

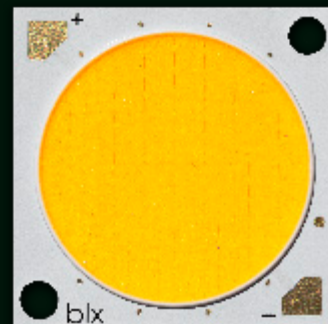
Bridgelux® V22 F90 BBBL Array Series

Product Data Sheet DS449-2



Introduction

V Series



The V Series™ LED Array products deliver high quality light in a compact and cost-effective solid-state lighting package. These chip on board (CoB) arrays can be efficiently driven up to two times the nominal drive current, enabling design flexibility not previously possible. These high flux density light sources are designed to support a wide range of high quality, low cost directional luminaires and replacement lamps for both interior and exterior commercial and residential applications.

The F90 V 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 90 CRI product of the F90 Series delivering better or equivalent efficacy as that of our traditional 80 CRI V Series product.

The V22 LED Array is available in a variety of electrical, CCT, and CRI combinations providing substantial design flexibility and energy efficiency advantages.

Lighting system designs incorporating these LED arrays deliver increased system level efficacy and a longer service life. Typical applications include replacement lamps and task, accent, spot, track, wide area, security, wall packs and down lights.

Features

- Efficacy of 179 lm/W typical, 3000K 90 CRI
- Wide selection of CCT options (2700K-4000K) with minimum 90 CRI options
- Uniform high-quality illumination
- 2 and 3 SDCM binning options (2700K – 4000K)
- Forward voltage bin codes and backside marking
- Instant light with unlimited dimming
- 5-Year warranty

Benefits

- 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
- Easy to use with daylight and motion sensors to increase energy savings
- Design with confidence



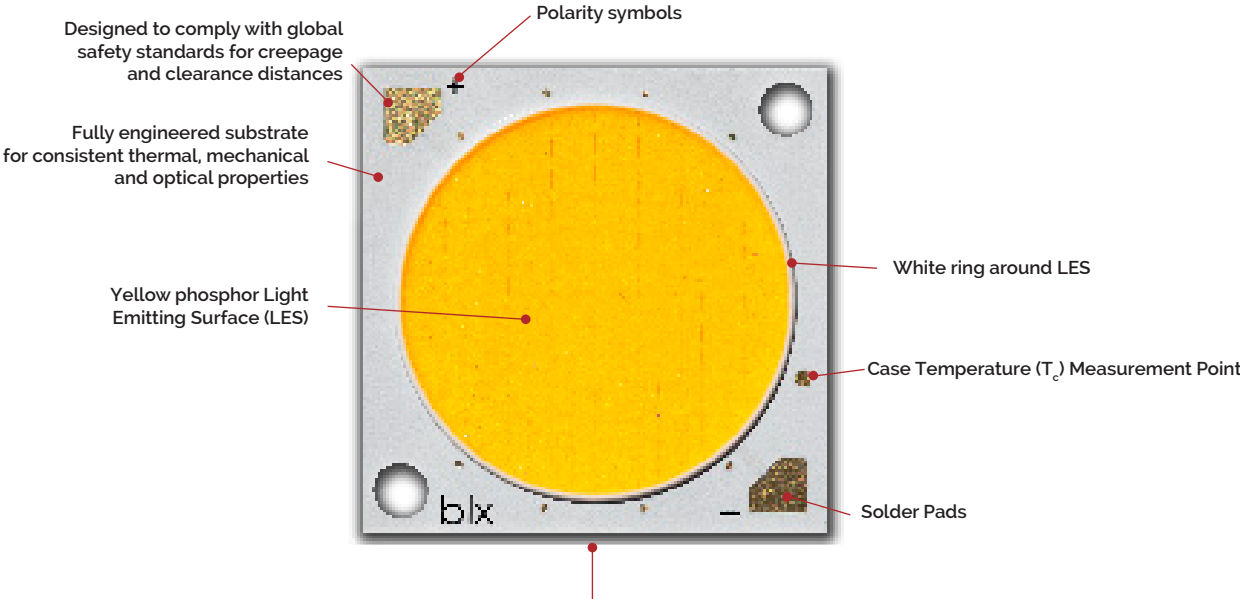
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Product Feature Map

Bridgelux arrays are fully engineered devices that provide consistent thermal and optical performance on an engineered mechanical platform. The V Series arrays are the most compact CoB devices across all of Bridgelux's LED Array products.

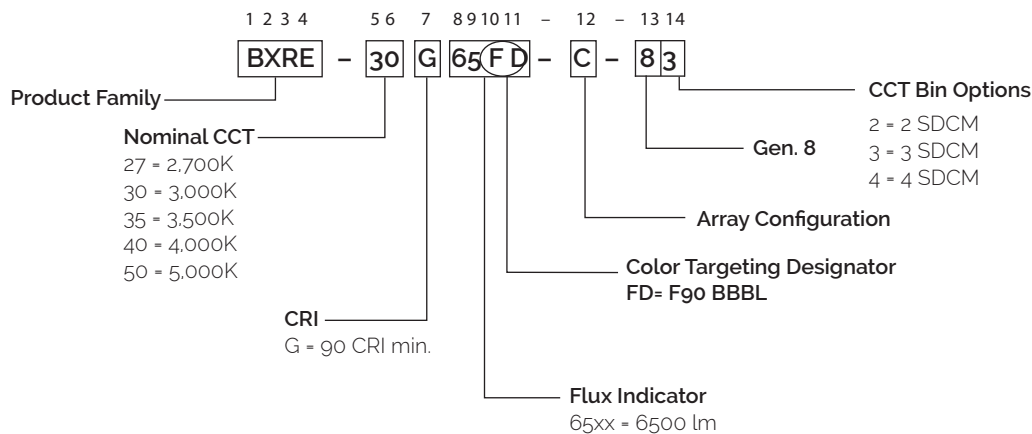
The arrays incorporate several features to simplify design integration and assembly. Please visit www.bridgelux.com for more information on the V Series family of products.



