



# Bridgelux<sup>®</sup> Vesta<sup>®</sup> Series 8 CCT Selectable 54mm Array with SMD3838

Product Data Sheet DS586



### **Product Feature Map**

Bridgelux Vesta Series 8 CCT Selectable Arrays are fully engineered devices that provide consistent thermal and optical performance on an engineered mechanical platform. Packaged Bridgelux 3838 Triple CCT 4-in-1 package (3.8 x 4.0 x 0.8 mm) with 54mm LES, at 90 CRI. The arrays incorporate several features to simplify design integration and assembly. Please visit www.bridgelux.com for more information on the Vesta Series family of products.





Bridgelux 8 CCT Switch Module 40 x 30 mm Size

#### Product Nomenclature

The part number designation for Bridgelux Vesta Series arrays is explained as follows:





### **Product Selection Guide**

Part Number (90 CRI²)	CCT¹ (K)	Dip Switch			LED Array Only				with Lens		with BLX Driver					
		1	2	3	lf (mA)	Vf (V)	Power (W)	Flux <sup>3, 4</sup> (lm)	LPW	Flux <sup>3, 4</sup> (lm)	LPW	lf (mA)	Vf (V)	Power (W)	Flux <sup>3, 4</sup> (lm)	LPW
BXRV-D54- TRI3000- 124-A3	2200	OFF	OFF	OFF	596	36	22	2808	134	2313	110	204	120	24	2057	87
	2700	ON	OFF	OFF				2944	138	2433	114				2163	91
	3000	OFF	ON	OFF				2982	140	2455	115				2189	91
	3500	ON	ON	OFF				3040	141	2509	116				2250	93
	4000	OFF	OFF	ON				3063	141	2518	116				2250	92
	5000	ON	OFF	ON				3054	140	2512	115				2223	91
	5700	OFF	ON	ON				3011	138	2485	114				2219	90
	6500	ON	ON	ON				2974	136	2453	112				2215	90
BXRV-D54- TRI6000- 099-A3	2200	OFF	OFF	OFF	1666	28	47	5719	122	4660	99	455 1	120	54	4402	84
	2700	ON	OFF	OFF				6155	127	4903	103				4674	88
	3000	OFF	ON	OFF				6147	128	4923	103				4887	92
	3500	ON	ON	OFF				6215	131	4999	104				4825	90
	4000	OFF	OFF	ON				6194	131	5023	104				4735	87
	5000	ON	OFF	ON				6148	130	4980	103				4831	89
	5700	OFF	ON	ON				6082	129	4939	102				4839	89
	6500	ON	ON	ON				6022	127	4876	100				4770	87

### Table 1: Selection Guide, White Stabilized DC Performance at CRI90 ( $T_c = 55^{\circ}C$ )<sup>6</sup>

Notes for Table 1:

1. Nominal CCT as defined by ANSI C78.377-2011.

2. All color points' CRIs are minimum 90 values and include test tolerance.

3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

4. Typical performance values are provided as a reference only and are not a guarantee of performance.

5. Bridgelux maintains a ±7.5% tolerance on flux measurements

6. Typical performance is estimated based on operation under DC (direct current) with LED array mounted onto a heat sink with thermal interface material and the case temperature maintained at 55°C. Based on Bridgelux test setup, values may vary depending on the thermal design of the luminaire and/or the exposed environment to which the product is subjected.

# Absolute Maximum Ratings

### Table 2: Maximum Ratings

Parameter	Maximum Rating					
Storage Temperature	-40°C to +85°C					
Operating Case Temperature (T <sub>c</sub> )	85°C					
Soldering Temperature	350°C or lower for a maximum of 5 seconds					
	BXRV-D54-TRI3000-124-A3	BXRV-D54-TRI6000-099-A3				
Maximum Drive Current	800mA	1800mA				

Note for Table 2:

1. Maximum rating provided for reference only.

### Performance Curves



### Figure 1: Chromaticity Coordinate Group (Color Targeted at $T_c = 55^{\circ}$ C)

Figure 2: Typical Color Spectrum at CRI90 ( $T_c = 55^{\circ}$ C)



### Performance Curves



### Figure 3: Typical Relative Luminous Flux vs. Case Temperature at CRI 90

### **Mechanical Dimensions**



Figure 4: Drawing for BXRV-D54-TRI3000-124-A3

### Figure 5: Drawing for BXRV-D54-TRI6000-099-A3



Notes for Figures 4 & 5:

- 1. Solder pads are labeled "+" to denote positive polarity and "-" to denote negative polarity.
- 2. Drawings are not to scale.
- 3. Drawing dimensions are in millimeters.
- 4. Unless otherwise specified, tolerances are ± 0.10mm.

