



Bridgelux® Gen 7 V10 Array Series

Product Data Sheet DS100



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 at twice the nominal drive current, enabling design flexibility not previously possible. This high flux density light source is designed to support a wide range of high quality, low cost directional luminaires and replacement lamps for commercial and residential applications.

The V10 LED array is available in a variety of electrical, CCT and CRI combinations providing substantial design flexibility and energy efficiencies.

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

Bridgelux Décor Series is our state of the art color line designed specifically for premium applications, producing unmatched LED light quality with brilliant color-rendering options and offer pleasing and inspiring lighting palettes. Bridgelux Décor Series color points are available on Vero® SE Series, Vero® Series, V Series™ and H Series™.

Décor Series Class A is based on human response testing, providing color points with a combined GAI and CRI metric.

Décor Series™ Ultra products provide a high CRI of 97 and a minimum R9 value of 93, which emphasizes the reds and color tones to which the human eye is most receptive - perfect for the most luxurious retail shops and world renowned museums. Décor Series Ultra is designed as a replacement for halogen.

Décor Series™ Street and Landmark is designed to be a direct replacement for high pressure sodium lamps.

Décor Series™ Showcase is the optimal solution for replacing ceramic metal halide lamps, incorporating the same pure white light with enhanced spectrum coverage and higher efficacy.

Features

- Efficacy of 167 lm/W typical
- Compact high flux density light source
- Uniform high quality illumination
- Minimum 65, 70, 80 and 90 and 95 CRI options
- Streamlined thermal path
- ENERGY STAR® / ANSI compliant color binning structure with 2, 3 and 4 SDCM options
- More energy efficient than incandescent, halogen and fluorescent lamps
- Low voltage DC operation
- Instant light with unlimited dimming
- V_f bin code backside marking

Benefits

- Enhanced optical control
- Clean white light without pixilation
- High quality true color reproduction
- Significantly reduced thermal resistance and increased operating temperatures
- Uniform consistent white light
- Lower operating costs
- Easy to use with daylight and motion detectors to enable increased energy savings
- Reduced maintenance costs
- Environmentally friendly, no disposal issue



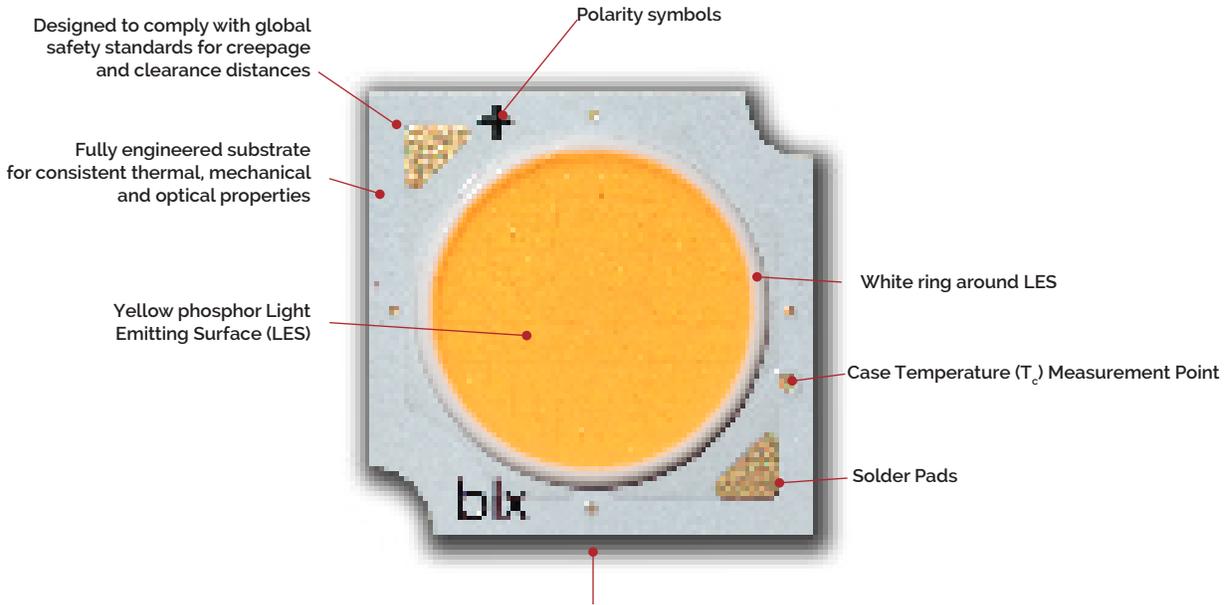
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Product Feature Map

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 chip-on-board devices across all of

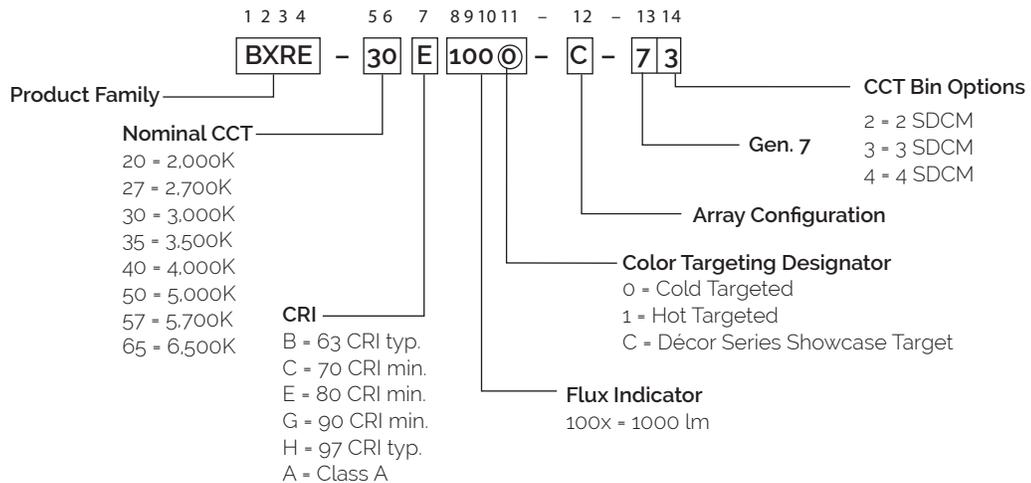
Bridgelux's LED Array products. The arrays incorporate several features to simplify design integration and assembly. Please visit www.bridgelux.com for more information on the V Series family of products.



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-20B1001-B-7x	2000	65	270	1439	1266	34.8	9.5	152
BXRE-27E1000-B-7x	2700	80	270	1458	1283	34.8	9.4	155
BXRE-27E1000-C-7x	2700	80	360	1944	1711	34.8	12.5	155
BXRE-27G10H0-B-7x	2700	90	270	1249	1099	34.8	9.4	133
BXRE-27G10H0-C-7x	2700	90	360	1665	1465	34.8	12.5	133
BXRE-27G1000-B-7x	2700	90	270	1203	1059	34.8	9.4	128
BXRE-27G1000-C-7x	2700	90	360	1604	1412	34.8	12.5	128
BXRE-27H1000-B-7x	2700	97	270	1066	938	34.8	9.4	113
BXRE-27H1000-C-7x	2700	97	360	1422	1251	34.8	12.5	113
BXRE-30C1001-B-7x	3000	70	270	1622	1428	34.8	9.4	173
BXRE-30C1001-C-7x	3000	70	360	2163	1904	34.8	12.5	173
BXRE-30E1000-B-7x	3000	80	270	1549	1363	34.8	9.4	165
BXRE-30E1000-C-7x	3000	80	360	2066	1818	34.8	12.5	165
BXRE-30G10H0-B-7x	3000	90	270	1312	1155	34.8	9.4	140
BXRE-30G10H0-C-7x	3000	90	360	1750	1540	34.8	12.5	140
BXRE-30G1000-B-7x	3000	90	270	1258	1107	34.8	9.4	134
BXRE-30G1000-C-7x	3000	90	360	1677	1476	34.8	12.5	134
BXRE-30G100C-B-7x	3000	90	270	1212	1067	34.8	9.4	129
BXRE-30G100C-C-7x	3000	90	360	1616	1422	34.8	12.5	129
BXRE-30A1001-B-7x ^{8,9}	3000	93	270	1130	995	34.8	9.4	120
BXRE-30A1001-C-7x ^{8,9}	3000	93	360	1507	1326	34.8	12.5	120
BXRE-30H1000-B-7x	3000	97	270	1139	1003	34.8	9.4	121
BXRE-30H1000-C-7x	3000	97	360	1519	1337	34.8	12.5	121
BXRE-35E1000-B-7x	3500	80	270	1586	1396	34.8	9.4	169
BXRE-35E1000-C-7x	3500	80	360	2114	1861	34.8	12.5	169
BXRE-35G1000-B-7x	3500	90	270	1303	1147	34.8	9.4	139
BXRE-35G1000-C-7x	3500	90	360	1738	1529	34.8	12.5	139
BXRE-35A1001-B-7x ^{8,9}	3500	93	270	1203	1059	34.8	9.4	128
BXRE-35A1001-C-7x ^{8,9}	3500	93	360	1604	1412	34.8	12.5	128
BXRE-35H1000-B-7x	3500	97	270	1175	1034	34.8	9.4	125
BXRE-35H1000-C-7x	3000	97	360	1566	1378	34.8	12.5	125

Notes for Table 1:

- Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to $T_c = 85^\circ\text{C}$.
- CRI values are typical for Decor Series Ultra, Décor Series Street and Landmark and Decor Series Class A products. CRI values are minimums for all other products. Minimum Rg value for 80 CRI products is 0, Minimum Rg value is 60 for 90 CRI products on 2700K/3000K/3500K and 4000K, it is 50 on 5000K/5700K and 6500K. But for the CRI90 H0 products (higher efficiency CRI90 version), minimum Rg value is 55 on 2700K/3000K/3500K and 4000K. Minimum Rg value for 97 CRI products is 93 on 2700K and 3000K, and it is 85 on 3500K /4000K/5000K and 5700K. Bridgelux maintains a ± 3 tolerance on Rg values.
- Drive current is referred to as nominal drive current.
- Products tested under pulsed condition (10ms pulse width) at nominal test current where T_j (junction temperature) = T_c (case temperature) = 25°C .
- Typical performance values are provided as a reference only and are not a guarantee of performance.
- Bridgelux maintains a $\pm 7\%$ tolerance on flux measurements.
- Minimum flux values at the nominal test current are guaranteed by 100% test.
- Nominal CCT is defined by the Lighting Research Center's Class A definition. The center of the Class A color bin is on the corresponding isothermal line.
- GAI value is 80. To help ensure optimal fixture level performance, GAI is measured at the fixture level, on axis, at a case temperature of 70°C . GAI may vary depending on fixture design and performance.