Note: Part number and lot codes are scribed on back of array

Product Nomenclature

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



Product Selection Guide

The following product configurations are available:

Table 1: Selection Guide, Pulsed Measurement Data ($T_j = T_c = 25^\circ\text{C}$)

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical Pulsed Flux ^{4,5,6} $T_c = 25^\circ\text{C}$ (lm)	Minimum Pulsed Flux ^{6,7} $T_c = 25^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-27G65FD-B-8x	2700	90	950	8583	7725	51.6	49.0	175
BXRE-27G65FD-C-8x	2700	90	1200	10808	9727	52.0	62.4	173
BXRE-27G65FD-D-8x	2700	90	1050	6338	5704	34.5	36.2	175
BXRE-30G65FD-B-8x	3000	90	950	8759	7883	51.6	49.0	179
BXRE-30G65FD-C-8x	3000	90	1200	11029	9926	52.0	62.4	177
BXRE-30G65FD-D-8x	3000	90	1050	6468	5821	34.5	36.2	179
BXRE-35G65FD-B-8x	3500	90	950	8711	7840	51.6	49.0	178
BXRE-35G65FD-C-8x	3500	90	1200	10969	9872	52.0	62.4	176
BXRE-35G65FD-D-8x	3500	90	1050	6432	5789	34.5	36.2	178
BXRE-40G65FD-B-8x	4000	90	950	8797	7917	51.6	49.0	179
BXRE-40G65FD-C-8x	4000	90	1200	11077	9970	52.0	62.4	178
BXRE-40G65FD-D-8x	4000	90	1050	6496	5846	34.5	36.2	179

Notes for Table 1:

1. Nominal CCT as defined by ANSI C78.377-2011.
2. CRI values are minimums and tested at $T_j = T_c = 25^\circ\text{C}$. Minimum Rg value for 90 CRI products is 50. Bridgelux maintains a ± 3 tolerance on CRI and Rg 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 $\pm 7\%$ tolerance on flux measurements.
7. Minimum flux values at the nominal drive current are guaranteed by 100% test.

Product Selection Guide

Table 2: Selection Guide, Stabilized DC Performance ($T_c = 65^\circ\text{C}$) ^{4,5}

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical DC Flux ^{4,5} $T_c = 65^\circ\text{C}$ (lm)	Minimum DC Flux ⁶ $T_c = 65^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-27G65FD-B-8x	2700	90	950	8025	7107	50.9	48.4	166
BXRE-27G65FD-C-8x	2700	90	1200	10106	8949	51.3	61.6	164
BXRE-27G65FD-D-8x	2700	90	1050	5926	5248	34.0	35.7	166
BXRE-30G65FD-B-8x	3000	90	950	8189	7252	50.9	48.4	169
BXRE-30G65FD-C-8x	3000	90	1200	10312	9132	51.3	61.6	167
BXRE-30G65FD-D-8x	3000	90	1050	6047	5355	34.0	35.7	169
BXRE-35G65FD-B-8x	3500	90	950	8145	7213	50.9	48.4	168
BXRE-35G65FD-C-8x	3500	90	1200	10256	9082	51.3	61.6	167
BXRE-35G65FD-D-8x	3500	90	1050	6014	5326	34.0	35.7	168
BXRE-40G65FD-B-8x	4000	90	950	8225	7284	50.9	48.4	170
BXRE-40G65FD-C-8x	4000	90	1200	10357	9172	51.3	61.6	168
BXRE-40G65FD-D-8x	4000	90	1050	6074	5379	34.0	35.7	170

Notes for Table 2:

1. Nominal CCT as defined by ANSI C78.377-2011.
2. CRI values are minimums and tested at $T_j = T_c = 65^\circ\text{C}$. Minimum Rg value for 90 CRI products is 50.
3. Drive current is referred to as nominal drive current.
4. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.
5. 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 65°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.
6. Minimum flux values at elevated temperatures are provided for reference only and are not guaranteed by 100% production testing. 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.


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 (Φ_{use}) at 85°C (lm)	Power (W)	Efficacy (lm/W)	Energy efficiency class ⁴ 	Registration No	URL to Product Information Sheet in EPREL Database
BXRE-27G65FD-B-8x	2700	90	2340	57.0	17069	133	128	E	1425073	https://eprelec.europa.eu/qr/1425073
BXRE-27G65FD-C-8x	2700	90	2700	57.0	19781	154	129	E	1425074	https://eprelec.europa.eu/qr/1425074
BXRE-30G65FD-B-8x	3000	90	2340	57.0	17417	133	131	E	1425103	https://eprelec.europa.eu/qr/1425103
BXRE-30G65FD-C-8x	3000	90	2700	57.0	20184	154	131	E	1425104	https://eprelec.europa.eu/qr/1425104
BXRE-35G65FD-B-8x	3500	90	2340	57.0	17592	133	132	E	1425134	https://eprelec.europa.eu/qr/1425134
BXRE-35G65FD-C-8x	3500	90	2700	57.0	20386	154	132	E	1425135	https://eprelec.europa.eu/qr/1425135
BXRE-40G65FD-B-8x	4000	90	2340	57.0	17766	133	133	E	1425165	https://eprelec.europa.eu/qr/1425165
BXRE-40G65FD-C-8x	4000	90	2700	57.0	20588	154	134	E	1425166	https://eprelec.europa.eu/qr/1425166

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 (Φ_{use}), 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