Figure 6: Drawing for Optical Lens Housing



Figure 7: Drawing for Optical Lens Diffuser



Notes for Figures 6 & 7:

1. Drawings are not to scale.

2. Drawing dimensions are in millimeters.

3. Unless otherwise specified, tolerances are  $\pm$  0.10mm.

### **Mechanical Dimensions**

Figure 8: Drawing for Dip Switch Control Housing



Figure 9: Drawing for Dip Switch Control Cover



Notes for Figures 8 & 9:

1. Drawings are not to scale.

2. Drawing dimensions are in millimeters.

3. Unless otherwise specified, tolerances are  $\pm$  0.10mm.





## Packaging and Labeling

### Figure 10: Vesta Series Array Packaging and Labeling



### Table 3: Packaging Structure

Box Parameter	BXRV-D54-TRIx000-xxx-A3
Quantity	300pcs per Box (30pcs per tray and 10 trays per box)
Dimension	830 x 530 x 360 mm
Weight	25.5 Kg

### Figure 11: Product Labeling

Bridgelux Vesta Series Array contain a label on the front to help with product identification. In addition to the product identification markings, Bridgelux Vesta Series Array also contain markings for internal Bridgelux manufacturing use only. The image below shows which markings are for customer use and which ones are for Bridgelux internal use only. The Bridgelux internal manufacturing markings are subject to change without notice, however these will not impact the form, function or performance of the array.



Customer Use- 2D Barcode Scannable barcode provides product part number and other Bridgelux internal production information.

### **Design Resources**

#### **Application Notes**

Vesta Series Arrays are intended for use in dry, indoor applications. Bridgelux has developed a comprehensive set of application notes and design resources to assist customers in successfully designing with the Vesta Series product family of LED array products. For a list of resources under development, visit www.bridgelux.com.

#### **Optical Source Models**

Optical source models and ray set files are available for all Bridgelux products. For a list of available formats, visit www.bridgelux.com.

### Precautions

#### CAUTION: CHEMICAL EXPOSURE HAZARD

Exposure to some chemicals commonly used in luminaire manufacturing and assembly can cause damage to the LED array. Please consult Bridgelux Application Note for additional information.

#### CAUTION: EYE SAFETY

The Bridgelux Vesta series LED array emits visible light, that, under certain circumstances, could be harmful to the eye. Proper safeguards must be used.

#### CAUTION: RISK OF BURN

Do not touch the Vesta Series LED array during operation. Allow the array to cool for a sufficient period of time before handling. The Vesta Series LED array may reach elevated temperatures such that could burn skin when touched.

#### 3D CAD Models

Three dimensional CAD models depicting the product outline of all Bridgelux Vesta Series LED arrays are available in both IGS and STEP formats. Please contact your Bridgelux sales representative for assistance.

#### LM80

Please contact your Bridgelux sales representative for more information.

### CAUTION

#### CONTACT WITH LIGHT EMITTING SURFACE (LES)

Avoid any contact with the LES. Do not touch the LES of the LED array or apply stress to the LES (yellow phosphor resin area). Contact may cause damage to the LED array.

Optics and reflectors must not be mounted in contact with the LES (yellow phosphor resin area). Optical devices may be mounted on the top surface of the Vesta Series LED array. Use the mechanical features of the LED array housing, edges and/or mounting holes to locate and secure optical devices as needed.

### **Disclaimers**

#### STANDARD TEST CONDITIONS

Unless otherwise stated, array testing is performed at the nominal drive current.

#### 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

© 2024 Bridgelux, Inc. All rights reserved 2024. Product specifications are subject to change without notice. Bridgelux, the Bridgelux stylized logo design and Vesta are registered trademarks of Bridgelux, Inc. All other trademarks are the property of their respective owners.