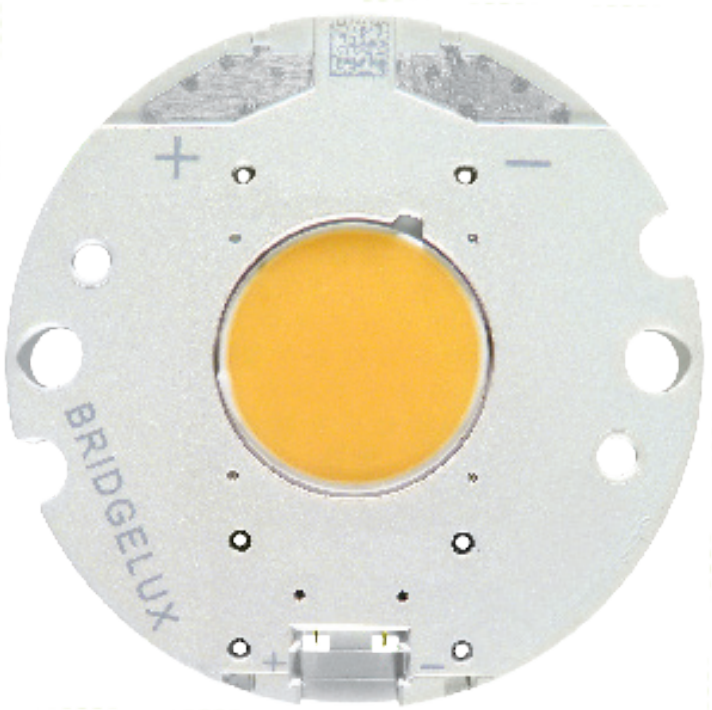


Bridgelux® GEN9 Vero®13 Array

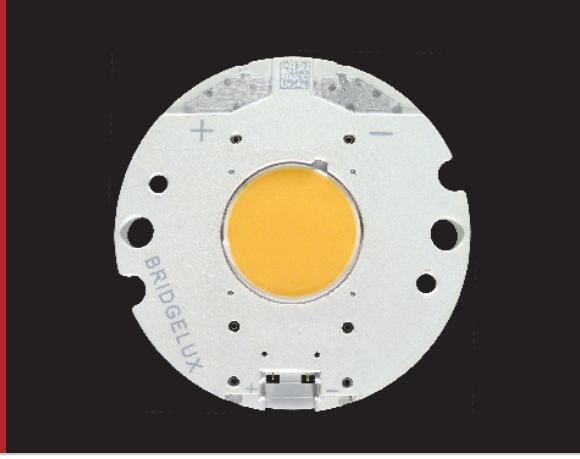
Product Data Sheet DS1312

TEN YEAR Warranty™

BXRC-27E | 30E | 35E | 40E | 50E

Introduction

Vero® GEN 9



The Vero® Series is a revolutionary advancement in chip on board (COB) light source technology and innovation, simplifying the luminaire design and manufacturing processes. Vero Chip on Board (COB) LED arrays are available in four LES configurations, engineered to enable new degrees of flexibility and reliability over a broad range of electrical currents. Vero arrays deliver increased lumen density to enable improved beam control and precision lighting with 2 and 3 SDCM color control standard for clean and consistent uniform lighting.

Vero products include an onboard connector port that enables a solder-free electrical interconnect, and simple mounting features for plug-and-play installation.

The Gen 9 Vero Series COB is a high efficacy product that uses narrow band red phosphor to significantly improve the spectrum efficacy. The improved spectrum efficacy results in the 80 CRI product of the Gen 9 Series delivering better or equivalent efficacy as that of our previous generation Vero Series product.

Features

- Efficacy of 199 lm/W typical, 3000K 80 CRI
- Wide selection of CCT options (2700K-5000K) with minimum 80 CRI options
- Uniform high-quality illumination
- 2 and 3 SDCM binning options (2700K – 4000K)
- 3 and 4 SDCM binning options (5000K)
- Forward voltage bin codes and backside marking
- Instant light with unlimited dimming
- Thermally isolated solder pads
- 10-Year warranty

Benefits

- Solder free installation and field upgradability
- Improved inventory management and quality control
- Enables high efficiency lighting systems and lower operating costs
- Supports the trend toward luminaire miniaturization and delivers enhanced optical control
- Design flexibility for a broad range of lighting applications
- Clean white light without pixelation
- Uniform consistent white light
- Design flexibility for multi-source applications
- Enhanced ease of use and installation
- Design with confidence

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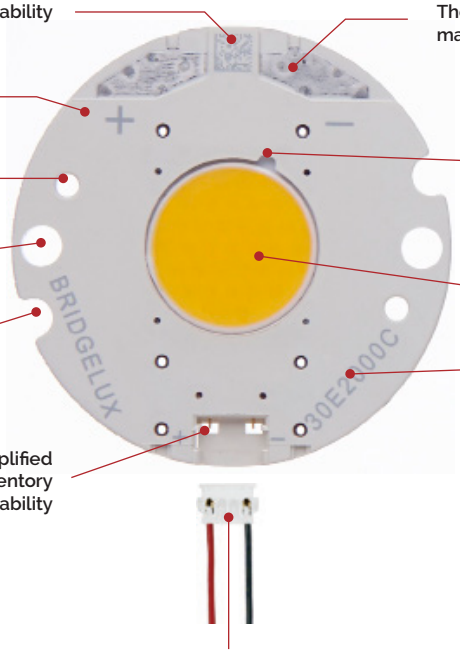
Product Feature Map

Vero 13 is the second smallest form factor in the Vero family of the next generation solid state light sources. In addition to delivering the performance and light quality required for many lighting applications, Vero incorporates several features to simplify the design integration and manufacturing process, accelerate time to market and reduce system costs. Please visit www.bridgelux.com for more information on the Vero Series family of products.



