247

Product Feature Map

Bridgelux Vesta-X4 (DMX) Quad Channel 768W Driver provides dynamic constant current output for LED modules and arrays. This Driver interoperates with DMX control lighting systems and protocols and allows for simple integration of Bridgelux's RGBW and 3CCT White Arrays and Linear modules. Please visit www.bridgelux.com for more information.



- LED Output
- Ch 1 (Red)
 - Ch 2 (Green)
 - Ch 3 (Blue)
 - Ch 4 (White)

Product Nomenclature

The part number designation for Bridgelux Vesta-X4 (DMX) Quad Channel 768W Driver is explained as follows:

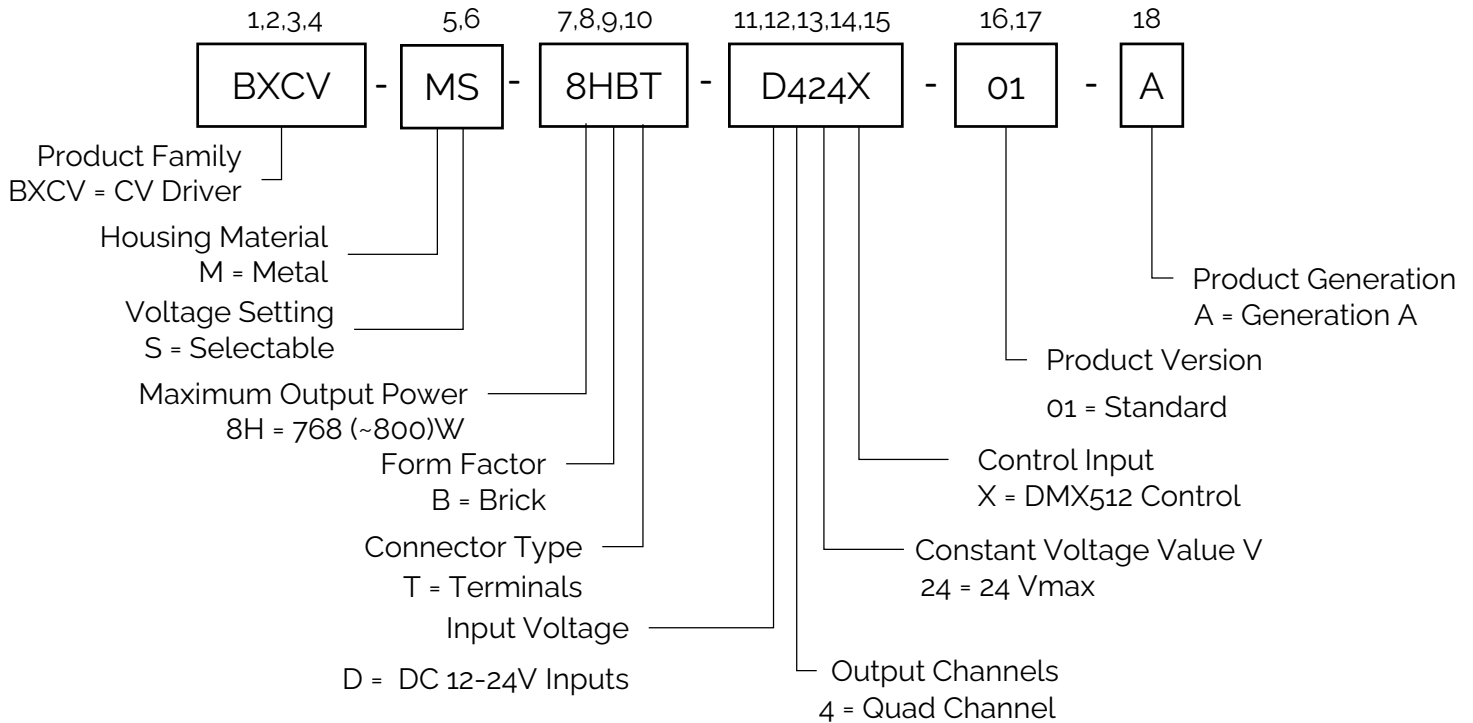


Table 1: Product Selection Guide

Part Number	Configuration
BXCVM-8HBT-D424X-01-A	DMX 4 Channel CV Driver, DC 12 – 24VDC

Wiring and setup instructions



Bridgelux Vesta-X4 driver can power up various Bridgelux 4 Channels LEDs (RGBW series). Below table provides some examples of the driver channel mapping to different LEDs channels (further instructions please contacts Bridgelux).