Product Selection Guide

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

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-40C1001-B-7x	4000	70	270	1668	1468	34.8	9.4	178
BXRE-40C1001-C-7x	4000	70	360	2224	1957	34.8	12.5	178
BXRE-40E1000-B-7x	4000	80	270	1595	1404	34.8	9.4	170
BXRE-40E1000-C-7x	4000	80	360	2127	1871	34.8	12.5	170
BXRE-40G1000-B-7x	4000	90	270	1331	1171	34.8	9.4	142
BXRE-40G1000-C-7x	4000	90	360	1774	1561	34.8	12.5	142
BXRE-40H1000-B-7x	3500	97	270	1203	1059	34.8	9.4	128
BXRE-40H1000-C-7x	3000	97	360	1604	1412	34.8	12.5	128
BXRE-50C1001-B-7x	5000	70	270	1677	1476	34.8	9.4	178
BXRE-50C1001-C-7x	5000	70	360	2236	1968	34.8	12.5	178
BXRE-50E1001-B-7x	5000	80	270	1613	1420	34.8	9.4	172
BXRE-50E1001-C-7x	5000	80	360	2151	1893	34.8	12.5	172
BXRE-50G1001-B-7x	5000	90	270	1394	1227	34.8	9.4	148
BXRE-50G1001-C-7x	5000	90	360	1859	1636	34.8	12.5	148
BXRE-57C1001-B-7x	5700	70	270	1631	1436	34.8	9.4	174
BXRE-57C1001-C-7x	5700	70	360	2175	1914	34.8	12.5	174
BXRE-57E1001-B-7x	5700	80	270	1549	1363	34.8	9.4	165
BXRE-57E1001-C-7x	5700	80	360	2066	1818	34.8	12.5	165
BXRE-65C1001-B-7x	6500	70	270	1631	1436	34.8	9.4	174
BXRE-65C1001-C-7x	6500	70	360	2175	1914	34.8	12.5	174
BXRE-65E1001-B-7x	6500	80	270	1568	1380	34.8	9.4	167
BXRE-65E1001-C-7x	6500	80	360	2090	1839	34.8	12.5	167

Notes for Table 1:

- Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to $T_c = 85^\circ\text{C}$.
- CRI values are typical for Decor Series Ultra, Décor Series Street and Landmark and Decor Series Class A products. CRI values are minimums for all other products. Minimum R_g value for 80 CRI products is 0. Minimum R_g value is 60 for 90 CRI products on 2700K/3000K/3500K and 4000K, it is 50 on 5000K/5700K and 6500K. But for the CRI90 Ho products (higher efficiency CRI90 version), minimum R_g value is 55 on 2700K/3000K/3500K and 4000K. Minimum R_g value for 97 CRI products is 93 on 2700K and 3000K, and it is 85 on 3500K /4000K/5000K and 5700K. Bridgelux maintains a ± 3 tolerance on R_g values.
- Drive current is referred to as nominal drive current.
- Products tested under pulsed condition (10ms pulse width) at nominal test current where T_j (junction temperature) - T_c (case temperature) = 25°C .
- Typical performance values are provided as a reference only and are not a guarantee of performance.
- Bridgelux maintains a $\pm 7\%$ tolerance on flux measurements.
- Minimum flux values at the nominal test current are guaranteed by 100% test.
- Nominal CCT is defined by the Lighting Research Center's Class A definition. The center of the Class A color bin is on the corresponding isothermal line.
- GAI value is 80. To help ensure optimal fixture level performance, GAI is measured at the fixture level, on axis, at a case temperature of 70°C . GAI may vary depending on fixture design and performance.

Product Selection Guide

Table 2: Selection Guide, Stabilized DC Performance ($T_c = 70^\circ\text{C}$) ^{7,8}

Part Number	Nominal CCT ¹ (K)	GAI ²	CRI ³	Nominal Drive Current ⁴ (mA)	Typical DC Flux ^{5,6} $T_c = 70^\circ\text{C}$ (lm)	Minimum DC Flux ^{6,9} $T_c = 70^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-30A1001-B-7x	3000	80	93	270	1051	925	34.3	9.3	113
BXRE-30A1001-C-7x	3000	80	93	360	1401	1233	34.3	12.3	113
BXRE-35A1001-B-7x	3500	80	93	270	1119	985	34.3	9.3	121
BXRE-35A1001-C-7x	3500	80	93	360	1492	1313	34.3	12.3	121

Notes for Table 2:

- Nominal CCT is defined by the Lighting Research Center's Class A definition. The center of the Class A color bin is on the corresponding isothermal line.
- To help ensure optimal fixture level performance, GAI is measured at the fixture level, on axis, at a case temperature of 70°C . GAI may vary depending on fixture design and performance.
- All CRI values are measured at $T_j = T_c = 25^\circ\text{C}$. CRI Values are specified as typical.
- Drive current is referred to as nominal drive current.
- Typical performance values are provided as a reference only and are not a guarantee of performance.
- Bridgelux maintains a $\pm 7\%$ tolerance on flux measurements.
- Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.
- 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 specified temperature. 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.
- 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.

Product Selection Guide

Table 3: Selection Guide, Stabilized DC Performance ($T_c = 85^\circ\text{C}$)^{4,5}

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical DC Flux ^{4,5} $T_c = 85^\circ\text{C}$ (lm)	Minimum DC Flux ⁶ $T_c = 85^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-20B1001-B-7X	2000	65	270	1295	1140	33.8	9.1	142
BXRE-27E1000-B-7X	2700	80	270	1312	1155	33.8	9.1	144
BXRE-27E1000-C-7X	2700	80	360	1750	1540	33.8	12.2	144
BXRE-27G10H0-B-7X	2700	90	270	1124	989	33.8	9.1	123
BXRE-27G10H0-C-7X	2700	90	360	1498	1319	33.8	12.2	123
BXRE-27G1000-B-7X	2700	90	270	1083	953	33.8	9.1	119
BXRE-27G1000-C-7X	2700	90	360	1444	1270	33.8	12.2	119
BXRE-27H1000-B-7X	2700	97	270	960	845	33.8	9.1	105
BXRE-27H1000-C-7X	2700	90	360	1280	1126	33.8	12.2	105
BXRE-30C1001-B-7X	3000	70	270	1460	1285	33.8	9.1	160
BXRE-30C1001-C-7X	3000	70	360	1947	1713	33.8	12.2	160
BXRE-30E1000-B-7X	3000	80	270	1394	1227	33.8	9.1	153
BXRE-30E1000-C-7X	3000	80	360	1859	1636	33.8	12.2	153
BXRE-30G10H0-B-7X	3000	90	270	1181	1039	33.8	9.1	129
BXRE-30G10H0-C-7X	3000	90	360	1575	1386	33.8	12.2	129
BXRE-30G1000-B-7X	3000	90	270	1132	996	33.8	9.1	124
BXRE-30G1000-C-7X	3000	90	360	1509	1328	33.8	12.2	124
BXRE-30G100C-B-7X	3000	90	270	1091	960	33.8	9.1	120
BXRE-30G100C-C-7X	3000	90	360	1455	1280	33.8	12.2	120
BXRE-30A1001-B-7X ^{7,8}	3000	93	270	1017	895	33.8	9.1	111
BXRE-30A1001-C-7X ^{7,8}	3000	93	360	1356	1193	33.8	12.2	111
BXRE-30H1000-B-7X	3000	97	270	1025	902	33.8	9.1	112
BXRE-30H1000-C-7X	3000	97	360	1367	1203	33.8	12.2	112
BXRE-35E1000-B-7X	3500	80	270	1427	1256	33.8	9.1	156
BXRE-35E1000-C-7X	3500	80	360	1903	1675	33.8	12.2	156
BXRE-35G1000-B-7X	3500	90	270	1173	1032	33.8	9.1	128
BXRE-35G1000-C-7X	3500	90	360	1564	1376	33.8	12.2	128
BXRE-35A1001-B-7X ^{7,8}	3500	93	270	1083	953	33.8	9.1	119
BXRE-35A1001-C-7X ^{7,8}	3500	93	360	1444	1270	33.8	12.2	119
BXRE-35H1000-B-7X	3000	97	270	1057	930	33.8	9.1	116
BXRE-35H1000-C-7X	3000	97	360	1409	1240	33.8	12.2	116

Notes for Table 3:

- Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to $T_c = 85^\circ\text{C}$.
- All CRI values are measured at $T_c = T_a = 25^\circ\text{C}$. CRI values are typical for Decor Series Ultra, Decor Series Street and Landmark and Decor Series Class A products. CRI values are minimums for all other products. Minimum Rg value for 80 CRI products is 0. Minimum Rg value is 60 for 90 CRI products on 2700K/3000K/3500K and 4000K. It is 50 on 5000K/5700K and 6500K. But for the CR190 H0 products (higher efficiency CR190 version), minimum Rg value is 55 on 2700K/3000K/3500K and 4000K. Minimum Rg value for 97 CRI products is 93 on 2700K and 3000K, and it is 85 on 3500K/4000K/5000K and 5700K. Bridgelux maintains a ± 3 tolerance on Rg values.
- Drive current is referred to as nominal drive current.
- Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.
- 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 85°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.
- 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.
- Nominal CCT is defined by the Lighting Research Center's Class A definition. The center of the Class A color bin is on the corresponding isothermal line.
- GAI value is 80. To help ensure optimal fixture level performance, GAI is measured at the fixture level, on axis, at a case temperature of 70°C . GAI may vary depending on fixture design and performance.

