



# Bridgelux® Vero® SE 10 Array

Product Data Sheet DS120



# Introduction

Vero SE



Vero® SE Series is a revolutionary light source system that integrates Bridgelux's seventh generation COB technology with poke-in connectivity enabling solder-free installation. Vero SE LED light sources streamline assembly processes, lower manufacturing cost, simplify luminaire design, improve light quality and increase design flexibility.

Vero SE is available in four different light emitting surface (LES) configurations that operate reliably over a broad current range. With Vero SE, secondary connector and holder components are not required, allowing for rapid integration of arrays into fixtures and an efficient field replaceable solution. Vero SE arrays deliver increased lumen density for improved beam control and precision lighting with 2 and 3 SDCM color control standards for clean and consistent uniform lighting.

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 V Series™ HD.

**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 Rg 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 also a good replacement for halogen lamps.

**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

- Poke-in connectivity
- Efficacy of 162 lm/W typical
- Broad range of CCT options from 2700K to 6500K
- CRI options: minimum 65, 70, 80, and 90
- Color control: 2 and 3 SDCM for 2700K-4000K CCT
- Reliable operation at up to 2X nominal drive current
- Radial die pattern and improved lumen density
- Top side part number markings
- No exposed solder pads or electrical connections
- V<sub>f</sub> bin code backside marking

## Benefits

- Poke-in connectivity enables solderless, connector free installation
- Broad application coverage for interior and exterior lighting
- Flexibility for application driven lighting design requirements
- High quality, true color reproduction
- Uniform consistent white light
- Flexibility in design optimization
- Enhanced ease of use and assembly
- Ability to configure multiple Vero SE arrays in series and parallel reduces customer driver cost
- Improved inventory management and quality control



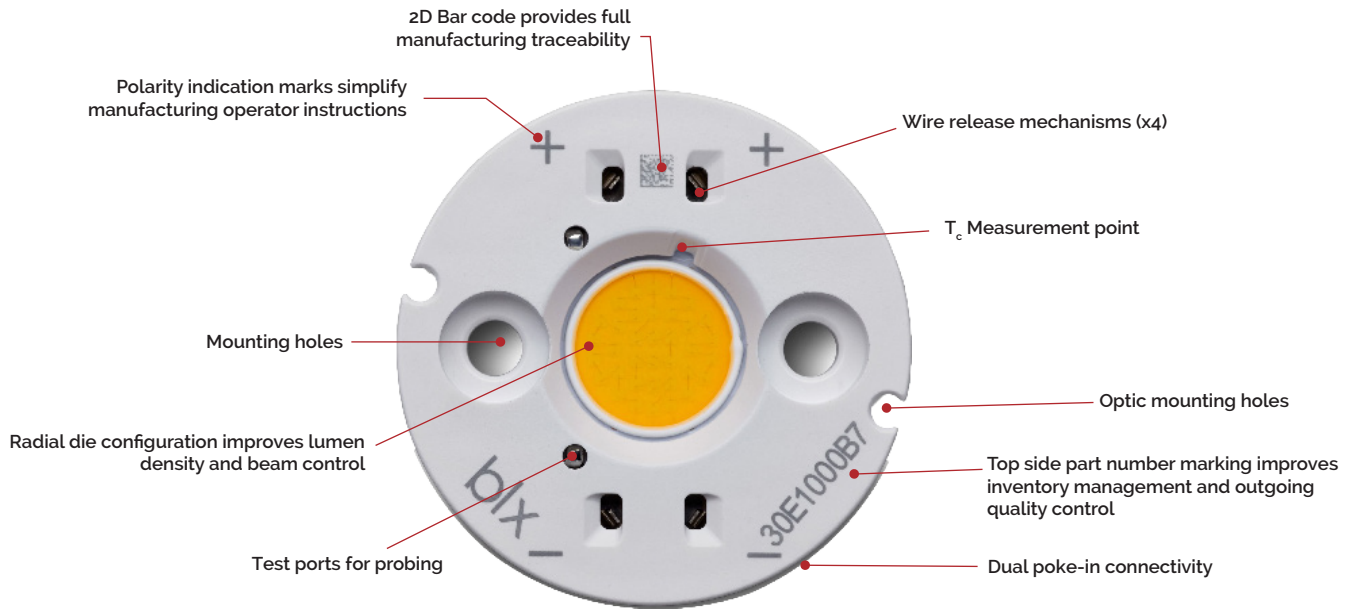
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# Product Feature Map