V Series LED arrays are tested to the specifications shown using the nominal drive currents in Table 1. V Series 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 & 3 and the flux vs. current characteristics shown in Figures 4, 5 & 6. 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 $T_c = 25^\circ\text{C}$ (V)	Typical Power $T_c = 25^\circ\text{C}$ (W)	Typical Flux ² $T_c = 25^\circ\text{C}$ (lm)	Typical DC Flux ³ $T_c = 65^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRE-27G65FD-B-8x	90	475	49.4	23.4	4418	4173	188
		725	50.6	36.7	6636	6242	181
		950	51.6	49.0	8583	8025	175
		1170	52.6	61.5	10444	9701	170
		1900	55.6	105.6	16309	14831	154
		2340	57.2	133.8	19112	17647	143
BXRE-27G65FD-C-8x	90	600	49.6	29.7	5574	5277	187
		900	50.8	45.7	8226	7748	180
		1200	52.0	62.4	10808	10106	173
		1440	52.9	76.2	12824	11915	168
		2400	56.2	134.9	20440	18551	151
		2700	57.2	154.3	22673	20454	147
BXRE-27G65FD-D-8x	90	525	32.9	17.3	3260	3094	188
		785	33.7	26.5	4799	4544	181
		1050	34.5	36.2	6338	5926	175
		1400	35.4	49.6	8292	6987	167
		2100	37.2	78.1	12011	10879	154
		2520	38.1	96.0	14113	11995	147
BXRE-30G65FD-B-8x	90	475	49.4	23.4	4509	4258	192
		725	50.6	36.7	6771	6369	185
		950	51.6	49.0	8759	8189	179
		1170	52.6	61.5	10657	9899	173
		1900	55.6	105.6	16642	15134	158
		2340	57.2	133.8	19502	18007	146
BXRE-30G65FD-C-8x	90	600	49.6	29.7	5688	5384	191
		900	50.8	45.7	8394	7906	184
		1200	52.0	62.4	11029	10312	177
		1440	52.9	76.2	13086	12158	172
		2400	56.2	134.9	20857	18930	155
		2700	57.2	154.3	23136	20871	150
BXRE-30G65FD-D-8x	90	525	32.9	17.3	3327	3158	192
		785	33.7	26.5	4897	4636	185
		1050	34.5	36.2	6468	6047	179
		1400	35.4	49.6	8461	7130	171
		2100	37.2	78.1	12257	11101	157
		2520	38.1	96.0	14401	12239	150

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 $\pm 7\%$ 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 $T_c = 25^\circ\text{C}$ (V)	Typical Power $T_c = 25^\circ\text{C}$ (W)	Typical Flux ² $T_c = 25^\circ\text{C}$ (lm)	Typical DC Flux ³ $T_c = 65^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRE-35G65FD-B-8x	90	475	49.4	23.4	4484	4235	191
		725	50.6	36.7	6734	6335	184
		950	51.6	49.0	8711	8145	178
		1170	52.6	61.5	10599	9845	172
		1900	55.6	105.6	16551	15051	157
		2340	57.2	133.8	19396	17909	145
BXRE-35G65FD-C-8x	90	600	49.6	29.7	5656	5355	190
		900	50.8	45.7	8348	7863	183
		1200	52.0	62.4	10969	10256	176
		1440	52.9	76.2	13014	12092	171
		2400	56.2	134.9	20743	18827	154
		2700	57.2	154.3	23010	20757	149
BXRE-35G65FD-D-8x	90	525	32.9	17.3	3308	3140	191
		785	33.7	26.5	4871	4611	184
		1050	34.5	36.2	6432	6014	178
		1400	35.4	49.6	8415	7091	170
		2100	37.2	78.1	12190	11040	156
		2520	38.1	96.0	14322	12173	149
BXRE-40G65FD-B-8x	90	475	49.4	23.4	4528	4277	193
		725	50.6	36.7	6801	6397	186
		950	51.6	49.0	8797	8225	179
		1170	52.6	61.5	10704	9943	174
		1900	55.6	105.6	16715	15200	158
		2340	57.2	133.8	19588	18086	146
BXRE-40G65FD-C-8x	90	600	49.6	29.7	5712	5408	192
		900	50.8	45.7	8431	7941	184
		1200	52.0	62.4	11077	10357	178
		1440	52.9	76.2	13143	12212	173
		2400	56.2	134.9	20948	19013	155
		2700	57.2	154.3	23237	20963	151
BXRE-40G65FD-D-8x	90	525	32.9	17.3	3341	3171	193
		785	33.7	26.5	4919	4657	186
		1050	34.5	36.2	6496	6074	179
		1400	35.4	49.6	8498	7161	171
		2100	37.2	78.1	12310	11150	158
		2520	38.1	96.0	14464	12293	151

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 $\pm 7\%$ 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, $T_c = 25^\circ\text{C}$ (V) ^{1, 2, 3, 8}			Typical Coefficient of Forward Voltage ⁴ $\Delta V_f / \Delta T_c$ (mV/ $^\circ\text{C}$)	Typical Thermal Resistance Junction to Case ^{5,6} R_{j-c} ($^\circ\text{C}/\text{W}$)	Driver Selection Voltages ⁷ (V)	
		Minimum	Typical	Maximum			V_f Min. Hot $T_c = 95^\circ\text{C}$ (V)	V_f Max. Cold $T_c = -40^\circ\text{C}$ (V)
BXRE-xxx65FD-B-8x	950	48.5	51.6	54.7	-17	0.07	47.3	55.8
	2340	53.7	57.2	60.6	-19	0.13	52.4	61.8
BXRE-xxx65FD-C-8x	1200	48.9	52.0	55.1	-17	0.08	47.7	56.2
	2700	53.7	57.2	60.6	-19	0.15	52.4	61.8
BXRE-xxx65FD-D-8x	1050	32.4	34.5	36.5	-11	0.08	31.6	37.3
	2520	35.8	38.1	40.4	-13	0.14	34.9	41.2

Notes for Table 5:

- Parts are tested in pulsed conditions, $T_c = 25^\circ\text{C}$. Pulse width is 10ms.
- Voltage minimum and maximum are provided for reference only and are not a guarantee of performance.
- Bridgelux maintains a tester tolerance of $\pm 0.10\text{V}$ on forward voltage measurements.
- Typical coefficient of forward voltage tolerance is $\pm 0.1\text{mV}$ for nominal current.
- Thermal resistance values are based from test data of a 3000K 90 CRI product.
- 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.
- 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.
- This product has been designed and manufactured per IEC 62031:2018. This product has passed dielectric withstand voltage testing at 1140 V. The working voltage designated for the insulation is 70V d.c. The maximum allowable voltage across the array must be determined in the end product application.