Product Selection Guide

Table 3: Selection Guide, Stabilized DC Performance ($T_c = 85^\circ\text{C}$) ^{4,5}(Continued)

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical DC Flux ^{4,5} $T_c = 85^\circ\text{C}$ (lm)	Minimum DC Flux ⁶ $T_c = 85^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-40C1001-B-7X	4000	70	270	1501	1321	33.8	9.1	164
BXRE-40C1001-C-7X	4000	70	360	2001	1761	33.8	12.2	164
BXRE-40E1000-B-7X	4000	80	270	1435	1263	33.8	9.1	157
BXRE-40E1000-C-7X	4000	80	360	1914	1684	33.8	12.2	157
BXRE-40G1000-B-7X	4000	90	270	1198	1054	33.8	9.1	131
BXRE-40G1000-C-7X	4000	90	360	1597	1405	33.8	12.2	131
BXRE-40H1000-B-7X	3000	97	270	1083	953	33.8	9.1	119
BXRE-40H1000-C-7X	3000	97	360	1444	1270	33.8	12.2	119
BXRE-50C1001-B-7X	5000	70	270	1509	1328	33.8	9.1	165
BXRE-50C1001-C-7X	5000	70	360	2012	1771	33.8	12.2	165
BXRE-50E1001-B-7X	5000	80	270	1452	1278	33.8	9.1	159
BXRE-50E1001-C-7X	5000	80	360	1936	1704	33.8	12.2	159
BXRE-50G1001-B-7X	5000	90	270	1255	1104	33.8	9.1	137
BXRE-50G1001-C-7X	5000	90	360	1673	1473	33.8	12.2	137
BXRE-57C1001-B-7X	5700	70	270	1468	1292	33.8	9.1	161
BXRE-57C1001-C-7X	5700	70	360	1958	1723	33.8	12.2	161
BXRE-57E1001-B-7X	5700	80	270	1394	1227	33.8	9.1	153
BXRE-57E1001-C-7X	5700	80	360	1859	1636	33.8	12.2	153
BXRE-65C1001-B-7X	6500	70	270	1468	1292	33.8	9.1	161
BXRE-65C1001-C-7X	6500	70	360	1958	1723	33.8	12.2	161
BXRE-65E1001-B-7X	6500	80	270	1411	1242	33.8	9.1	154
BXRE-65E1001-C-7X	6500	80	360	1881	1655	33.8	12.2	154

Notes for Table 3:

- Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to $T_c = 85^\circ\text{C}$.
- All CRI values are measured at $T_j = T_c = 25^\circ\text{C}$. CRI values are typical for Decor Series Ultra, Décor Series Street and Landmark and Decor Series Class A products. CRI values are minimums for all other products. Minimum Rg value for 80 CRI products is 0, Minimum Rg value is 60 for 90 CRI products on 2700K/3000K/3500K and 4000K, it is 50 on 5000K/5700K and 6500K. But for the CRI90 H0 products (higher efficiency CRI90 version), minimum Rg value is 55 on 2700K/3000K/3500K and 4000K. Minimum Rg value for 97 CRI products is 93 on 2700K and 3000K, and it is 85 on 3500K /4000K/5000K and 5700K. Bridgelux maintains a ± 3 tolerance on Rg values.
- Drive current is referred to as nominal drive current.
- Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.
- 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 85°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.
- 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.
- Nominal CCT is defined by the Lighting Research Center's Class A definition. The center of the Class A color bin is on the corresponding isothermal line.
- GAI value is 80. To help ensure optimal fixture level performance, GAI is measured at the fixture level, on axis, at a case temperature of 70°C . GAI may vary depending on fixture design and performance.

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 4 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 4: 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 85C (lm)	Power (W)	Efficacy (lm/W)	Energy efficiency class ⁴	Registration No	URL to Product Information Sheet in EPREL Database
BXRE-20B1000-B-7x	2000	65	540	35.1	2347	19.0	124	E	869034	https://eprelec.europa.eu/qr/869034
BXRE-27E1000-B-7x	2700	80	540	35.1	2392	19.0	126	E	869104	https://eprelec.europa.eu/qr/869104
BXRE-27E1000-C-7x	2700	80	720	35.1	3186	25.3	126	E	869108	https://eprelec.europa.eu/qr/869108
BXRE-27G10H0-B-7x	2700	90	540	35.1	2048	19.0	108	F	869235	https://eprelec.europa.eu/qr/869235
BXRE-27G10H0-C-7x	2700	90	720	35.1	2728	25.3	108	F	869239	https://eprelec.europa.eu/qr/869239
BXRE-27G1000-B-7x	2700	90	540	35.1	1973	19.0	104	F	869219	https://eprelec.europa.eu/qr/869219
BXRE-27G1000-C-7x	2700	90	670	34.8	2477	23.3	106	F	869224	https://eprelec.europa.eu/qr/869224
BXRE-27H1000-B-7x	2700	95	430	34.1	1446	14.6	99	F	869343	https://eprelec.europa.eu/qr/869343
BXRE-30C1001-B-7x	3000	70	540	35.1	2661	19.0	140	E	869436	https://eprelec.europa.eu/qr/869436
BXRE-30C1001-C-7x	3000	70	720	35.1	3544	25.3	140	E	869442	https://eprelec.europa.eu/qr/869442
BXRE-30E1000-B-7x	3000	80	540	35.1	2542	19.0	134	E	869534	https://eprelec.europa.eu/qr/869534
BXRE-30E1000-C-7x	3000	80	720	35.1	3385	25.3	134	E	869539	https://eprelec.europa.eu/qr/869539
BXRE-30G10H0-B-7x	3000	90	540	35.1	2153	19.0	113	F	869665	https://eprelec.europa.eu/qr/869665
BXRE-30G10H0-C-7x	3000	90	720	35.1	2867	25.3	113	F	869669	https://eprelec.europa.eu/qr/869669
BXRE-30G1000-B-7x	3000	90	540	35.1	2063	19.0	109	F	869646	https://eprelec.europa.eu/qr/869646
BXRE-30G1000-C-7x	3000	90	720	35.1	2748	25.3	109	F	869651	https://eprelec.europa.eu/qr/869651
BXRE-30G100C-B-7x	3000	90	540	35.1	2063	19.0	109	F	869661	https://eprelec.europa.eu/qr/869661
BXRE-30G100C-C-7x	3000	90	720	35.1	2748	25.3	109	F	869663	https://eprelec.europa.eu/qr/869663

Notes for Table 4:

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.

European Product Registry for Energy Labeling

Table 4: Part numbers registered in European Product Registry for Energy Labeling (Continued)

PART NUMBER ¹	CCT (K)	CRI	Current ² (mA)	Vf (V)	Useful flux ³ (Φ_{use}) at 85C (lm)	Power (W)	Efficacy (lm/W)	Energy efficiency class ⁴ 	Registration No	URL to Product Information Sheet in EPREL Database
BXRE-30A1001-B-7x	3000	90	460	34.4	1624	15.8	103	F	869405	https://eprelec.europa.eu/qr/869405
BXRE-30A1001-C-7x	3000	90	570	34.0	2031	19.4	105	F	869406	https://eprelec.europa.eu/qr/869406
BXRE-30H1000-B-7x	3000	95	500	34.7	1754	17.4	101	F	869795	https://eprelec.europa.eu/qr/869795
BXRE-35E1000-B-7x	3500	80	540	35.1	2601	19.0	137	E	869905	https://eprelec.europa.eu/qr/869905
BXRE-35E1000-C-7x	3500	80	720	35.1	3464	25.3	137	E	869910	https://eprelec.europa.eu/qr/869910
BXRE-35G1000-B-7x	3500	90	540	35.1	2138	19.0	113	F	869997	https://eprelec.europa.eu/qr/869997
BXRE-35G1000-C-7x	3500	90	720	35.1	2847	25.3	113	F	870002	https://eprelec.europa.eu/qr/870002
BXRE-35A1001-B-7x	3500	90	540	35.1	1973	19.0	104	F	869859	https://eprelec.europa.eu/qr/869859
BXRE-35A1001-C-7x	3500	90	670	34.8	2477	23.3	106	F	869860	https://eprelec.europa.eu/qr/869860
BXRE-40C1001-B-7x	4000	70	540	35.1	2736	19.0	144	E	870117	https://eprelec.europa.eu/qr/870117
BXRE-40C1001-C-7x	4000	70	720	35.1	3644	25.3	144	E	870123	https://eprelec.europa.eu/qr/870123
BXRE-40E1000-B-7x	4000	80	540	35.1	2616	19.0	138	E	870212	https://eprelec.europa.eu/qr/870212
BXRE-40E1000-C-7x	4000	80	720	35.1	3484	25.3	138	E	870217	https://eprelec.europa.eu/qr/870217
BXRE-40G1000-B-7x	4000	90	540	35.1	2183	19.0	115	F	870314	https://eprelec.europa.eu/qr/870314
BXRE-40G1000-C-7x	4000	90	720	35.1	2907	25.3	115	F	870319	https://eprelec.europa.eu/qr/870319
BXRE-50C1001-B-7x	5000	70	540	35.1	2751	19.0	145	E	870444	https://eprelec.europa.eu/qr/870444
BXRE-50C1001-C-7x	5000	70	720	35.1	3664	25.3	145	E	870448	https://eprelec.europa.eu/qr/870448
BXRE-50E1001-B-7x	5000	80	540	35.1	2646	19.0	139	E	870515	https://eprelec.europa.eu/qr/870515
BXRE-50E1001-C-7x	5000	80	720	35.1	3524	25.3	139	E	870519	https://eprelec.europa.eu/qr/870519
BXRE-50G1001-B-7x	5000	90	540	35.1	2287	19.0	121	E	870584	https://eprelec.europa.eu/qr/870584
BXRE-50G1001-C-7x	5000	90	720	35.1	3046	25.3	120	E	870588	https://eprelec.europa.eu/qr/870588
BXRE-57C1001-B-7x	5700	70	540	35.1	2676	19.0	141	E	870702	https://eprelec.europa.eu/qr/870702
BXRE-57C1001-C-7x	5700	70	720	35.1	3564	25.3	141	E	870706	https://eprelec.europa.eu/qr/870706
BXRE-57E1001-B-7x	5700	80	540	35.1	2542	19.0	134	E	870757	https://eprelec.europa.eu/qr/870757
BXRE-57E1001-C-7x	5700	80	720	35.1	3385	25.3	134	E	870761	https://eprelec.europa.eu/qr/870761
BXRE-65C1001-B-7x	6500	70	540	35.1	2676	19.0	141	E	870830	https://eprelec.europa.eu/qr/870830
BXRE-65C1001-C-7x	6500	70	720	35.1	3564	25.3	141	E	870834	https://eprelec.europa.eu/qr/870834
BXRE-65E1001-B-7x	6500	80	540	35.1	2572	19.0	136	E	870886	https://eprelec.europa.eu/qr/870886
BXRE-65E1001-C-7x	6500	80	720	35.1	3425	25.3	135	E	870890	https://eprelec.europa.eu/qr/870890

Notes for Table 4:

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 LED Arrays 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 5.