Product Nomenclature

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

1 2 3 4 – 5 6 7 8 9 10 11 – 12 – 13 14

BXRC – 30 E 20F0 – C – 9 3

Product Family

Nominal CCT
27 = 2,700K
30 = 3,000K
35 = 3,500K
40 = 4,000K
50 = 5,000K

Minimum CRI
E = 80 CRI min

Flux Indicator
20XX = 2000 lm

Array Configuration

Gen 9

CCT Bin Options
2 = 2 SDCM
3 = 3 SDCM
4 = 4 SDCM

Product Selection Guide

The following product configurations are available:

Table 1: Selection Guide, Pulsed Measurement Data (T_c = 25˚C)

Part Number	Nominal CCT[1] (K)	CRI[2]	Nominal Drive Current[3] (mA)	Typical Pulsed Flux[4,5,6] T_c = 25°C (lm)	Minimum Pulsed Flux[6,7] T_c = 25°C (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-27E20F0-B-9x	2700	80	350	2303	2073	33.8	11.8	195
BXRC-27E20F0-C-9x	2700	80	500	3283	2955	33.8	16.9	194
BXRC-30E20F0-B-9x	3000	80	350	2350	2115	33.8	11.8	199
BXRC-30E20F0-C-9x	3000	80	500	3350	3015	33.8	16.9	198
BXRC-35E20F0-B-9x	3500	80	350	2362	2126	33.8	11.8	200
BXRC-35E20F0-C-9x	3500	80	500	3367	3030	33.8	16.9	199
BXRC-40E20F0-B-9x	4000	80	350	2374	2136	33.8	11.8	201
BXRC-40E20F0-C-9x	4000	80	500	3384	3045	33.8	16.9	200
BXRC-50E20F0-B-9x	5000	80	350	2327	2094	33.8	11.8	197
BXRC-50E20F0-C-9x	5000	80	500	3317	2985	33.8	16.9	196

Table 2: Selection Guide, Stabilized DC Test Performance (T_c = 85˚C)[4,5,6]

Part Number	Nominal CCT[1] (K)	CRI[2]	Nominal Drive Current[3] (mA)	Typical DC Flux[4,5] T_c = 85°C (lm)	Minimum DC Flux[6] T_c = 85°C (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-27E20F0-B-9x	2700	80	350	2119	1907	33.2	11.6	182
BXRC-27E20F0-C-9x	2700	80	500	3020	2718	33.2	16.6	182
BXRC-30E20F0-B-9x	3000	80	350	2162	1946	33.2	11.6	186
BXRC-30E20F0-C-9x	3000	80	500	3082	2774	33.2	16.6	186
BXRC-35E20F0-B-9x	3500	80	350	2173	1956	33.2	11.6	187
BXRC-35E20F0-C-9x	3500	80	500	3097	2788	33.2	16.6	187
BXRC-40E20F0-B-9x	4000	80	350	2184	1965	33.2	11.6	188
BXRC-40E20F0-C-9x	4000	80	500	3113	2802	33.2	16.6	187
BXRC-50E20F0-B-9x	5000	80	350	2140	1926	33.2	11.6	184
BXRC-50E20F0-C-9x	5000	80	500	3051	2746	33.2	16.6	184

Notes for Table 1 & 2:

1. Nominal CCT as defined by ANSI C78.377-2011.
2. CRI values are minimums and tested at T_j = T_c = 85˚C. Minimum R9 value for 80 CRI products is 0.Bridgelux maintains a ± 3 tolerance on CRI and R9 values.
3. Drive current is referred to as nominal drive current.
4. Products tested under pulsed condition (10ms pulse width) at nominal drive current where T_j (junction temperature) = T_c (case temperature) = 25˚C.
5. Typical performance values are provided as a reference only and are not a guarantee of performance.
6. Bridgelux maintains a ±7% tolerance on flux measurements.
7. Minimum flux values at the nominal drive current are guaranteed by 100% test.

European Product Registry for Energy Labeling

The European Product Registry for Energy Labeling (EPREL) is defined in the EU Regulation 2017/1369 to provide important energy efficiency information to consumers. Together with Energy Labeling Regulation ELR (EU) 2019/2015 which was amended by regulation (EU) 2021/340 for energy labelling of light sources, manufacturers are required to declare an energy class based on key technical specifications from each of their product and register it in an open data base managed by EPREL It is now a legal requirement for a vendor of light sources to upload information about their products into the EPREL database before placing these products on the market in the EU.

Table 3 below provides a list of part numbers that are in compliance with ELR and are currently listed in the EPREL database.

At Bridgelux, we are fully committed to supplying products that are compliant with pertinent laws, rules, and obligation imposed by relevant government bodies including the European Energy Labeling regulation. Customers can use these products with full confidence for any projects that fall under the ELR.

Table 3: Part numbers registered in European Product Registry for Energy Labeling

PART NUMBER[1]	CCT (K)	CRI	Current[2] (mA)	Vf (V)	Useful flux[3] (Φuse) at 85C (lm)	Power (W)	Efficacy (lm/W)	Energy efficiency class[4] 	Registration No	URL to Product Information Sheet in EPREL Database

Notes for Table 3:

1. All device listed here must be disposed as e-waste upon its end of life according to local country guideline in each country.
2. For information on performance values at alternative drive conditions. please refer to the Product Selection Guide, Absolute Maximum Rating Table and Performance Curves in this data sheet.
3. For a definition of useful luminous flux **(Φuse),** please see the ELR regulations at https://tinyurl.com/4b6zvt4m.
4. EPREL requires an arrow symbol containing the letter of the energy efficiency class to be displayed. on technical promotional material. Refer to this energy efficiency class column for specific energy efficiency class on each part number.

Performance at Commonly Used Drive Currents

Vero LED arrays are tested to the specifications shown using the nominal drive currents in Table 1. Vero may also be driven at other drive currents dependent on specific application design requirements. The performance at any drive current can be derived from the current vs. voltage characteristics shown in Figures 1 & 2 and the flux vs. current characteristics shown in Figures 3 & 4. The performance at commonly used drive currents is summarized in Table 4.