Eye Safety

Table 6: Eye Safety Risk Group (RG) Classifications

Part Number	Drive Current (mA)	CCT ¹	
		2700K/3000K	3500-5000K ^{2,3}
BXRE-xxx65Fx-B-8x	1485	RG1	RG1
	2340	RG1	RG2
BXRE-xxx65Fx-C-8x	1515	RG1	RG1
	2500	RG1	RG2
	2700	RG2	RG2
BXRE-xxx65Fx-D-8x	2160	RG1	RG1
	2520	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. 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 +95°C		
Operating Case Temperature ² (T_c)	95°C		
Soldering Temperature ³	350°C or lower for a maximum of 6 seconds		
	BXRE-xxx65FD-B-8x	BXRE-xxx65FD-C-8x	BXRE-xxx65FD-D-8x
Maximum Drive Current ⁴	2340 mA at ≤85°C 1755 mA at 95°C	2700 mA at ≤85°C 2025 mA at 95°C	2520 mA at ≤85°C 1890 mA at 95°C
Maximum Peak Pulsed Drive Current ⁵	3350 mA	3870 mA	3610 mA
Maximum Reverse Voltage ⁶	-90V	-90V	-50V

Notes for Table 7:

1. The Fgo 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 AN101: Handling and Assembly of Bridgelux V Series 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.

Performance Curves

Figure 1: V22B Drive Current vs. Voltage

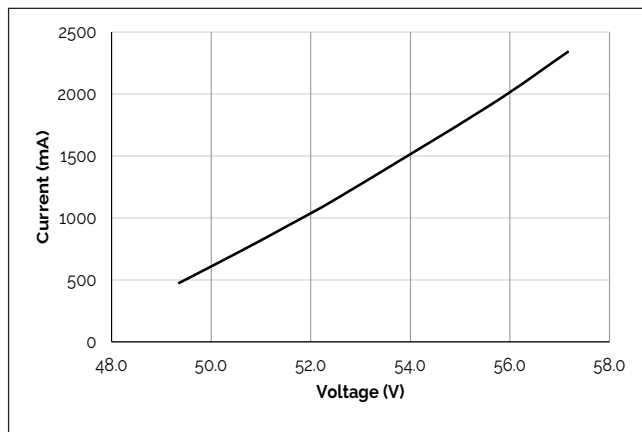


Figure 2: V22C Drive Current vs. Voltage

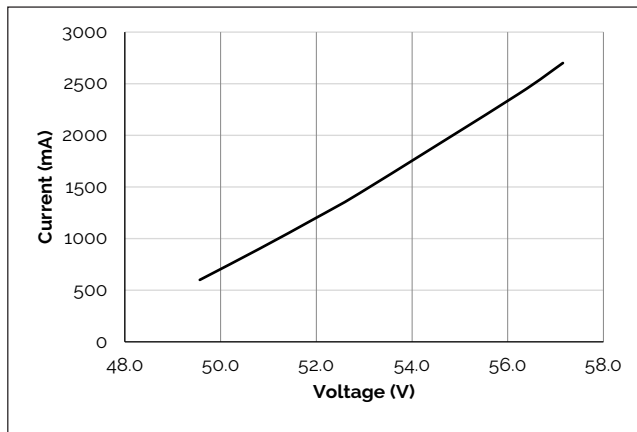


Figure 3: V22D Drive Current vs. Voltage

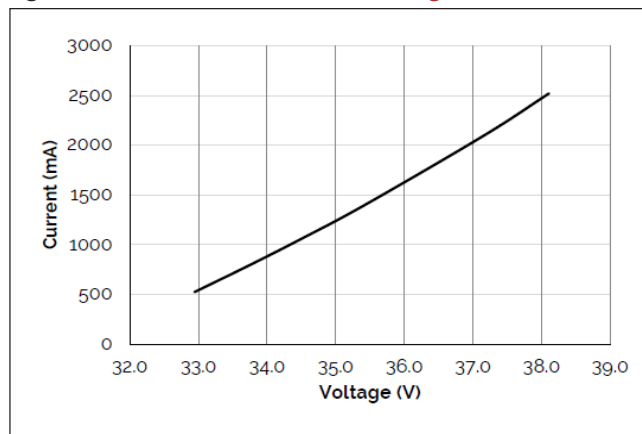


Figure 4: V22B Typical Relative Flux vs. Current

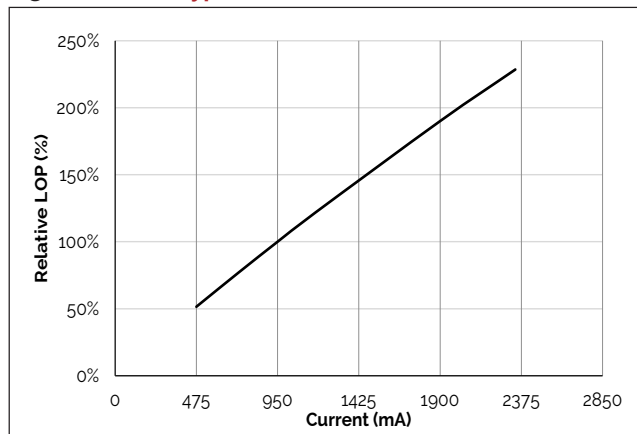


Figure 5: V22C Typical Relative Flux vs. Current

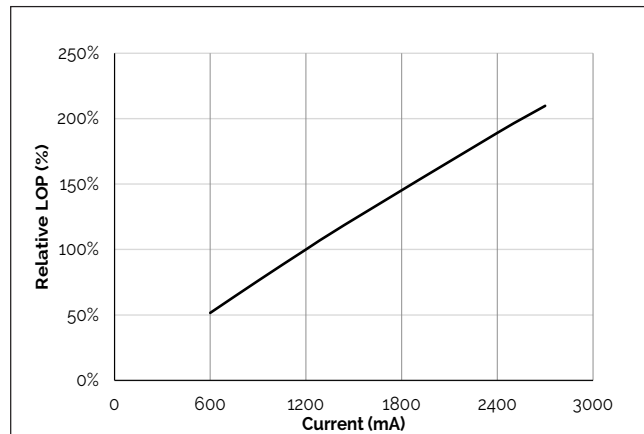
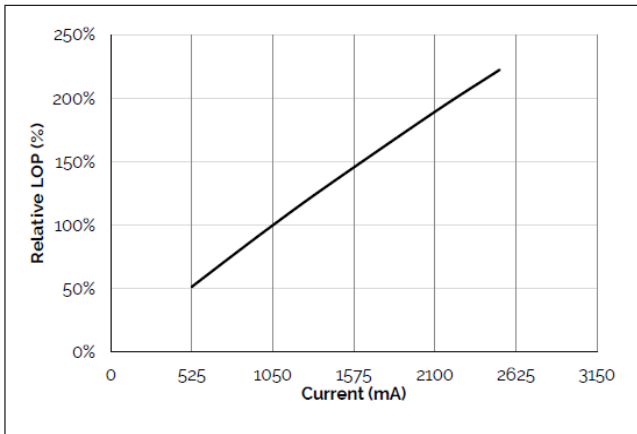


Figure 6: V22D Typical Relative Flux vs. Current



Notes for Figures 1-6:

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 test current where T_j (junction temperature) = T_c (case temperature) = 25°C.