Table 5: 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 $T_c = 85^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRE-20B1001-B-7x	65	135	33.2	4.5	767	689	171
		180	34.0	6.1	1006	902	164
		270	34.8	9.4	1439	1295	153
		405	35.6	14.4	2111	1878	146
		540	36.1	19.5	2705	2394	139
BXRE-27E1000-B-7x	80	135	33.2	4.5	777	698	173
		180	34.0	6.1	1019	914	166
		270	34.8	9.4	1458	1312	155
		405	35.6	14.4	2139	1903	148
		540	36.1	19.5	2741	2426	140
BXRE-27E1000-C-7x	80	180	33.2	6.0	1034	922	173
		240	34.0	8.2	1354	1203	166
		360	34.8	12.5	1944	1750	155
		540	35.6	19.2	2831	2460	147
		720	36.1	26.0	3617	3096	139
BXRE-27G10H0-B-7x	90	135	33.2	4.5	665	598	148
		180	34.0	6.1	872	783	143
		270	34.8	9.4	1249	1124	133
		405	35.6	14.4	1832	1630	127
		540	36.1	19.5	2347	2077	120
BXRE-27G10H0-C-7x	90	180	33.2	6.0	885	790	148
		240	34.0	8.2	1160	1030	142
		360	34.8	12.5	1665	1498	133
		540	35.6	19.2	2424	2106	126
		720	36.1	26.0	3097	2651	119
BXRE-27G1000-B-7x	90	135	33.2	4.5	641	576	143
		180	34.0	6.1	841	754	137
		270	34.8	9.4	1203	1083	128
		405	35.6	14.4	1765	1570	122
		540	36.1	19.5	2261	2001	116
BXRE-27G1000-C-7x	90	180	33.2	6.0	853	761	143
		240	34.0	8.2	1117	993	137
		360	34.8	12.5	1604	1444	128
		540	35.6	19.2	2336	2029	121
		720	36.1	26.0	2984	2554	115
BXRE-27H1000-B-7x	97	135	33.2	4.5	568	511	127
		180	34.0	6.1	745	668	122
		270	34.8	9.4	1066	960	113
		405	35.6	14.4	1564	1392	108
		540	36.1	19.5	2004	1774	103

Notes for Table 5:

1. Alternate drive currents 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 5: 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 $T_c = 85^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRE-27H1000-C-7x	97	180	33.2	6.0	756	675	126
		240	34.0	8.2	990	880	121
		360	34.8	12.5	1422	1509	113
		540	35.6	19.2	2070	1799	108
BXRE-30C1001-B-7x	70	135	33.2	4.5	864	777	193
		180	34.0	6.1	1134	1017	185
		270	34.8	9.4	1622	1460	173
		405	35.6	14.4	2380	2117	165
BXRE-30C1001-C-7x	70	540	36.1	19.5	3049	2699	156
		180	33.2	6.0	1150	1026	192
		240	34.0	8.2	1507	1338	185
		360	34.8	12.5	2163	1947	173
BXRE-30E1000-B-7x	80	540	35.6	19.2	3150	2736	164
		720	36.1	26.0	4023	3444	155
		135	33.2	4.5	826	742	184
		180	34.0	6.1	1083	971	177
BXRE-30E1000-C-7x	80	270	34.8	9.4	1549	1394	165
		405	35.6	14.4	2273	2022	157
		540	36.1	19.5	2912	2577	149
		180	33.2	6.0	1098	980	184
BXRE-30G10H0-B-7x	90	240	34.0	8.2	1439	1278	176
		360	34.8	12.5	2066	1859	165
		540	35.6	19.2	3008	2613	156
		720	36.1	26.0	3843	3289	148
BXRE-30G10H0-C-7x	90	135	33.2	4.5	699	628	156
		180	34.0	6.1	917	823	150
		270	34.8	9.4	1312	1181	140
		405	35.6	14.4	1925	1713	133
BXRE-30G1000-B-7x	90	540	36.1	19.5	2467	2183	126
		180	33.2	6.0	930	830	156
		240	34.0	8.2	1219	1083	149
		360	34.8	12.5	1750	1575	140
BXRE-30G1000-C-7x	90	540	35.6	19.2	2548	2214	132
		720	36.1	26.0	3255	2786	125
		135	33.2	4.5	670	602	149
		180	34.0	6.1	879	788	144
BXRE-30G1000-B-7x	90	270	34.8	9.4	1258	1132	134
		405	35.6	14.4	1845	1641	128
		540	36.1	19.5	2364	2092	121
		180	33.2	6.0	892	796	149
BXRE-30G1000-C-7x	90	240	34.0	8.2	1168	1038	143
		360	34.8	12.5	1677	1509	134
		540	35.6	19.2	2442	2121	127
		720	36.1	26.0	3119	2670	120

Notes for Table 5:

1. Alternate drive currents 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 5: 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)
BXRE-30G100C-B-7x	90	135	33.2	4.5	646	580	144
		180	34.0	6.1	847	760	138
		270	34.8	9.4	1212	1091	129
		405	35.6	14.4	1778	1582	123
		540	36.1	19.5	2278	2016	117
BXRE-30G100C-C-7x	90	180	33.2	6.0	859	767	144
		240	34.0	8.2	1126	1000	138
		360	34.8	12.5	1616	1455	129
		540	35.6	19.2	2353	2045	122
BXRE-30A1001-B-7x	93	720	36.1	26.0	3006	2573	116
		135	33.2	4.5	602	541	134
		180	34.0	6.1	790	708	129
		270	34.8	9.4	1130	1017	120
BXRE-30A1001-C-7x	93	405	35.6	14.4	1658	1475	115
		540	36.1	19.5	2124	1880	109
		180	33.2	6.0	801	715	134
		240	34.0	8.2	1050	932	129
BXRE-30H1000-B-7x	97	360	34.8	12.5	1507	1356	120
		540	35.6	19.2	2194	1906	114
		720	36.1	26.0	2803	2399	108
		135	33.2	4.5	607	546	135
BXRE-30H1000-C-7x	97	180	34.0	6.1	796	714	130
		270	34.8	9.4	1139	1025	121
		405	35.6	14.4	1671	1487	116
		540	36.1	19.5	2141	1895	110
BXRE-35E1000-B-7x	80	180	33.2	6.0	808	721	135
		240	34.0	8.2	1058	940	130
		360	34.8	12.5	1519	1409	121
		540	35.6	19.2	2212	1922	115
BXRE-35E1000-C-7x	80	720	36.1	26.0	2825	2419	109
		135	33.2	4.5	845	759	188
		180	34.0	6.1	1108	994	181
		270	34.8	9.4	1586	1427	169
BXRE-35G1000-B-7x	90	405	35.6	14.4	2327	2070	161
		540	36.1	19.5	2981	2638	153
		180	33.2	6.0	1124	1003	188
		240	34.0	8.2	1473	1308	180
BXRE-35G1000-C-7x	90	360	34.8	12.5	2114	1903	169
		540	35.6	19.2	3079	2675	160
		720	36.1	26.0	3933	3367	151
		135	33.2	4.5	695	624	155
BXRE-35G1000-B-7x	90	180	34.0	6.1	911	817	149
		270	34.8	9.4	1303	1173	139
		405	35.6	14.4	1912	1701	132
		540	36.1	19.5	2450	2168	126

Notes for Table 5:

1. Alternate drive currents 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 5: 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)
BXRE-35G1000-C-7x	90	180	33.2	6.0	924	824	155
		240	34.0	8.2	1210	1075	148
		360	34.8	12.5	1738	1564	139
		540	35.6	19.2	2530	2198	131
		720	36.1	26.0	3232	2767	124
BXRE-35A1001-B-7x	93	135	33.2	4.5	641	576	143
		180	34.0	6.1	841	754	137
		270	34.8	9.4	1203	1083	128
		405	35.6	14.4	1765	1570	122
		540	36.1	19.5	2261	2001	116
BXRE-35A1001-C-7x	93	180	33.2	6.0	853	761	143
		240	34.0	8.2	1117	993	137
		360	34.8	12.5	1604	1444	128
		540	35.6	19.2	2336	2029	121
		720	36.1	26.0	2984	2554	115
BXRE-35H1000-B-7x	97	135	33.2	4.5	626	562	140
		180	34.0	6.1	821	736	134
		270	34.8	9.4	1175	1057	125
		405	35.6	14.4	1723	1533	119
		540	36.1	19.5	2207	1954	113
BXRE-35H1000-C-7x	97	180	33.2	6.0	833	743	139
		240	34.0	8.2	1091	969	134
		360	34.8	12.5	1566	1409	125
		540	35.6	19.2	2280	1981	118
		720	36.1	26.0	2913	2493	112
BXRE-40C1001-B-7x	70	135	33.2	4.5	889	799	198
		180	34.0	6.1	1165	1045	190
		270	34.8	9.4	1668	1501	178
		405	35.6	14.4	2447	2177	170
		540	36.1	19.5	3135	2775	161
BXRE-40C1001-C-7x	70	180	33.2	6.0	1182	1055	198
		240	34.0	8.2	1549	1376	190
		360	34.8	12.5	2224	2001	178
		540	35.6	19.2	3238	2813	168
		720	36.1	26.0	4136	3541	159
BXRE-40E1000-B-7x	80	135	33.2	4.5	850	764	190
		180	34.0	6.1	1114	1000	182
		270	34.8	9.4	1595	1435	170
		405	35.6	14.4	2340	2082	162
		540	36.1	19.5	2998	2653	154
BXRE-40E1000-C-7x	80	180	33.2	6.0	1131	1009	189
		240	34.0	8.2	1481	1316	181
		360	34.8	12.5	2127	1914	170
		540	35.6	19.2	3097	2690	161
		720	36.1	26.0	3956	3386	152

Notes for Table 5:

1. Alternate drive currents 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 5: 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 $T_c = 85^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRE-40G1000-B-7x	90	135	33.2	4.5	709	637	158
		180	34.0	6.1	930	834	152
		270	34.8	9.4	1331	1198	142
		405	35.6	14.4	1952	1737	135
		540	36.1	19.5	2501	2214	128
BXRE-40G1000-C-7x	90	180	33.2	6.0	943	842	158
		240	34.0	8.2	1236	1098	151
		360	34.8	12.5	1774	1597	142
		540	35.6	19.2	2584	2244	134
BXRE-40H1000-B-7x	97	135	33.2	4.5	641	576	143
		180	34.0	6.1	841	754	137
		270	34.8	9.4	1203	1083	128
		405	35.6	14.4	1765	1570	122
BXRE-40H1000-C-7x	97	180	33.2	6.0	853	761	143
		240	34.0	8.2	1117	993	137
		360	34.8	12.5	1604	1444	128
		540	35.6	19.2	2336	2029	121
BXRE-50C1001-B-7x	70	135	33.2	4.5	894	803	199
		180	34.0	6.1	1172	1051	191
		270	34.8	9.4	1677	1509	178
		405	35.6	14.4	2460	2189	170
BXRE-50C1001-C-7x	70	180	33.2	6.0	1189	1061	199
		240	34.0	8.2	1557	1384	191
		360	34.8	12.5	2236	2012	178
		540	35.6	19.2	3256	2828	169
BXRE-50E1001-B-7x	80	135	33.2	4.5	860	773	192
		180	34.0	6.1	1127	1011	184
		270	34.8	9.4	1613	1452	172
		405	35.6	14.4	2367	2105	164
BXRE-50E1001-C-7x	80	180	33.2	6.0	1144	1020	191
		240	34.0	8.2	1498	1331	184
		360	34.8	12.5	2151	1936	172
		540	35.6	19.2	3132	2721	163
BXRE-50G1001-B-7x	90	135	33.2	4.5	743	668	166
		180	34.0	6.1	974	874	159
		270	34.8	9.4	1394	1255	148
		405	35.6	14.4	2046	1820	142
		540	36.1	19.5	2621	2320	134