Table 4: Product Performance at Commonly Used Drive Currents

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-27E20F0-B-9x	80	125	31.8	4.0	844	786	212
		250	33.0	8.2	1669	1546	202
		300	33.4	10.0	1989	1836	198
		350	**33.8**	**11.8**	**2303**	**2119**	**195**
		630	35.7	22.5	3979	3593	177
		900	37.6	33.8	5512	4896	163
BXRC-27E20F0-C-9x	80	175	31.8	5.6	1180	1099	212
		350	32.9	11.5	2335	2163	203
		400	33.2	13.3	2655	2454	200
		500	**33.8**	**16.9**	**3283**	**3020**	**194**
		875	35.7	31.2	5524	4992	177
		1260	37.5	47.3	7708	6851	163
BXRC-30E20F0-B-9x	80	125	31.8	4.0	861	802	216
		250	33.0	8.2	1704	1577	207
		300	33.4	10.0	2030	1873	203
		350	**33.8**	**11.8**	**2350**	**2162**	**199**
		630	35.7	22.5	4060	3666	180
		900	37.6	33.8	5624	4996	166
BXRC-30E20F0-C-9x	80	175	31.8	5.6	1204	1122	217
		350	32.9	11.5	2383	2207	207
		400	33.2	13.3	2709	2504	204
		500	**33.8**	**16.9**	**3350**	**3082**	**198**
		875	35.7	31.2	5637	5094	181
		1260	37.5	47.3	7865	6991	166
BXRC-35E20F0-B-9x	80	125	31.8	4.0	866	806	218
		250	33.0	8.2	1712	1585	208
		300	33.4	10.0	2040	1883	204
		350	**33.8**	**11.8**	**2362**	**2173**	**200**
		630	35.7	22.5	4081	3685	181
		900	37.6	33.8	5652	5021	167
BXRC-35E20F0-C-9x	80	175	31.8	5.6	1210	1127	218
		350	32.9	11.5	2394	2218	208
		400	33.2	13.3	2723	2516	205
		500	**33.8**	**16.9**	**3367**	**3097**	**199**
		875	35.7	31.2	5665	5120	182
		1260	37.5	47.3	7905	7026	167

Notes for Table 4:

1. Alternate drive currents in Table 4 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 4: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-40E20F0-B-9x	80	125	31.8	4.0	870	810	219
		250	33.0	8.2	1721	1593	209
		300	33.4	10.0	2050	1892	205
		350	**33.8**	**11.8**	**2374**	**2184**	**201**
		630	35.7	22.5	4101	3703	182
		900	37.6	33.8	5680	5046	168
BXRC-40E20F0-C-9x	80	175	31.8	5.6	1216	1133	219
		350	32.9	11.5	2406	2229	209
		400	33.2	13.3	2736	2529	206
		500	**33.8**	**16.9**	**3384**	**3113**	**200**
		875	35.7	31.2	5694	5145	183
		1260	37.5	47.3	7944	7061	168
BXRC-50E20F0-B-9x	80	125	31.8	4.0	853	794	214
		250	33.0	8.2	1687	1562	204
		300	33.4	10.0	2009	1855	200
		350	**33.8**	**11.8**	**2327**	**2140**	**197**
		630	35.7	22.5	4020	3630	179
		900	37.6	33.8	5568	4946	165
BXRC-50E20F0-C-9x	80	175	31.8	5.6	1192	1110	214
		350	32.9	11.5	2359	2185	205
		400	33.2	13.3	2682	2479	202
		500	**33.8**	**16.9**	**3317**	**3051**	**196**
		875	35.7	31.2	5581	5043	179
		1260	37.5	47.3	7787	6921	165

Notes for Table 4:

1. Alternate drive currents in Table 4 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Electrical Characteristics

Table 5: Electrical Characteristics

Part Number	Drive Current (mA)	Forward Voltage Pulsed, T_c = 25°C (V) [1, 2, 3, 8]			Typical Coefficient of Forward Voltage[4] $\Delta V_f/\Delta T_c$ (mV/°C)	Typical Thermal Resistance Junction to Case[5,6] R_{j-c} (°C/W)	Driver Selection Voltages[7] (V)	
		Minimum	Typical	Maximum			V_f Min. Hot T_c = 105°C (V)	V_f Max. Cold T_c = -40°C (V)
BXRC-xxx20Fx-B-9x	350	31.8	33.8	35.8	-13.25	0.22	31.0	37.1
	900	35.4	37.6	39.9	-14.66	0.34	34.5	41.3
BXRC-xxx20Fx-C-9x	500	31.8	33.8	35.8	-13.27	0.19	31.0	37.1
	1260	35.3	37.5	39.8	-14.68	0.29	34.4	41.2

Notes for Table 5:

1. Parts are tested in pulsed conditions, T_c = 25°C. Pulse width is 10ms.
2. Voltage minimum and maximum are provided for reference only and are not a guarantee of performance.
3. Bridgelux maintains a tester tolerance of ± 0.10V on forward voltage measurements.
4. Typical coefficient of forward voltage tolerance is ± 0.1mV for nominal current.
5. Thermal resistance values are based from test data of a 3000K 80 CRI product.
6. Thermal resistance value was calculated using total electrical input power; optical power was not subtracted from input power. The thermal interface material used during testing is not included in the thermal resistance value.
7. V_f min hot and max cold values are provided as reference only and are not guaranteed by test. These values are provided to aid in driver design and selection over the operating range of the product.
8. This product has been designed and manufactured per IEC 62031:2018.

Eye Safety

Table 6: Eye Safety Risk Group (RG) Classifications

Part Number	Drive Current (mA)	CCT[5]		
		2700K/3000K	4000K[2]	5000K[3]
BXRC-xxx20Fx-B-9x		RG1	RG1	RG1
		RG1	RG1	RG2
BXRC-xxx20Fx-C-9x		RG1	RG1	RG1
		RG1	RG1	RG2

Notes for Table 6:

1. Eye safety classification for the use of Bridgelux V Series LED arrays is in accordance with specification IEC/TR 62778: Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires.
2. For products classified as RG2 at 4000K, Ethr= 1980 lx.
3. For products classified as RG2 at 5000K Ethr= 1530 lx.
4. For products classified as RG2 at 6500K, Ethr= 1170 lx.
5. Please contact your Bridgelux sales representative for Ethr values at specific drive currents and CCTs not listed.