Performance Curves

Figure 7: Typical DC Flux vs. Case Temperature

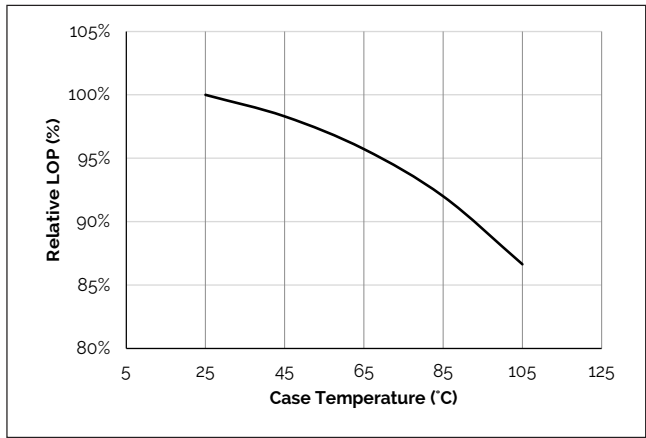
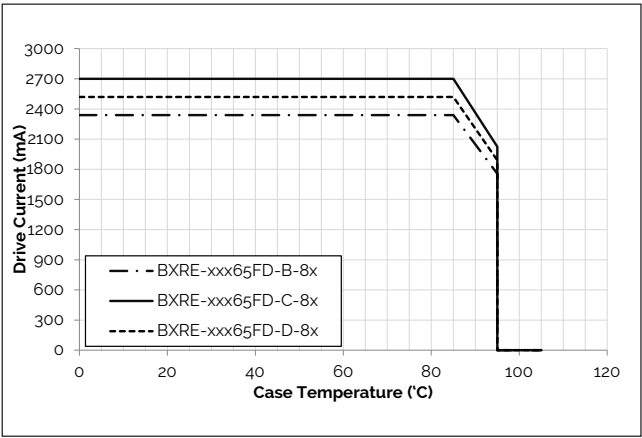


Figure 8: Derating Curve

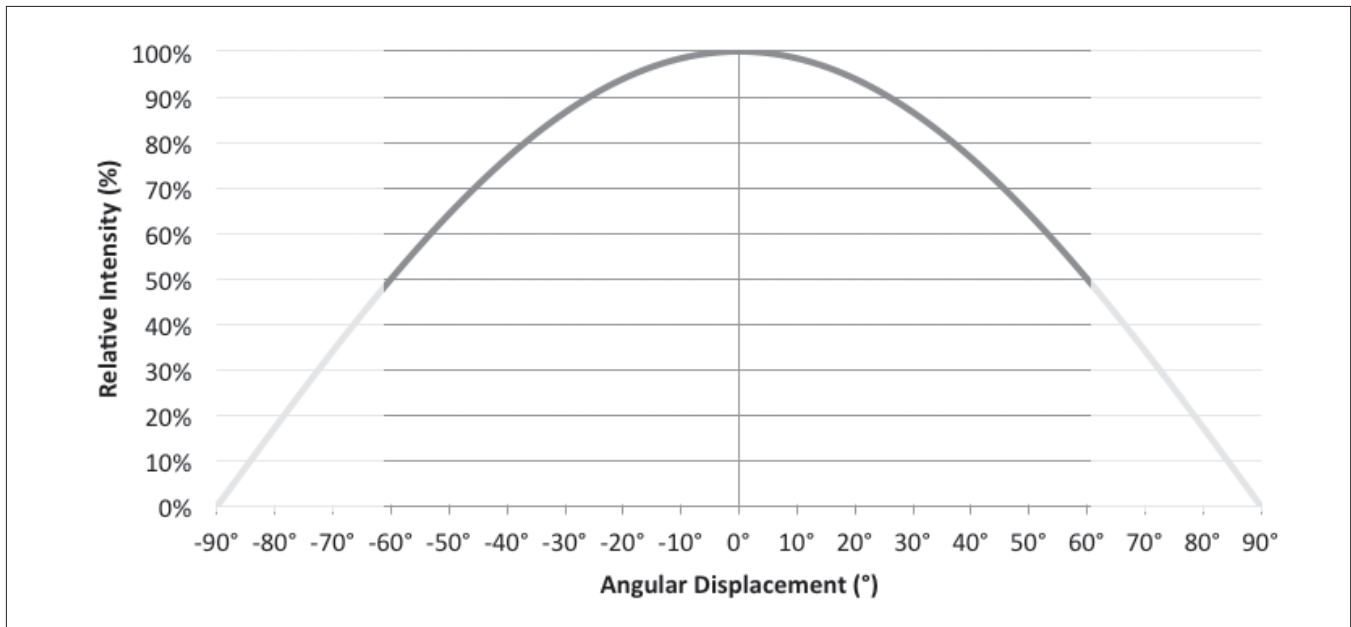


Notes for Figures 7-8:

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 test current where T_j (junction temperature) = T_c (case temperature) = 25°C.