Notes for Table 5:

1. Alternate drive currents 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 5: 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)
BXRE-50G1001-C-7x	90	180	33.2	6.0	989	882	165
		240	34.0	8.2	1295	1150	159
		360	34.8	12.5	1859	1673	148
		540	35.6	19.2	2707	2352	141
		720	36.1	26.0	3458	2960	133
BXRE-57C1001-B-7x	70	135	33.2	4.5	869	781	194
		180	34.0	6.1	1140	1022	186
		270	34.8	9.4	1631	1468	174
		405	35.6	14.4	2393	2129	166
		540	36.1	19.5	3066	2714	157
BXRE-57C1001-C-7x	70	180	33.2	6.0	1156	1032	193
		240	34.0	8.2	1515	1346	186
		360	34.8	12.5	2175	1958	174
		540	35.6	19.2	3167	2752	165
		720	36.1	26.0	4046	3463	155
BXRE-57E1001-B-7x	80	135	33.2	4.5	826	742	184
		180	34.0	6.1	1083	971	177
		270	34.8	9.4	1549	1394	165
		405	35.6	14.4	2273	2022	157
		540	36.1	19.5	2912	2577	149
BXRE-57E1001-C-7x	80	180	33.2	6.0	1098	980	184
		240	34.0	8.2	1439	1278	176
		360	34.8	12.5	2066	1859	165
		540	35.6	19.2	3008	2613	156
		720	36.1	26.0	3843	3289	148
BXRE-65C1001-B-7x	70	135	33.2	4.5	869	781	194
		180	34.0	6.1	1140	1022	186
		270	34.8	9.4	1631	1468	174
		405	35.6	14.4	2393	2129	166
		540	36.1	19.5	3066	2714	157
BXRE-65C1001-C-7x	70	180	33.2	6.0	1156	1032	193
		240	34.0	8.2	1515	1346	186
		360	34.8	12.5	2175	1958	174
		540	35.6	19.2	3167	2752	165
		720	36.1	26.0	4046	3463	155
BXRE-65E1001-B-7x	80	135	33.2	4.5	835	751	186
		180	34.0	6.1	1095	982	179
		270	34.8	9.4	1568	1411	167
		405	35.6	14.4	2300	2046	159
		540	36.1	19.5	2946	2608	151
BXRE-65E1001-C-7x	80	180	33.2	6.0	1111	992	186
		240	34.0	8.2	1456	1293	178
		360	34.8	12.5	2090	1881	167
		540	35.6	19.2	3044	2644	158
		720	36.1	26.0	3888	3328	149

Notes for Table 5:

1. Alternate drive currents 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 6: 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 $T_c = 105^\circ\text{C}$ (V)	V_f Max. Cold $T_c = -40^\circ\text{C}$ (V)
BXRE-xxx100x-B-7x	270	32.2	34.8	37.4	-16.1	0.49	30.9	38.5
	540	33.4	36.1	38.8	-16.1	0.56	32.1	39.9
BXRE-xxx100x-C-7x	360	32.2	34.8	37.4	-16.1	0.37	30.9	38.5
	720	33.4	36.1	38.8	-16.1	0.45	32.1	39.9

Notes for Table 6:

- 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 80 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 1160 V. The working voltage designated for the insulation is 80V d.c. The maximum allowable voltage across the array must be determined in the end product application.

Eye Safety

Table 7: Eye Safety Risk Group (RG) Classifications

Part Number	Drive Current ⁵ (mA)	CCT ¹⁻⁵			
		2700K/3000K	4000K ²	5000K ³	6500K ⁴
BXRE-xxx100x-B-7x	270	RG1	RG1	RG1	RG1
	405	RG1	RG1	RG1	RG2
	540	RG1	RG1	RG2	RG2
BXRE-xxx100x-C-7x	360	RG1	RG1	RG1	RG2
	540	RG1	RG1	RG2	RG2
	720	RG1	RG2	RG2	RG2

Notes for Table 7:

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, $E_{thr} = 1847.5$ lx.
3. For products classified as RG2 at 5000K, $E_{thr} = 1315.8$ lx.
4. For products classified as RG2 at 6500K, $E_{thr} = 1124.5$ lx.
5. Please contact your Bridgelux sales representative for E_{thr} values at specific drive currents and CCTs not listed.

Absolute Maximum Ratings

Table 8: Maximum Ratings

Parameter	Maximum Rating	
LED Junction Temperature (T _J)	150°C	
Storage Temperature	-40°C to +105°C	
Operating Case Temperature ¹ (T _C)	105°C	
Soldering Temperature ²	300°C or lower for a maximum of 6 seconds	
	BXRE-xxx100x-B-7x	BXRE-xxx100x-C-7x
Maximum Drive Current ³	540mA	720mA
Maximum Peak Pulsed Drive Current ⁴	770mA	1030mA
Maximum Reverse Voltage ⁵	-60V	-60V

Notes for Table 8:

1. For IEC 62717 requirement, please consult your Bridgelux sales representative.
2. Refer to Bridgelux Application Note AN101: Handling and Assembly of Bridgelux V Series LED Arrays.
3. Arrays may be driven at higher currents however lumen maintenance may be reduced.
4. 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.
5. 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: V10B Drive Current vs. Voltage

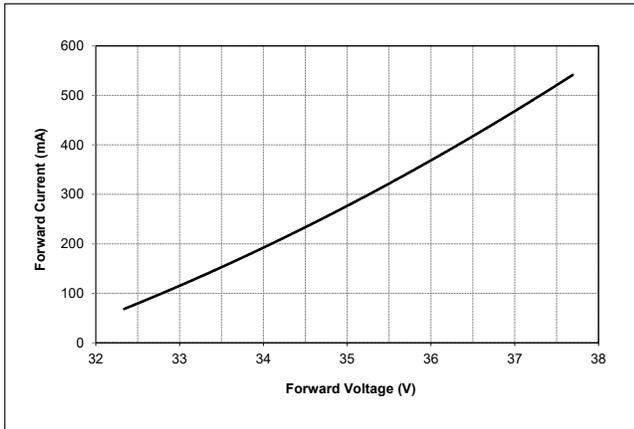


Figure 2: V10C Drive Current vs. Voltage

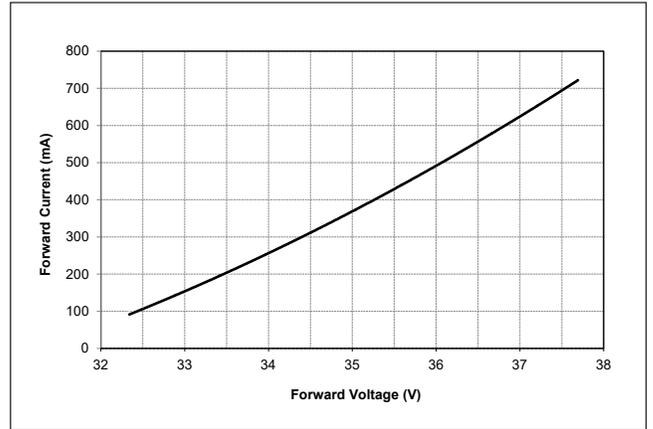


Figure 3: V10B Typical Relative Flux vs. Current

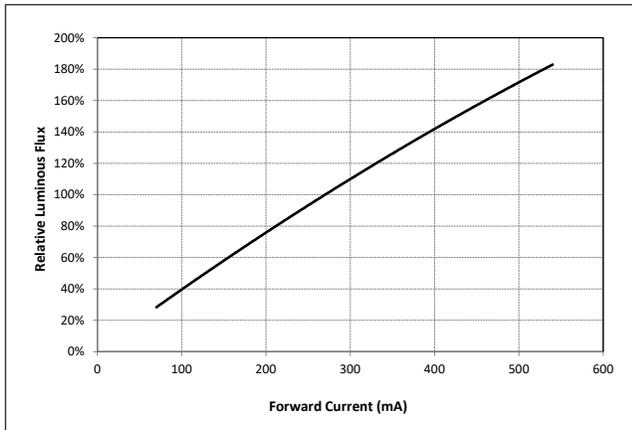
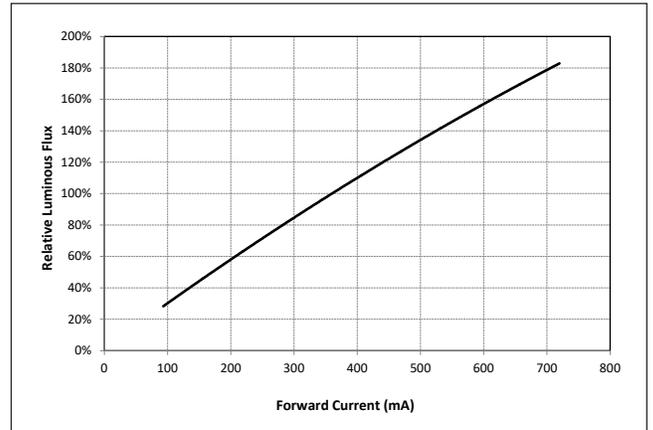