Absolute Maximum Ratings

Table 7: Maximum Ratings

Parameter	Maximum Rating	
LED Junction Temperature (T_j)	150˚C	
Storage Temperature[1]	-40˚C to +105˚C	
Operating Case Temperature[2] (T_c)	105˚C[7]	
Soldering Temperature[3]	350˚C or lower for a maximum of 6 seconds	
	BXRC-xxx20Fx-B-9x	BXRC-xxx20Fx-C-9x
Maximum Drive Current[4]	900 mA	1260 mA
Maximum Peak Pulsed Drive Current[5]	1290 mA	1800 mA
Maximum Reverse Voltage[6]	-60V	-60V

Notes for Table 7:

1. The Gen 9 product is robust enough to pass our internal humidity test but it is still more sensitive compared to regular LED array product The product needs to be stored in a dry environment. It is not recommended to use the product in a damp environment that directly exposes it to moisture.
2. For IEC 62717 requirement, please consult your Bridgelux sales representative.
3. Refer to Bridgelux Application Note AN31: Assembly Considerations for Bridgelux Vero LED Arrays.
4. Arrays may be driven at higher currents however lumen maintenance may be reduced and warranty will not apply.
5. Bridgelux recommends a maximum duty cycle of 10% and pulse width of 20 ms when operating LED Arrays at maximum peak pulsed current specified. Maximum peak pulsed currents indicate values where LED Arrays can be driven without catastrophic failures.
6. Light emitting diodes are not designed to be driven in reverse voltage and will not produce light under this condition. Maximum rating provided for reference only.
7. For good thermal management and to achieve optimal LED lifetime, please ensure that your thermal design accounts for the temperature of the light emitting surface (LES) to not exceed 140 deg C.

Performance Curves

Figure 1: Vero13B Drive Current vs. Voltage

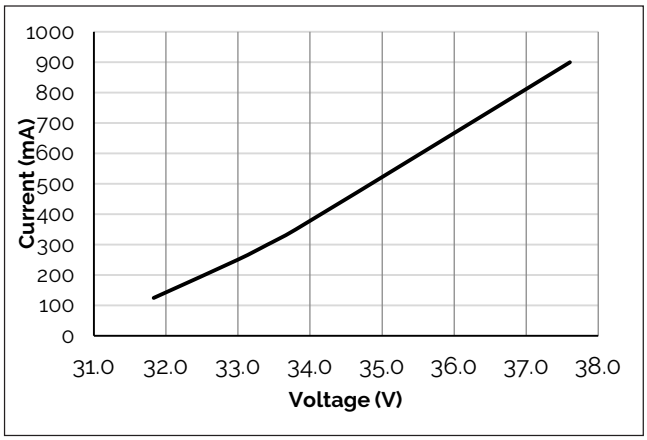


Figure 2: Vero13C Drive Current vs. Voltage

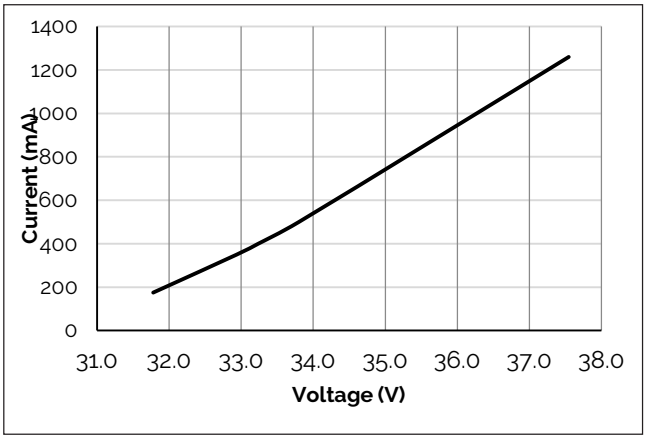


Figure 3: Vero13B Typical Relative Flux vs. Current

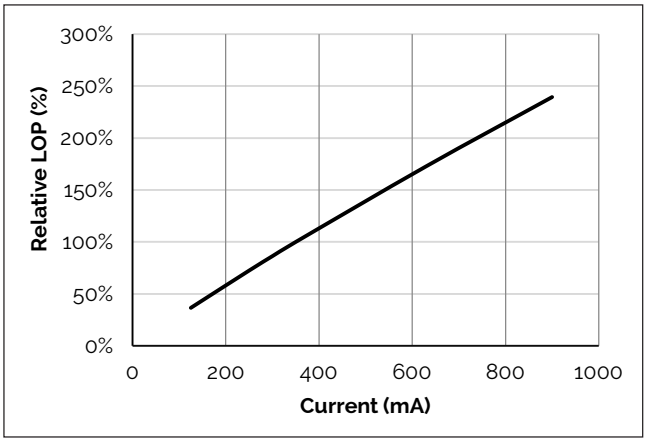


Figure 4: Vero13C Typical Relative Flux vs. Current

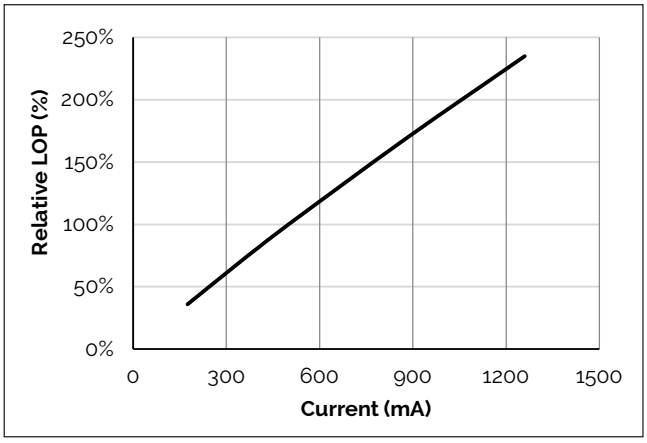


Figure 5: Typical DC Flux vs. Case Temperature

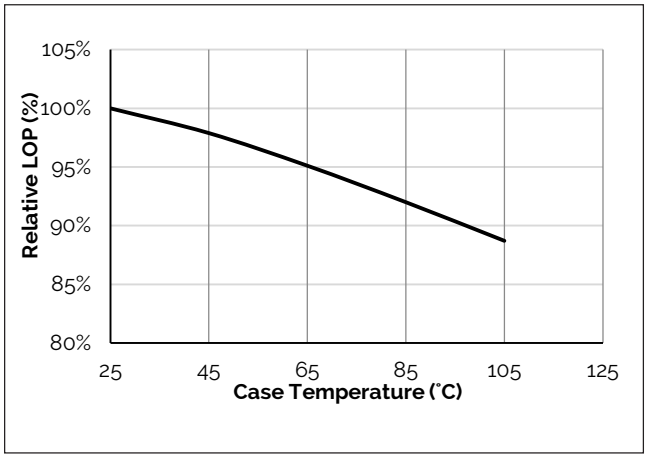
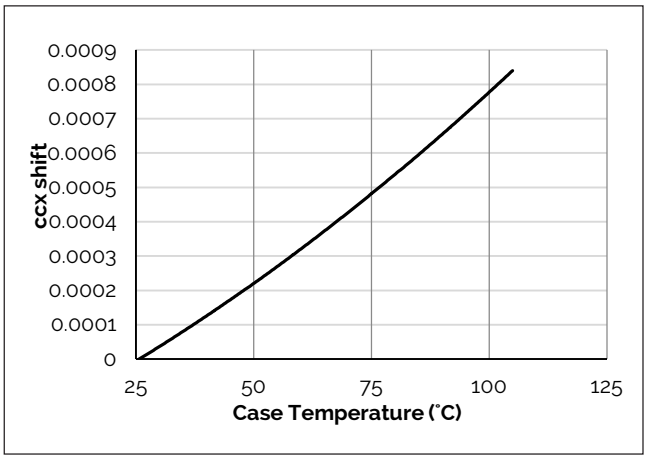