Typical Radiation Pattern

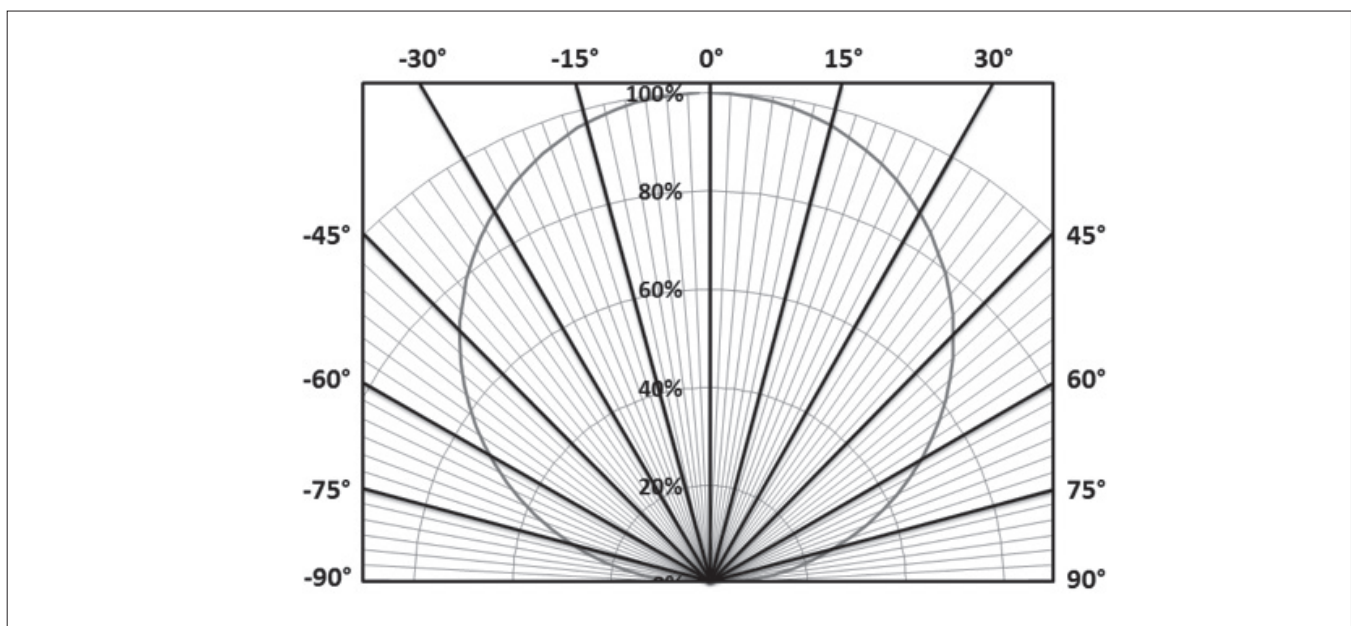
Figure 9: Typical Spatial Radiation Pattern



Notes for Figure 9:

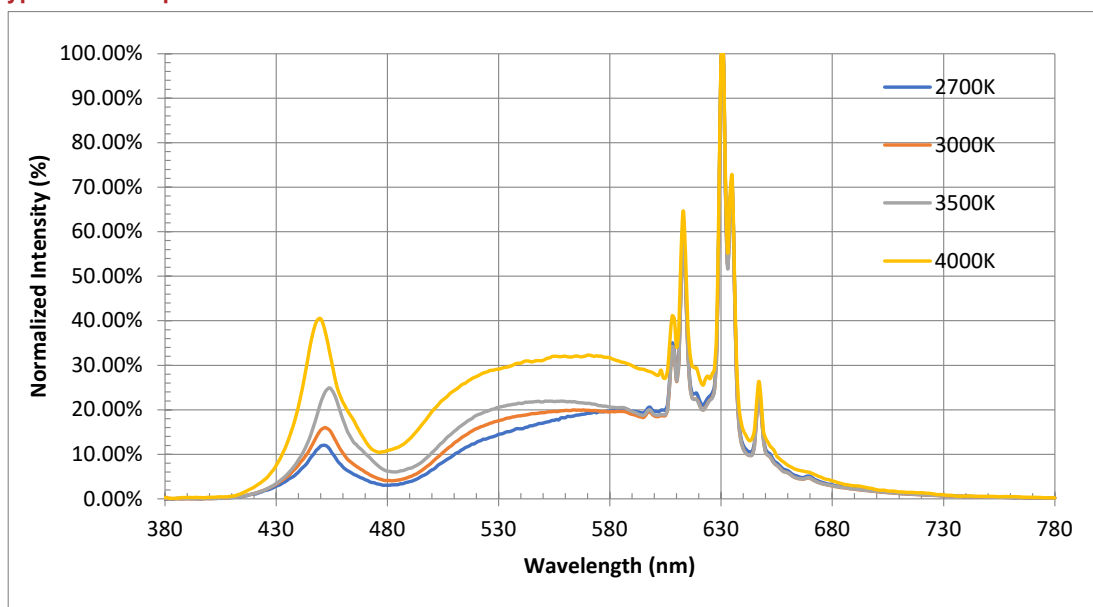
1. Typical viewing angle is 120°.
2. The viewing angle is defined as the off axis angle from the centerline where intensity is $\frac{1}{2}$ of the peak value.