Figure 4: V10C Typical Relative Flux vs. Current



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

Performance Curves

Figure 5: Typical DC Flux vs. Case Temperature⁵

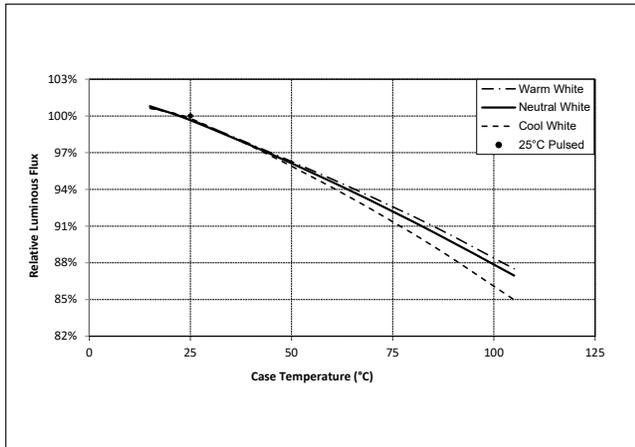


Figure 6: Typical DC ccy Shift vs. Case Temperature

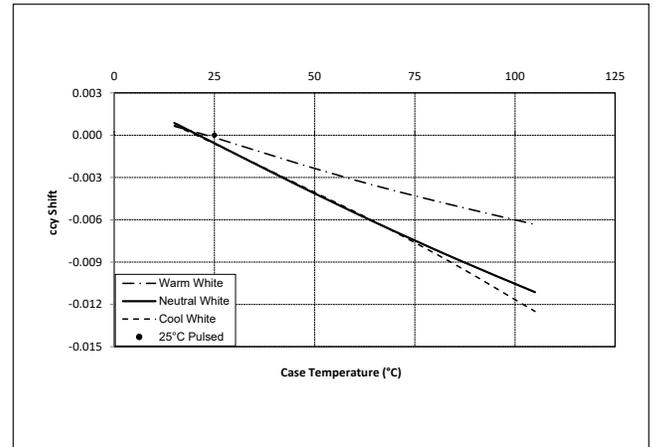
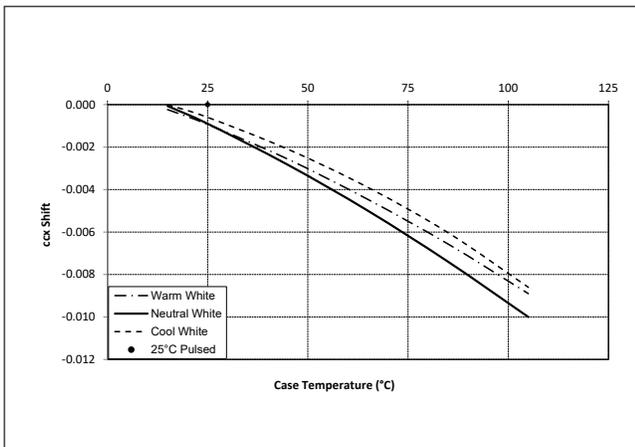


Figure 7: Typical DC ccx Shift vs. Case Temperature



Notes for Figures 5-7:

1. Characteristics shown for warm white based on 3000K and 80 CRI.
2. Characteristics shown for neutral white based on 4000K and 80 CRI.
3. Characteristics shown for cool white based on 5000K and 70 CRI.
4. Characteristics shown for warm white includes Decor Series Class A
5. For other color SKUs, the shift in color will vary. Please contact your Bridgelux Sales Representative for more information.

Performance Curves

Figure 8: 2000K, 65 CRI Color Shift vs. Case Temperature

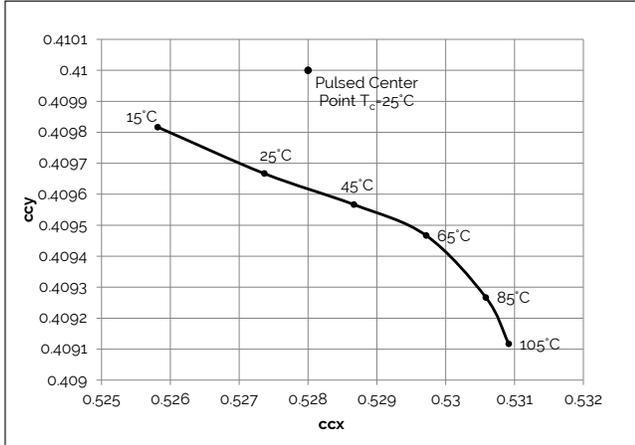


Figure 9: 3000K, 90 CRI Color Shift vs. Case Temperature^{1,3}

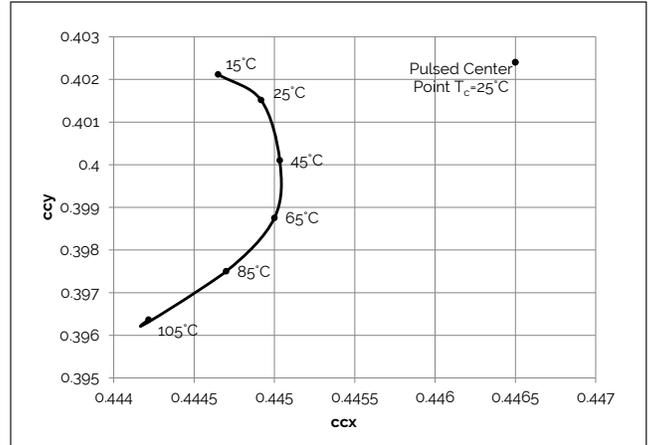


Figure 10: 2700K, 97 CRI Color Shift vs. Case Temperature¹

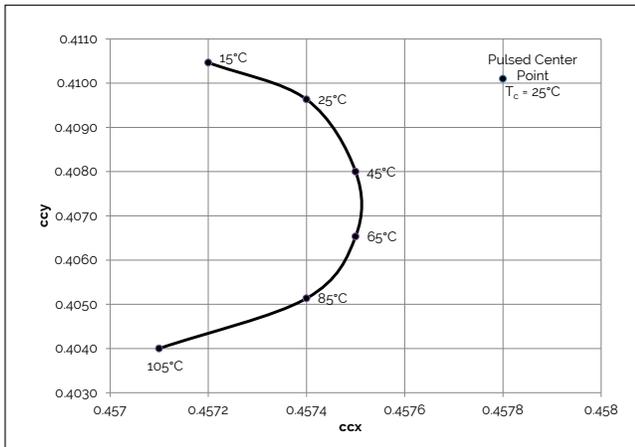


Figure 11: 3000K, 97 CRI Color Shift vs. Case Temperature¹

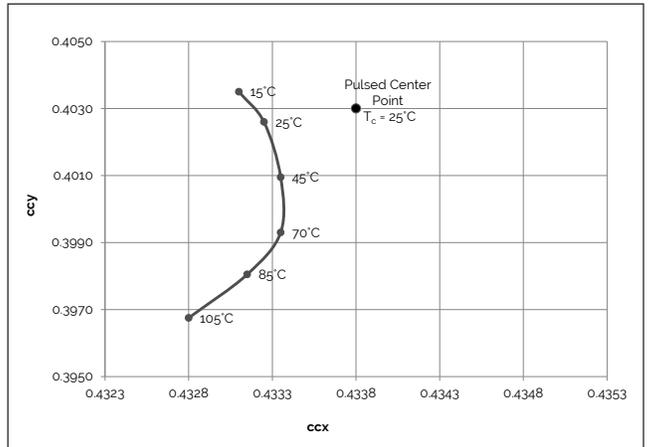


Figure 12: 3000K Class A Color Shift vs. Case Temperature¹

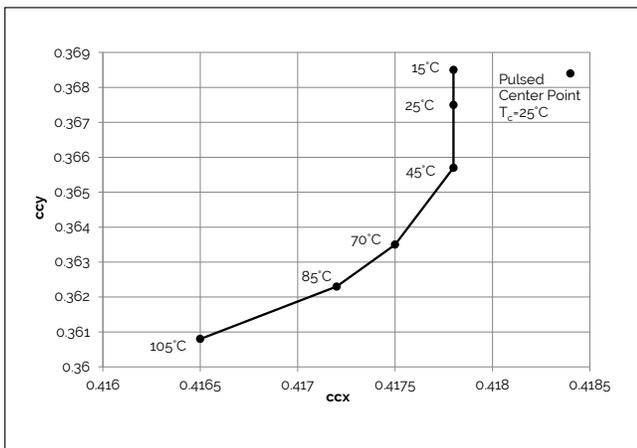
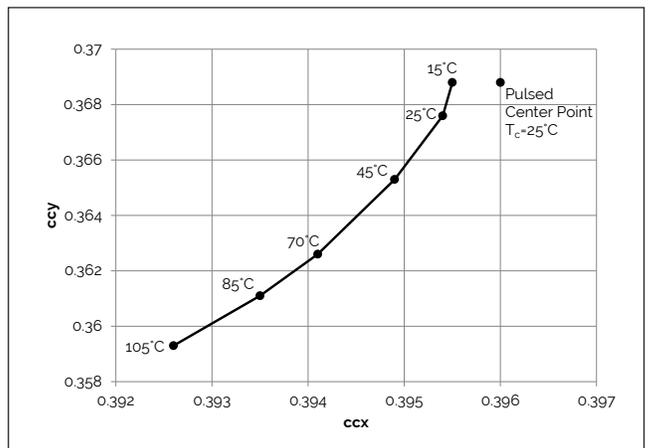


Figure 13: 3500K Class A Color Shift vs. Case Temperature¹

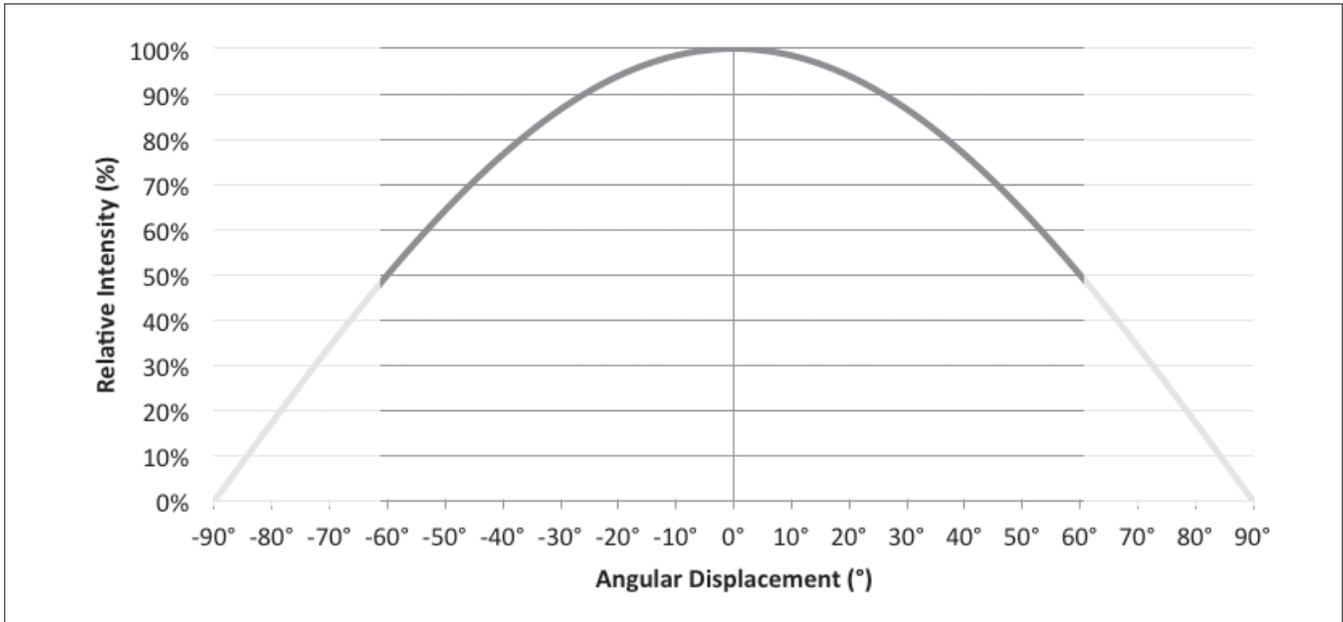


Note for Figures 8-13:

1. Measurements made under DC test conditions at the nominal drive current.
2. Typical color shift is shown with a tolerance of ± 0.002 .
3. Characteristics shown for Decor Series Showcase products, BXRE-30G100C-x-73

Typical Radiation Pattern

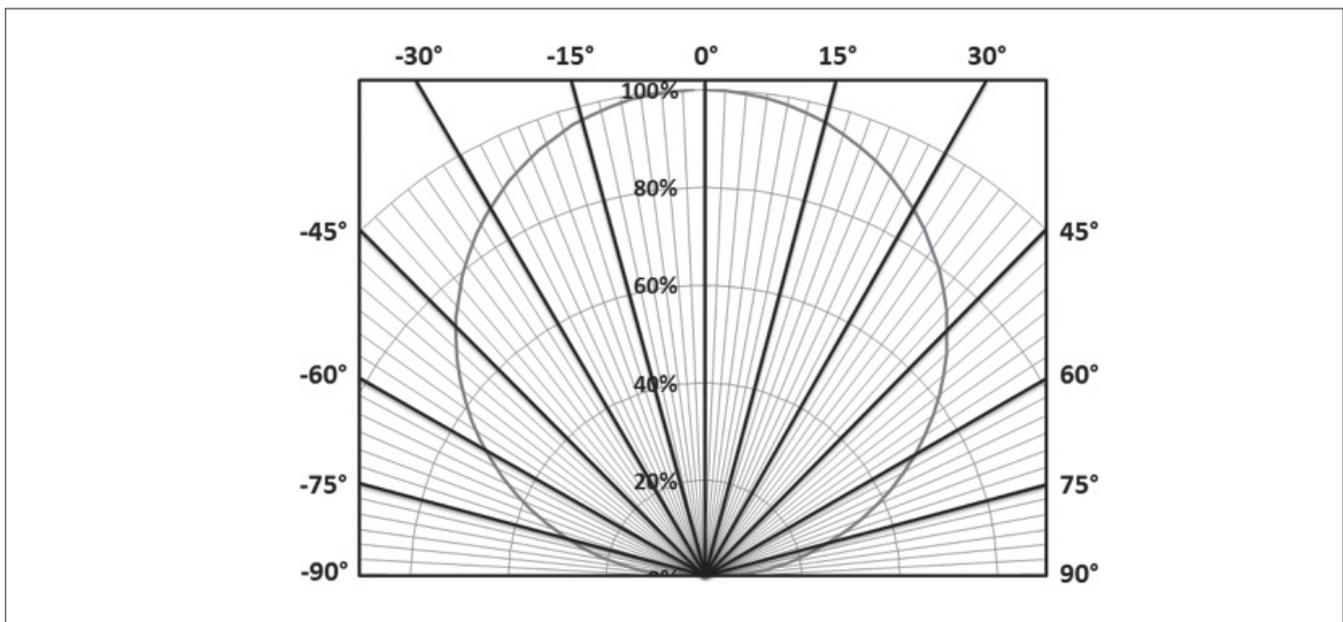
Figure 14: Typical Spatial Radiation Pattern



Note for Figure 14:

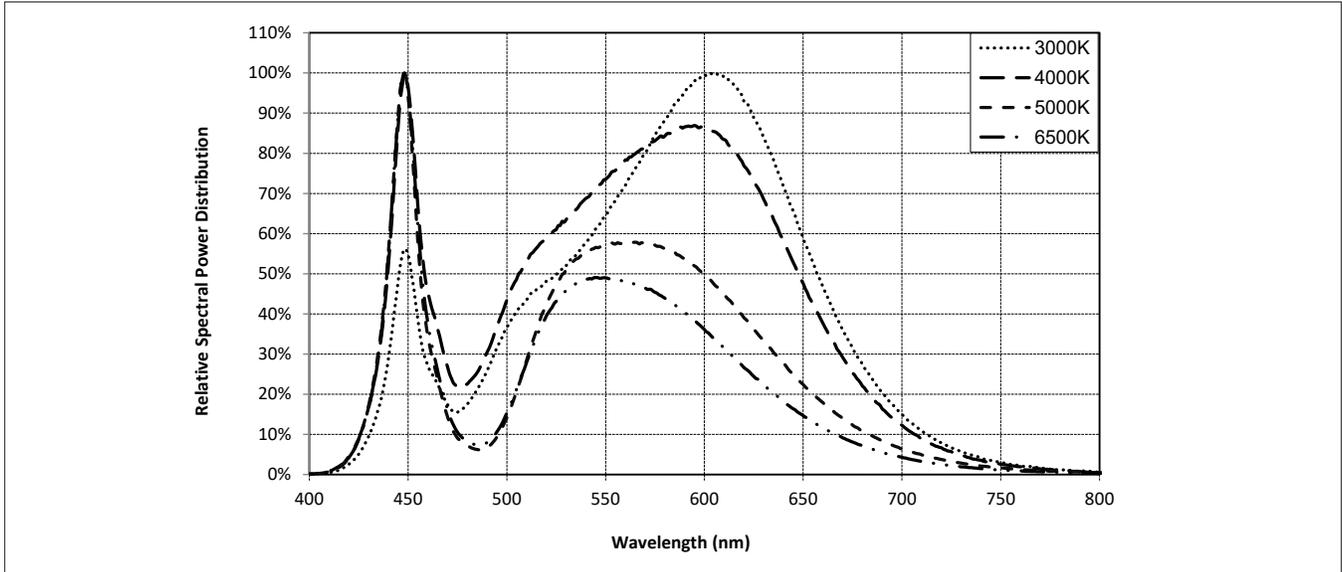
1. Typical viewing angle is 120°.
2. The viewing angle is defined as the off axis angle from the centerline where intensity is ½ of the peak value.

Figure 15: Typical Polar Radiation Pattern



Typical Color Spectrum

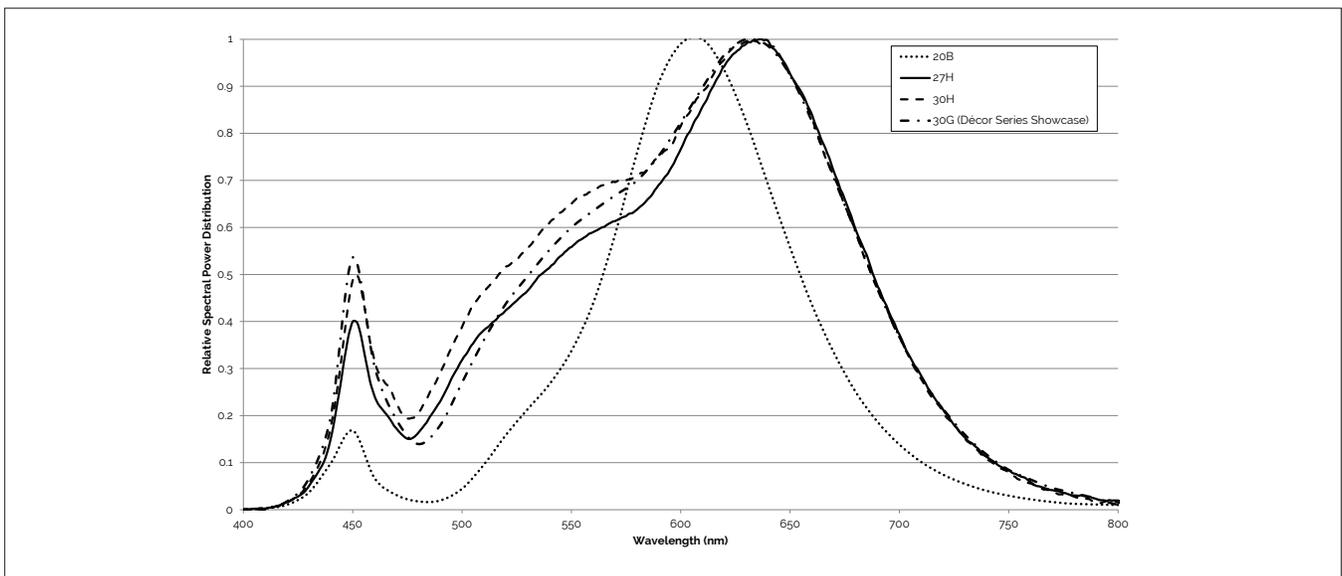
Figure 16: Typical Color Spectrum



Notes for Figure 16:

1. Color spectra measured at nominal current for $T_j = T_c = 25^\circ\text{C}$.
2. Color spectra shown is 3000K and 80 CRI.
3. Color spectra shown is 4000K and 80 CRI.
4. Color spectra shown is 5000K and 70 CRI.
4. Color spectra shown is 6500K and 70 CRI.