Figure 6: Typical DC ccx Shift vs. Case Temperature



Notes for Figures 1-4:

1. Bridgelux does not recommend driving high power LEDs at low currents. Doing so may produce unpredictable results. Pulse width modulation (PWM) is recommended for dimming effects.
2. Products tested under pulsed condition (10ms pulse width) at nominal drive current where T_j (junction temperature) = T_c (case temperature) = 25˚C.

Note for Figures 5-6:

1. Characteristics shown for Warm White.

Performance Curves

Figure 7: Typical DC ccy Shift vs. Case Temperature

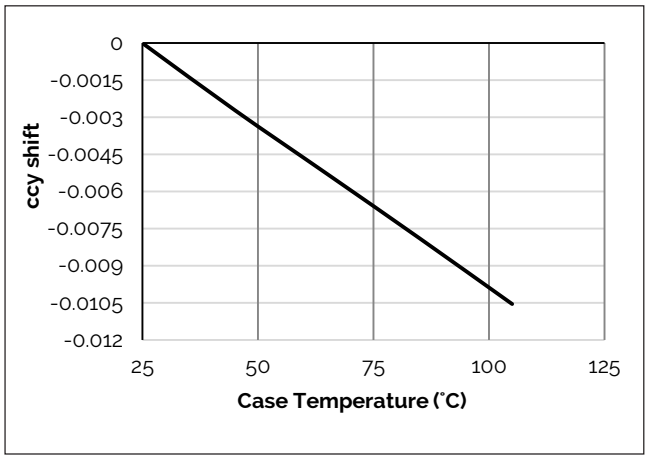


Figure 8: Vero13B Drive Current vs. ccx Shift

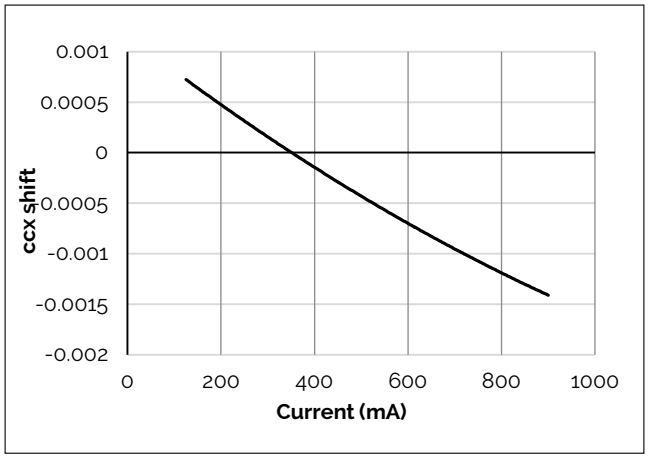


Figure 9: Vero13B Drive Current vs. ccy Shift

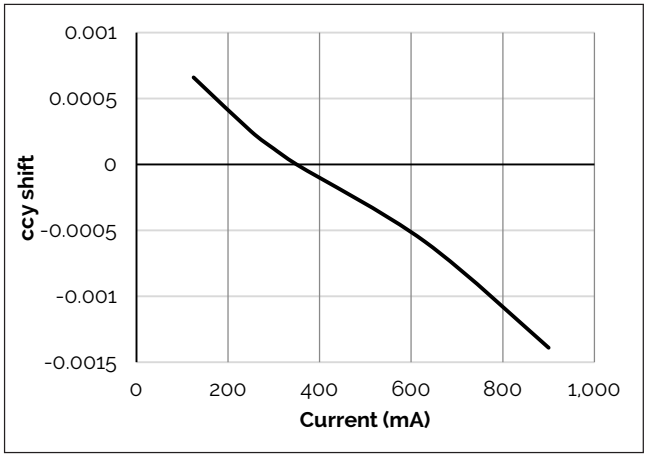


Figure 10: Vero13C Drive Current vs. ccx Shift

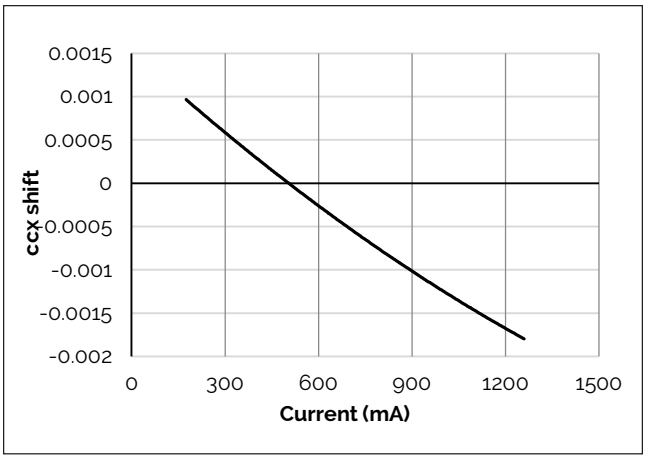
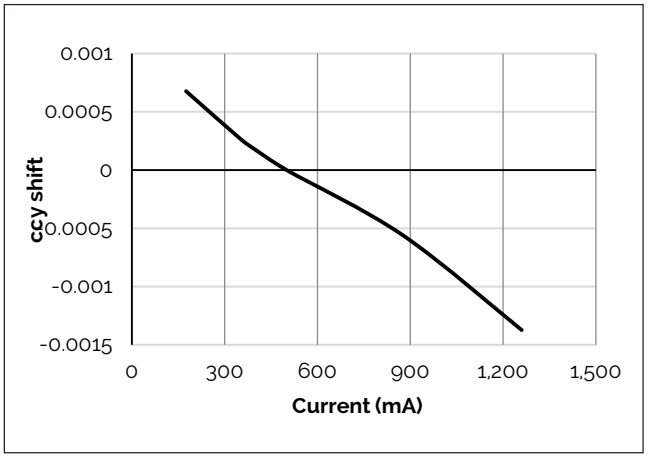