V+ (All Ch +)	R (-)
	G (-)
	B (-)
	W (-)

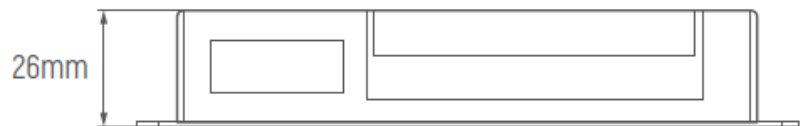
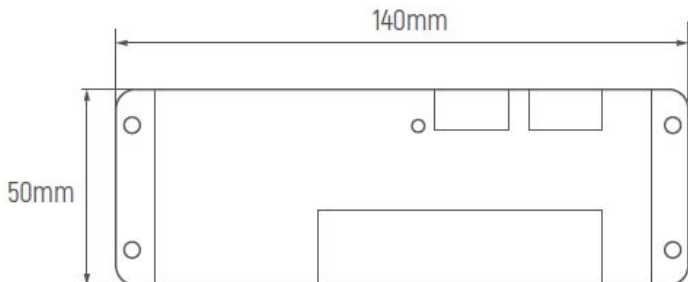
Driver Channel	SMD RGBW (CRI 95)	SMD 3CCT (CRI 90)	SMD 3CCT (CRI 97)
R	Red	1	1
G	Green	1	2
B	Blue	2	3
W	White	3	3

Electrical Characteristics

Table 2: Electrical Characteristics

Parameter	Unit	Specification
Number of Ch		4
Input Voltage	V	12 – 24V DC
Output Voltage	V	12 – 24V DC
Output Current	mA	8,000mA (per Ch) / 32,000mA (combined)
Output Power	W	384W max (12V) 768W max (24V)
Efficiency	%	≥ 95% (@ Full Load)
Dimension	mm	140 x 50 x 26 mm
Weight	g	240

Dimension(mm)



Driver Configuration and Connections

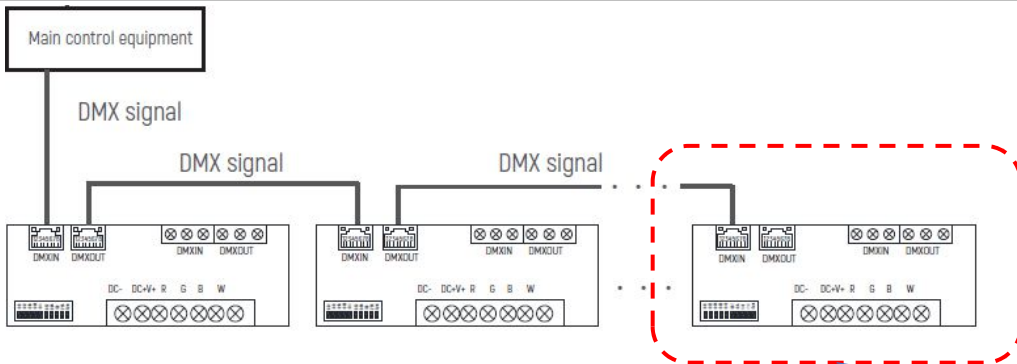
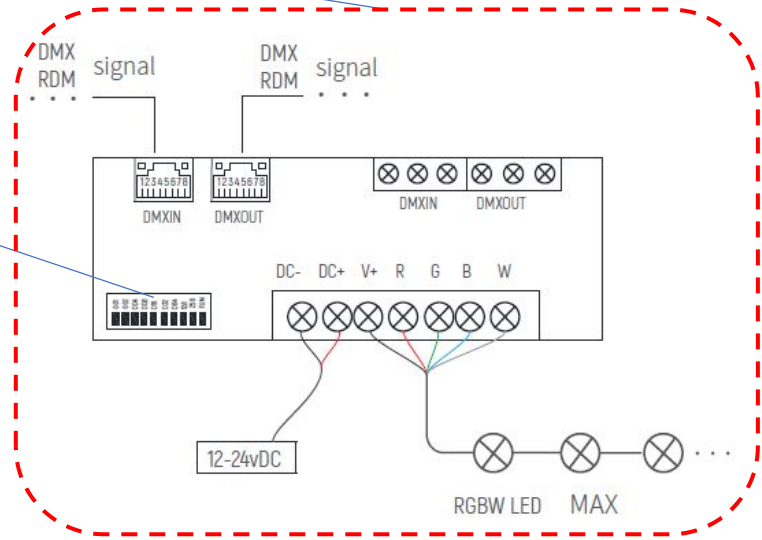


Table 3: Button Controls

	DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	DIP7	DIP8	DIP9	DIP10
OFF	0	0	0	0	0	0	0	0	0	NA
ON	1	2	4	8	16	32	64	128	256	FUN



DIP1~9: sets the address of the first channel of DMX decoder.
 DIP10 : FUN represents the end resistance of 120 ohms.