Figure 17: Typical Color Spectrum for Décor Series

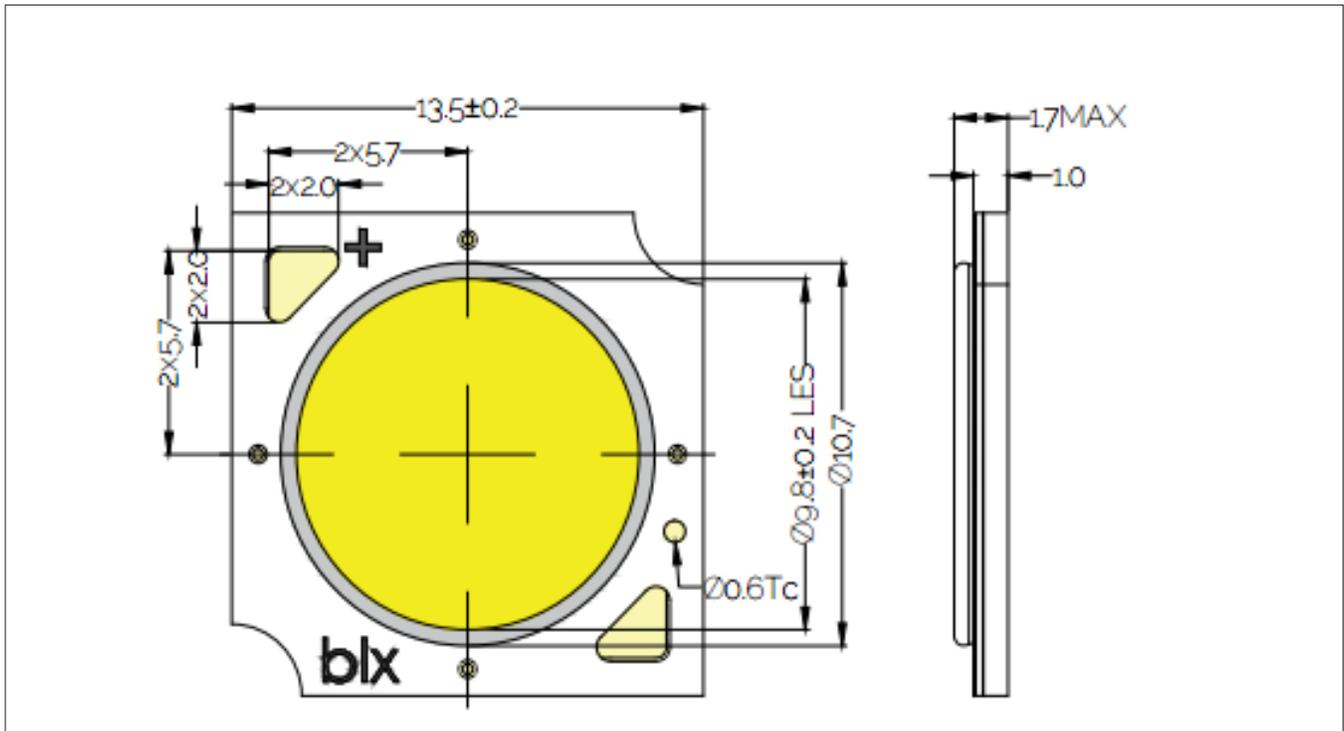


Note for Figure 17:

1. Color spectra measured at nominal current for $T_j = T_c = 25^\circ\text{C}$.

Mechanical Dimensions

Figure 18: Drawing for V10 LED Array

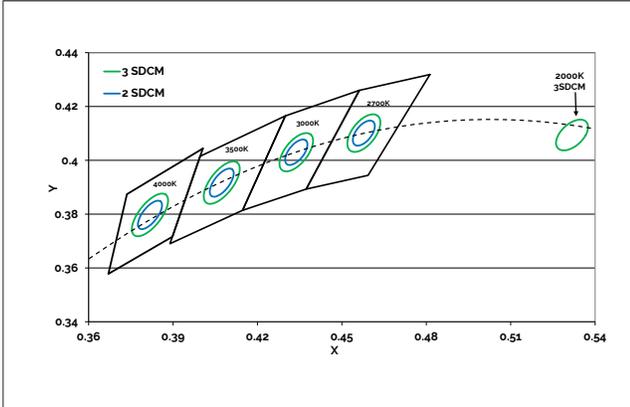


Notes for Figure 18:

1. Drawings are not to scale.
2. Drawing dimensions are in millimeters.
3. Unless otherwise specified, tolerances are ± 0.1 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 ± 0.2 mm.
7. Bridgelux maintains a flatness of 0.10 mm across the mounting surface of the array.

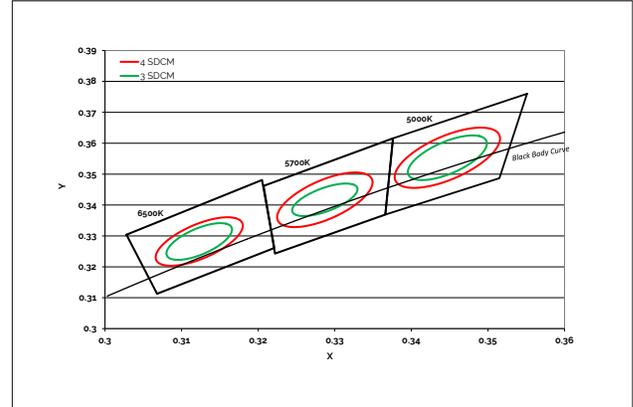
Color Binning Information

Figure 19: Warm and Neutral White Test Bins in xy Color Space



Note: Pulsed Test Conditions, $T_c = 25^\circ\text{C}$

Figure 20: Cool White Test Bins in xy Color Space



Note: Pulsed Test Conditions, $T_c = 25^\circ\text{C}$

Table 9: Warm and Neutral White xy Bin Coordinates and Associated Typical CCT

Bin Code	2000K	2700K	3000K ¹	3500K ¹	4000K ¹
ANSI Bin (for reference only)	-	(2580K - 2870K)	(2870K - 3220K)	(3220K - 3710K)	(3710K - 4260K)
73 (3 SDCM)	-	(2651K - 2794K)	(2968K - 3136K)	(3369K - 3586K)	(3851K - 4130K)
72 (2 SDCM)	-	(2674K - 2769K)	(2995K - 3107K)	(3404K - 3548K)	(3895K - 4081K)
Center Point (x,y)	(0.5280, 0.4100)	(0.4578, 0.4101)	(0.4338, 0.403) (0.4465, 0.4024) ²	(0.4073, 0.3917)	(0.3818, 0.3797)

Notes for Table 9:

- Color Binning information excludes Décor Series Class A products. Please contact your Bridgelux Sales Representative for more information.
- Center Point for Decor Series Showcase.
- Bridgelux maintains a tolerance of +/- 0.007 on x and y color coordinates in the CIE 1931 color Space.

Table 10: Cool White xy Bin Coordinates and Associated Typical CCT (product is hot targeted to $T_c = 85^\circ\text{C}$)

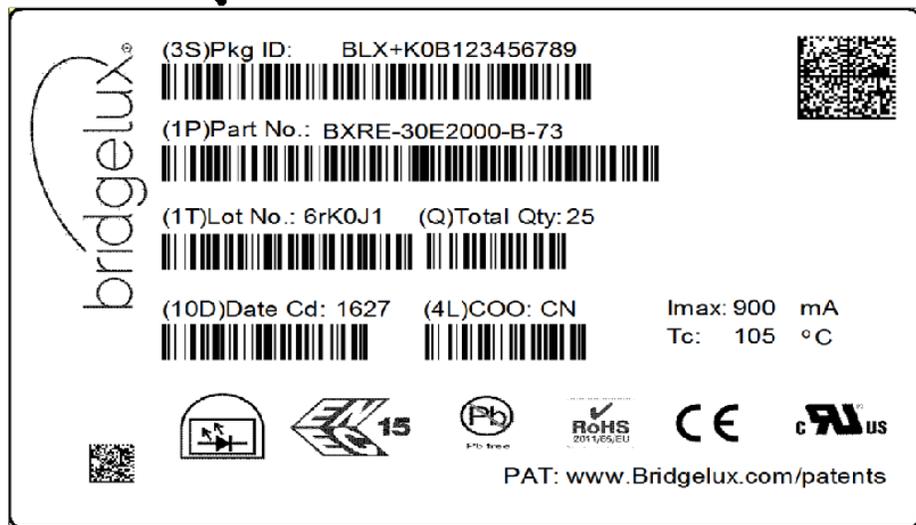
Bin Code	5000K	5700K	6500K
ANSI Bin (for reference only)	(4745K - 5311K)	(5312K - 6022K)	(6022K - 7042K)
74 (4 SDCM)	(4801K - 5282K)	(5395K - 5970K)	(6200K - 6910K)
73 (3 SDCM)	(4835K - 5215K)	(5460K - 5891K)	(6279K - 6811K)
Center Point (x,y)	(0.3447, 0.3553)	(0.3287, 0.3417)	(0.3123, 0.3282)

Note for Table 10:

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

Packaging and Labeling

Figure 21: V10 Packaging Tube



Box Label

Commercial Invoice
and Packing list



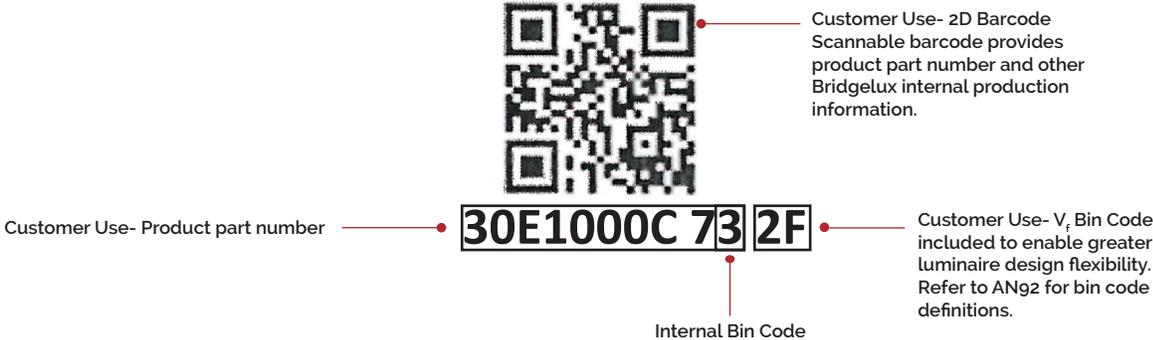
Notes for Figure 21:

1. Each tube holds 30 V10 COB arrays.
2. One tube is sealed in an anti-static bag. Four bags are placed in a shipping box. 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 8.3 (W) x 15.4 (H) x 430 (L). Dimensions for the anti-static bag are 75 (W) x 615 (L) x 3.1 (T) mm. Dimensions for the shipping box are 58.7 x 13.3 x 7.9 cm

Packaging and Labeling

Figure 22: Gen. 7 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

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 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

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.

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Bridgelux Gen 7 V10 Array Series Product Data Sheet DS100 Rev. T (11/2022)