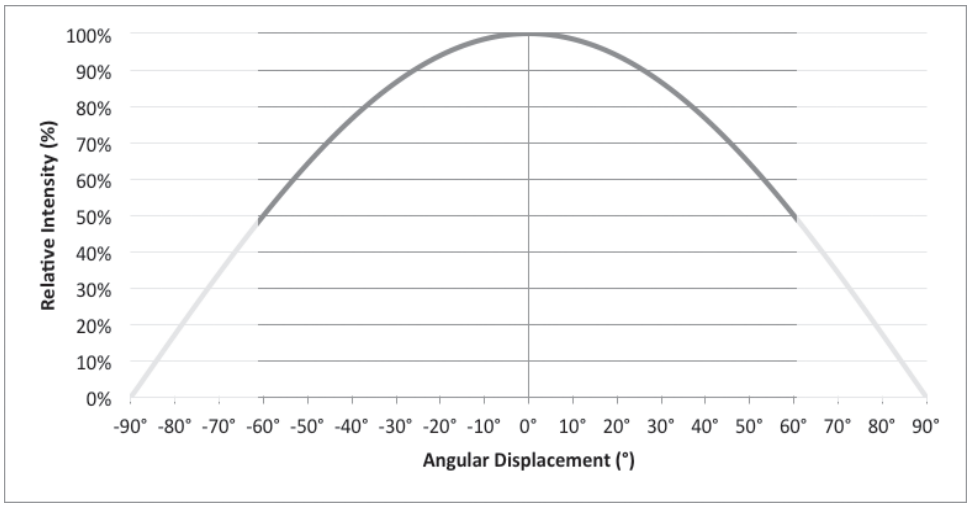
Figure 11: Vero13C Drive Current vs. ccy Shift



Note for Figures 7-11:
1. Characteristics shown for Warm White.

Typical Radiation Pattern

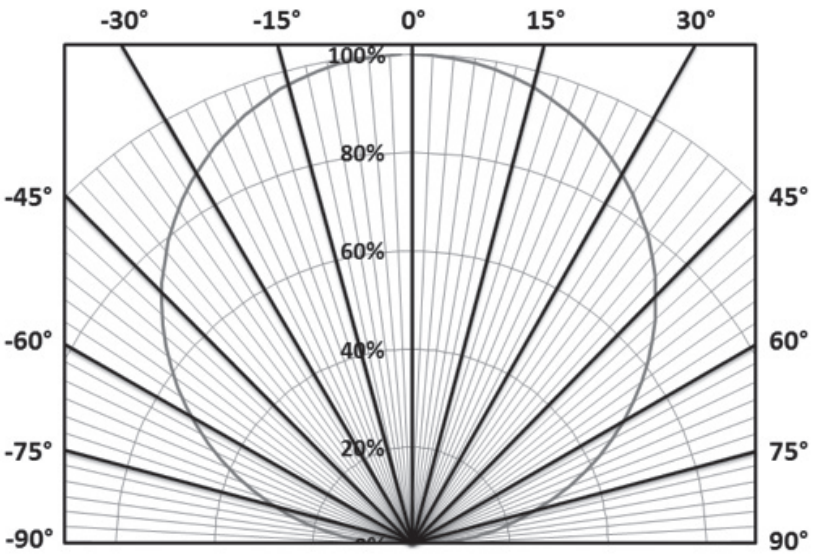
Figure 12: Typical Spatial Radiation Pattern



Notes for Figure 12:

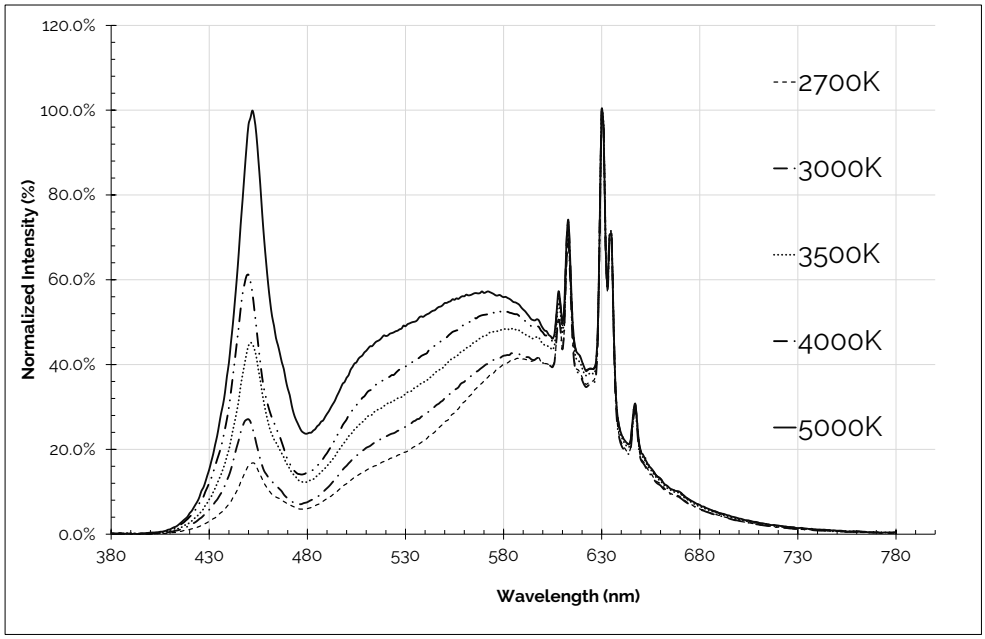
1. Typical viewing angle is 120°.
2. The viewing angle is defined as the off axis angle from the centerline where intensity is ½ of the peak value.