The valid address in DMX mode is $1 \leq 511$, (address 511 is self-test mode, output RGBW gradient).
 When the address is set to 0, the default is RDM mode.



DMX Mode:

- DIP-Switch 1-9 to set the DMX first address
- FUN (DIP Switch 10) = OFF



RDM Mode:

- DIP-Switch 1-9 = OFF
- FUN (DIP Switch 10) = OFF



Self-Test Mode (Output RGBW gradient):

- DIP-Switch 1-9 = ON
- FUN (DIP Switch 10) = OFF

Environmental and Regulatory Standards

Table 4: Environmental Conditions

Parameter	Specification
Ambient Operating Temperature	-20°C to + 50°C
Humidity Rating	Maximum 90% Relative Humidity, non condensing
Storage Temperature	-40°C to + 80°C
Expected Lifetime	> 50,000 hours (Ta < 50°C)

Table 5: Regulatory Approvals and Compliance

Specification	Reference Standard	Condition
Harmonic Current Emissions	EN IEC 61000-3-2:2014	
Voltage Fluctuations & Flicker	IEC 61000-3-3:2013	
ESD (Electrostatic Discharge)	IEC 61547:2009 Section 5.2 Test des.: IEC 61000-4-2	2 kV contact discharge, 4 kV air discharge, level 3
Continuous Radiated Disturbance	IEC 61547:2009 Section 5.3 Test des.: IEC 61000-4-3	3 V/m, 80 - 1000 MHz, 80% modulated at distance of 3 meters
Electrical Fast Transient	IEC 61547:2009 Section 5.5 Test des.: IEC 61000-4-4	± 1 kV on AC power port for 1 minute,
Surge	IEC 61547 Section 5.7 Test des.: IEC 61000-4-5	± 1 kV (differential mode)
Continuous Conducted Disturbance	IEC 61547:2009 Section 5.6 Test des.: IEC 61000-4-6	3V, 0.15-80 MHz, 80% modulated, Level 2
Voltage Dips	IEC 61547 Section 5.8, 5.9 Test des.: IEC 61000-4-11	70% dip during 25 cycles @ 50Hz, 30 cycles @ 60Hz 0% dip during ½ cycles

Regulatory Standards (continued)

Table 6: Safety Agency Approvals

Specification	Reference Standard	Condition
ETL	UL8750, CAN/CSA-C22.2 No. 250.13	
CE / UKCA	EN 61347-1:2015, EN 61347-2-13:2014/A1:2017	



Protection

Table 7: Protection

Parameters	Specification
Over Current Protection	Yes / Auto Resume
Over Temperature Protection	Yes / Auto Resume
Short Circuit Protection	Yes / Auto Resume

Design Resources

Application Notes

Please contact your Bridgelux sales representative for assistance on obtaining application support when designing with the Bridgelux Vesta-X4 Quad Channel Driver. For a list of available resources, visit www.bridgelux.com.

Precautions

CAUTION: PRODUCT HANDLING

Handle the Vesta-X4 Quad Channel Driver with care to prevent any damage from mechanical shock. It is recommended to handle this driver in a static-free environment. To maintain product warranty, the product must not be opened or disassembled and the installer must ensure that the driver's operating conditions do not exceed the maximum conditions stated within this data sheet.

CAUTION: PRODUCT INSTALLATION

Incorrect installation of the Vesta-X4 Quad Channel Driver can cause irreparable damage to the driver, connected LEDs. Pay attention when connecting the LED load and observe the correct polarity of the output terminals as specified in this data sheet and on the driver label. Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

CAUTION: ELECTRIC SHOCK

Be aware of the possibility of an electric shock hazard which can result in serious injury or death. Disconnect power before servicing or installing this device.

Disclaimers

MINOR PRODUCT CHANGE POLICY

The rigorous qualification testing on products offered by Bridgelux provides performance assurance. Slight cosmetic changes that do not affect form, fit, or function may occur as Bridgelux continues product optimization.

About Bridgelux: Bridging Light and Life™

At Bridgelux, we help companies, industries and people experience the power and possibility of light. Since 2002, we've designed LED solutions that are high performing, energy efficient, cost effective and easy to integrate. Our focus is on light's impact on human behavior, delivering products that create better environments, experiences and returns—both experiential and financial. And our patented technology drives new platforms for commercial and industrial luminaires.

For more information about the company, please visit

bridgelux.com

twitter.com/Bridgelux

facebook.com/Bridgelux

youtube.com/user/Bridgelux

linkedin.com/company/bridgelux

WeChat ID: BridgeluxInChina



46410 Fremont Blvd

Fremont, CA 94538 USA

Tel (925) 583-8400

www.bridgelux.com