Figure 10: Typical Polar Radiation Pattern



Typical Color Spectrum

Figure 11: Typical Color Spectrum

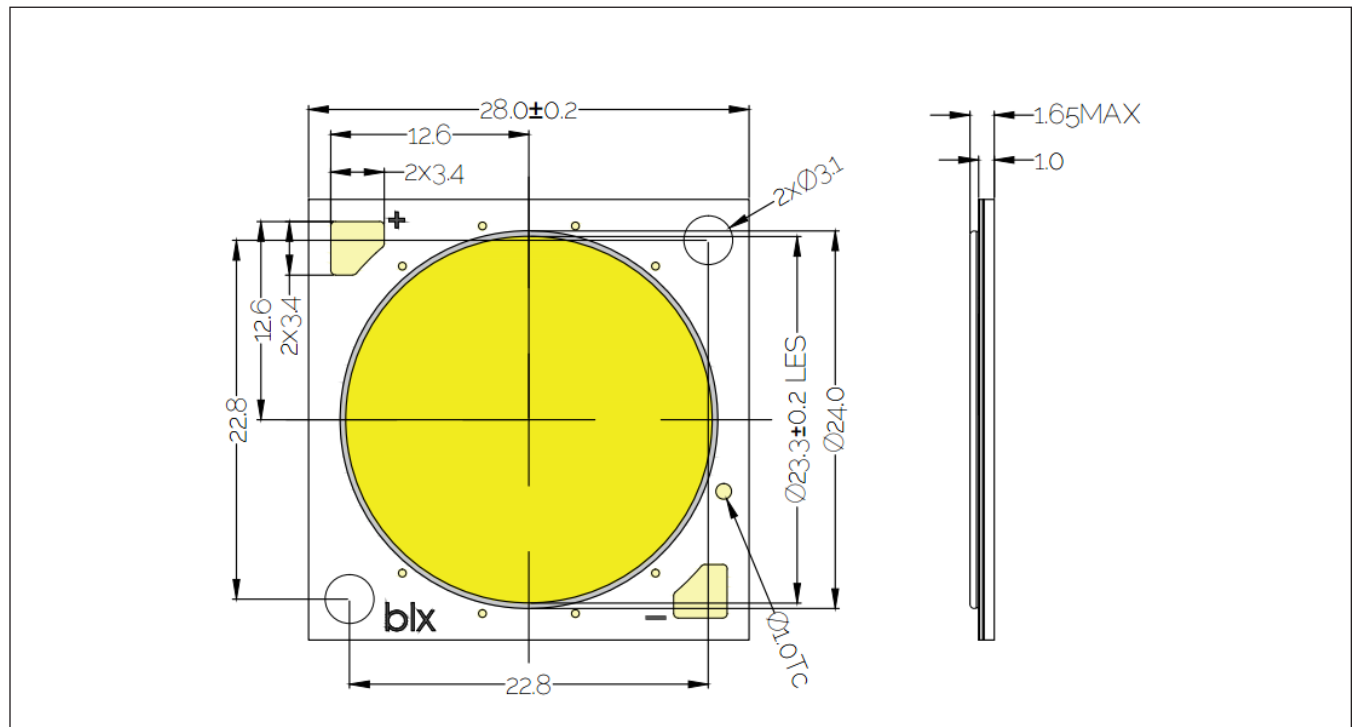


Notes for Figure 11:

1. Color spectra measured at nominal current for $T_j = T_c = 65^\circ\text{C}$.
2. Color spectra shown is 2700K and 90CRI.
3. Color spectra shown is 3000K and 90 CRI.
4. Color spectra shown is 3500K and 90 CRI.
5. Color spectra shown is 4000K and 90 CRI.

Mechanical Dimensions

Figure 12: Drawing for V22 LED Array

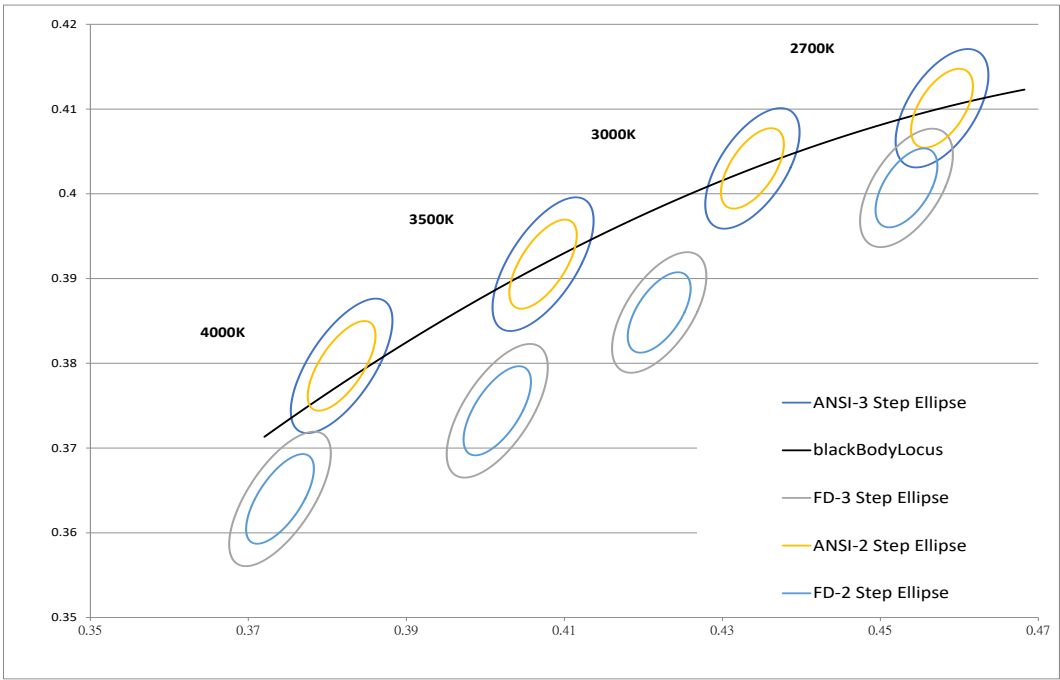


Notes for Figure 12:

1. Drawings are not to scale.
2. Drawing dimensions are in millimeters.
3. Unless otherwise specified, tolerances are $\pm 0.1\text{mm}$.
4. Solder pad labeled "+" denotes positive contact.
5. Refer to Application Notes AN101 for product handling, mounting and heat sink recommendations.
6. The optical center of the LED Array is nominally defined by the mechanical center of the array to a tolerance of $\pm 0.2\text{mm}$.
7. Bridgelux maintains a flatness of 0.10mm across the mounting surface of the array.

Color Binning Information

Figure 13: Warm and Neutral White Test Bins in xy Color Space



Note: Pulsed Test Conditions, $T_c = 65^{\circ}\text{C}$

Table 8: Warm and Neutral White xy Bin Coordinates and Associated Typical CCT (product is hot targeted to $T_c = 65^{\circ}\text{C}$)