Figure 13: Typical Polar Radiation Pattern



Typical Color Spectrum

Figure 14: Typical Color Spectrum

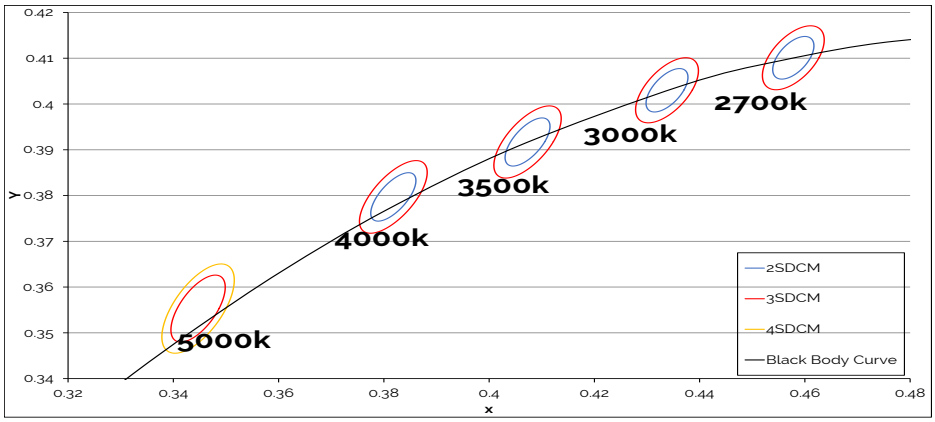


Notes for Figure 14:

1. Color spectra measured at nominal current for $T_j = T_c = 85°C$.
2. Color spectra shown is 2700K and 80CRI.
3. Color spectra shown is 3000K and 80 CRI.
4. Color spectra shown is 3500K and 80 CRI.
5. Color spectra shown is 4000K and 80 CRI.
6. Color spectra shown is 5000K and 80 CRI.

Color Binning Information

Figure 15: Warm,Neutral and Cool White Test Bins in xy Color Space



Note: Pulsed Test Conditions, T_c = 85˚C

Table 8: Warm and Neutral White xy Bin Coordinates and Associated Typical CCT (product is hot targeted to Tc = 85˚C)

Bin Code	2700K	3000K	3500K	4000K
ANSI Bin (for reference only)	(2580K - 2870K)	(2870K - 3220K)	(3220K - 3710K)	(3710K - 4260K)
93 (3 SDCM)	(2651K - 2794K)	(2968K - 3136K)	(3369K - 3586K)	(3851K - 4130K)
92 (2 SDCM)	(2674K - 2769K)	(2995K - 3107K)	(3404K - 3548K)	(3895K - 4081K)
Center Point (x,y)	(0.4578, 0.4101)	(0.4338, 0.403)	(0.4073, 0.3917)	(0.3818, 0.3797)

Table 9: Cool White xy Bin Coordinates and Associated Typical CCT (product is hot targeted to T_c = 85˚C)

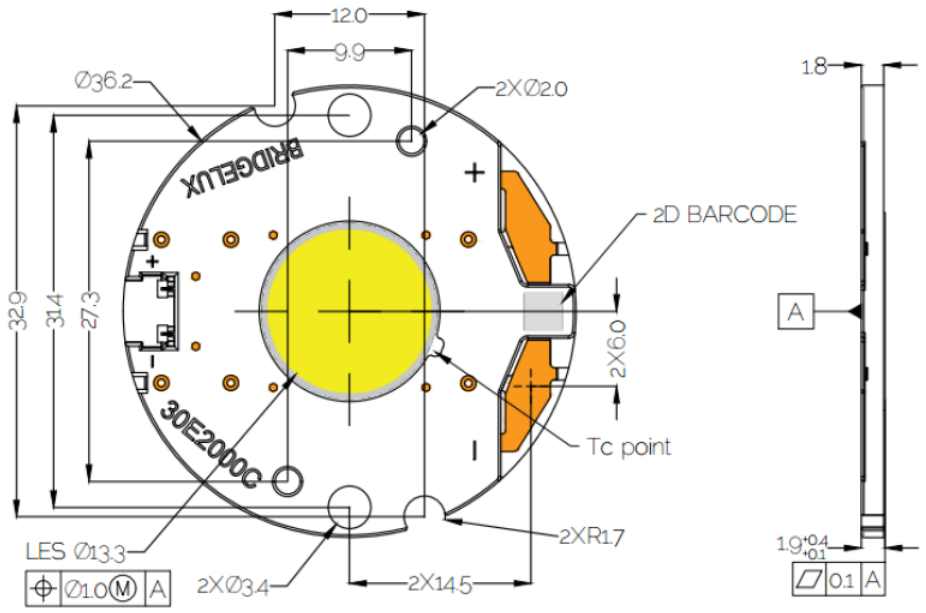
Bin Code	5000K
ANSI Bin (for reference only)	(4745K - 5311K)
94 (4 SDCM)	(4801K - 5282K)
93 (3 SDCM)	(4835K - 5215K)
Center Point (x,y)	(0.3447, 0.3553)

Note for Tables 8-9:

1. Bridgelux maintains a tolerance of +/- 0.007 on x and y color coordinates in the CIE 1931 color Space.

Mechanical Dimensions

Figure 16: Drawing for Vero13 LED Array

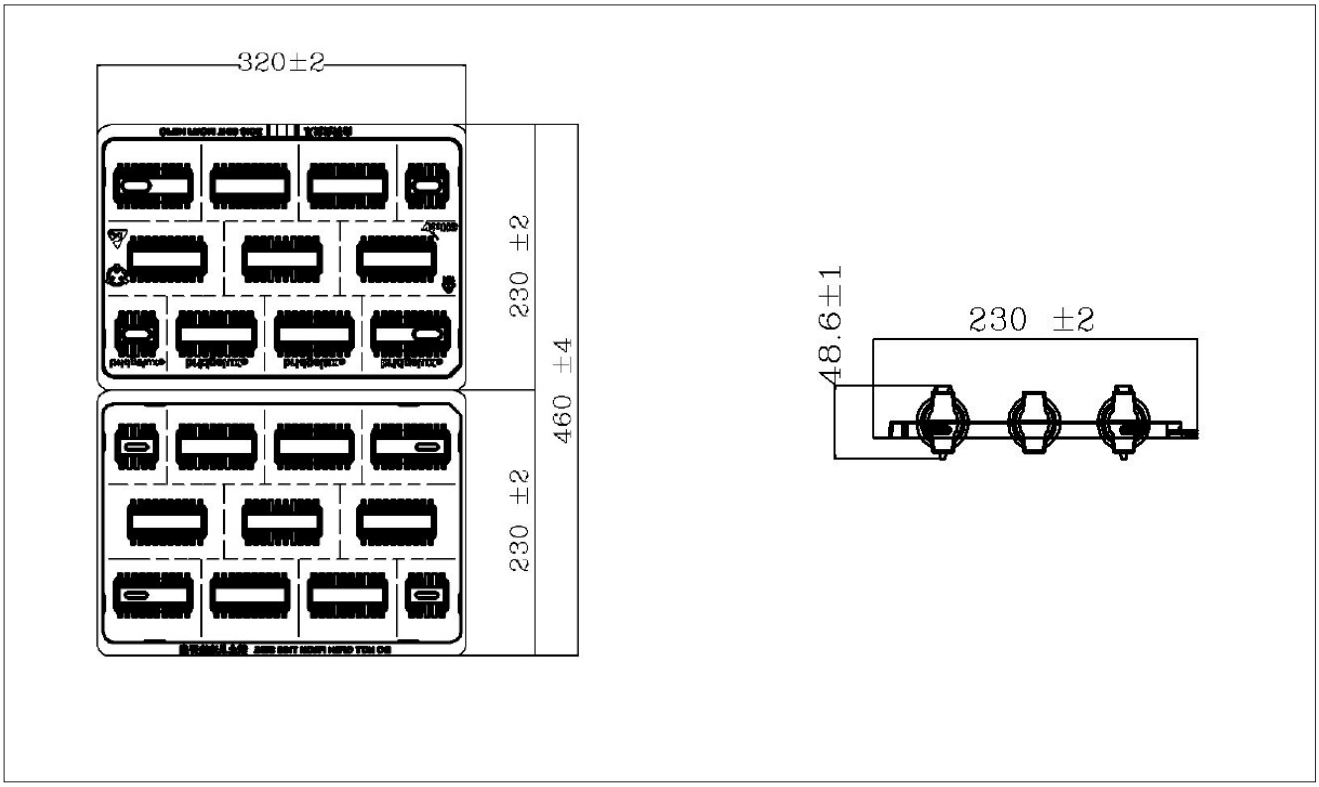


Notes for Figure 16:

1. Drawings are not to scale.
2. Drawing dimensions are in millimeters.
3. Unless otherwise specified, tolerances are ±0.1mm.
4. Mounting holes (2X) are for M2.5 screws.
5. Bridgelux recommends two tapped holes for mounting screws with 31.4 ± 0.10mm center-to-center spacing.
6. Screws with flat shoulders (pan, dome, button, round, truss, mushroom) provide optimal torque control. Do NOT use flat, countersink, or raised head screws.
7. Solder pads and connector port are labeled "+" and "-" to denote positive and negative, respectively.
8. It is not necessary to provide electrical connections to both the solder pads and the connector port. Either set may be used depending on application specific design requirements.
9. Refer to Application Notes AN30 and AN31 for product handling, mounting and heat sink recommendations.
10. The optical center of the LED Array is nominally defined by the mechanical center of the array to a tolerance of ± 0.2mm.
11. Bridgelux maintains a flatness of 0.10mm across the mounting surface of the array.

Packaging and Labeling

Figure 17: Drawing for Vero 13 Packaging Tray

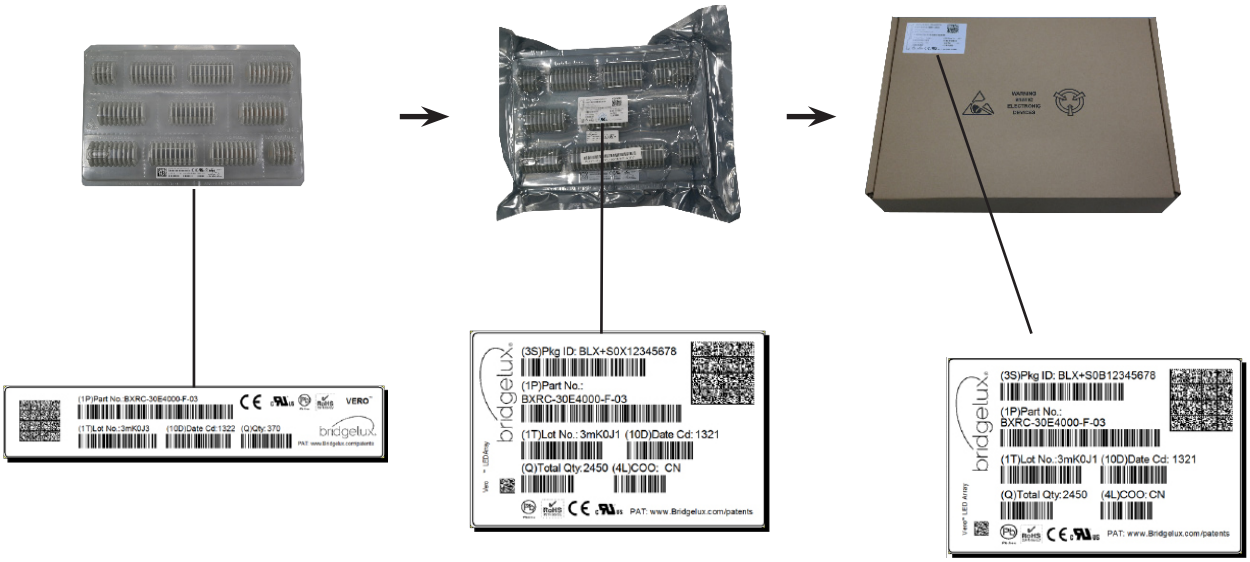


Notes for Figure 17:

1. Dimensions are in millimeters.
2. Drawings are not to scale.

Packaging and Labeling

Figure 18: Vero Series Packaging and Labeling



Notes for Figure 18:

1. Each tray holds 100 COBs.
2. Each tray is vacuum sealed in an anti-static bag and placed in its own box.
3. Each tray, bag and box is to be labeled as shown above.

Figure 19: Product Labeling

Bridgelux COB arrays have laser markings on the back side of the substrate to help with product identification. In addition to the product identification markings, Bridgelux COB arrays 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 COB array.

Design Resources

Application Notes

Bridgelux has developed a comprehensive set of application notes and design resources to assist customers in successfully designing with the Vero product family of LED array products. For all available application notes 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.

3D CAD Models

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

LM80

LM80 testing has been completed and the LM80 report is now available. Please contact your Bridgelux sales representative for LM-80 report.

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 AN31 for additional information.

CAUTION: RISK OF BURN

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

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 plastic housing of the Vero 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

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.

STANDARD TEST CONDITIONS

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

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
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