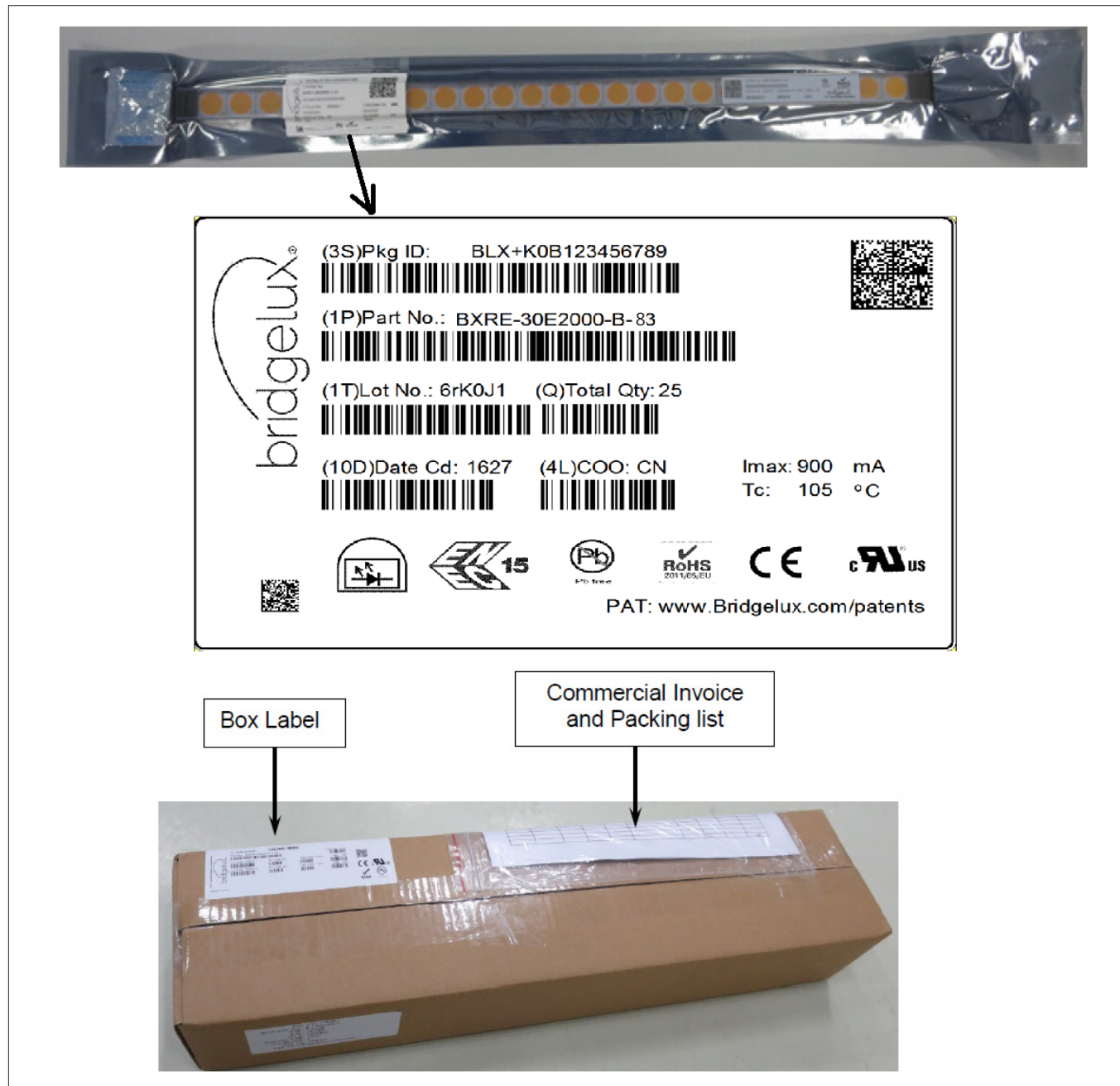
Bin Code	2700K	3000K	3500K	4000K
ANSI Bin (for reference only)	(2580K - 2870K)	(2870K - 3220K)	(3220K - 3710K)	(3710K - 4260K)
83 (3 SDCM)	(2645K - 2788K)	(3025K - 3210K)	(3333K - 3567K)	(3935K - 4254K)
82 (2 SDCM)	(2668K - 2764K)	(3055K - 3178K)	(3370K - 3526K)	(3985K - 4197K)
Center Point (x,y)	(0.4533, 0.4007)	(0.422 0.386)	(0.4015 0.3744)	(0.374, 0.364)

Note for Table 8:

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

Packaging and Labeling

Figure 14: Drawing for V22 Packaging Tube



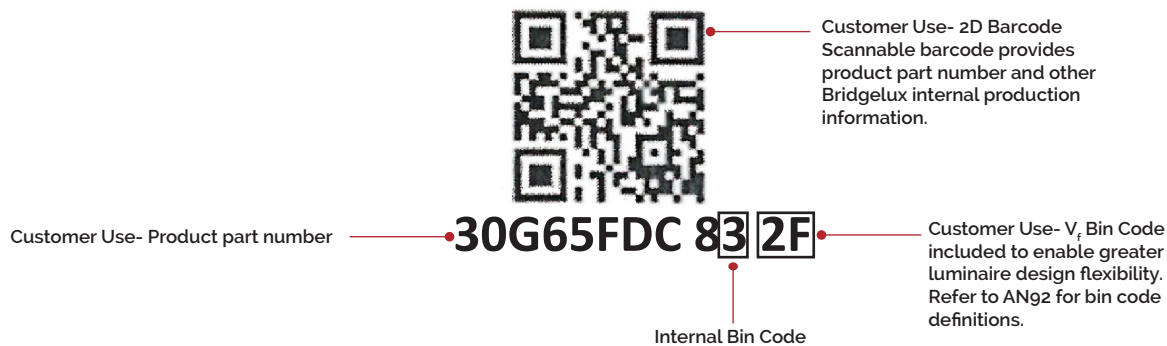
Notes for Figure 14

1. Each tube holds 15 V22 COB arrays.
2. Four tubes are sealed in an anti-static bag. Four bags are placed in a shipping box and shipped. Depending on quantities ordered, a bigger shipping box, containing four boxes may be used to ship products.
3. Each bag and box is to be labeled as shown above.
4. Dimensions for each tube are 30.7 (W) x 9.65(H) x 460(L). Dimensions for the anti-static bag are 120mm (W) x 635mm (L) x 0.1 (T) mm. Dimensions for the shipping box are 58.7 x 13.3 x 7.9 cm.

Packaging and Labeling

Figure 15: Gen. 8 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 V Series 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 V 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 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 AN101 for additional information.

CAUTION: RISK OF BURN

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

CAUTION: AVOID MOISTURE

The product is sensitive to moisture. It is not recommended for use in outdoor application or damp environment.

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).

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
bridgelux.com
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Bridgelux V22 F90 BBBL Array Series Product Data Sheet DS449-2 Rev. B (09/2024)