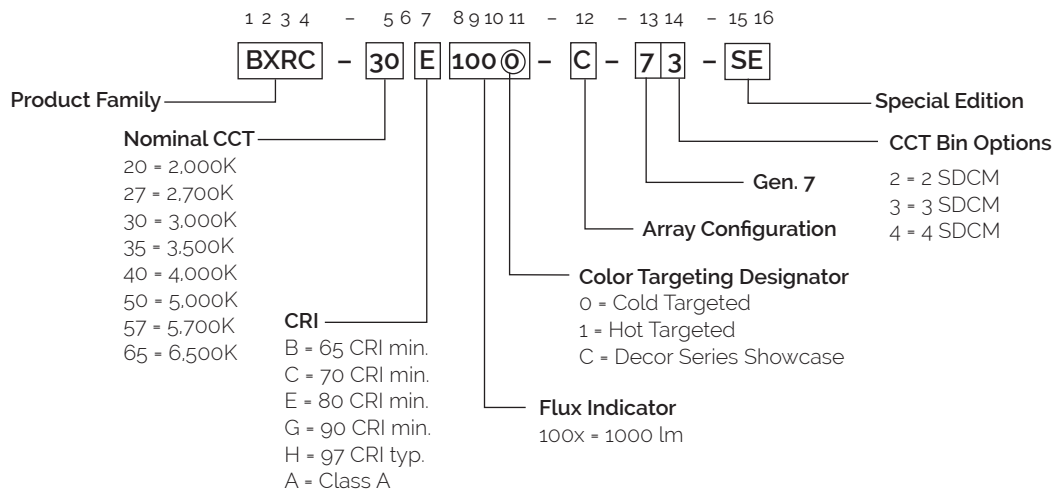
Vero SE 10 is the smallest form factor in the product family of next generation solid state light sources. In addition to delivering the performance and light quality required for many lighting applications.

Vero SE incorporates several features to simplify the design integration and manufacturing process, accelerate time to market and reduce system costs. Please visit [www.bridgelux.com](http://www.bridgelux.com) for more information on the Vero SE family of products.



## Product Nomenclature

The part number designation for Bridgelux Vero SE 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 <sup>1</sup> (K)	CRI <sup>2</sup>	Nominal Drive Current <sup>3</sup> (mA)	Typical Pulsed Flux <sup>4,5,6</sup> $T_c = 25^\circ\text{C}$ (lm)	Minimum Pulsed Flux <sup>6,7</sup> $T_c = 25^\circ\text{C}$ (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-20B1001-B-73-SE	2000	65	270	1391	1224	34.8	9.4	148
BXRC-20B1001-D-73-SE	2000	65	350	1347	1185	26.0	9.1	148
BXRC-27E1000-B-7x-SE	2700	80	270	1417	1247	34.8	9.4	151
BXRC-27E1000-C-7x-SE	2700	80	360	1890	1663	34.8	12.5	151
BXRC-27E1000-D-7x-SE	2700	80	350	1373	1208	26.0	9.1	151
BXRC-27G10H0-B-7x-SE	2700	90	270	1214	1068	34.8	9.4	129
BXRC-27G10H0-C-7x-SE	2700	90	360	1618	1424	34.8	12.5	129
BXRC-27G10H0-D-7x-SE	2700	90	350	1175	1034	26.0	9.1	129
BXRC-27G1000-B-7x-SE	2700	90	270	1169	1029	34.8	9.4	124
BXRC-27G1000-C-7x-SE	2700	90	360	1559	1372	34.8	12.5	124
BXRC-27G1000-D-7x-SE	2700	90	350	1133	997	26.0	9.1	124
BXRC-27H1000-B-7x-SE	2700	97	270	1036	912	34.8	9.4	110
BXRC-27H1000-C-7x-SE	2700	97	360	1382	1216	34.8	12.5	110
BXRC-27H1000-D-7x-SE	2700	97	350	1004	883	26.0	9.1	110
BXRC-30C1001-B-74-SE	3000	70	270	1577	1388	34.8	9.4	168
BXRC-30C1001-C-74-SE	3000	70	360	2103	1850	34.8	12.5	168
BXRC-30C1001-D-74-SE	3000	70	350	1527	1344	26.0	9.1	168
BXRC-30E1000-B-7x-SE	3000	80	270	1506	1325	34.8	9.4	160
BXRC-30E1000-C-7x-SE	3000	80	360	2008	1767	34.8	12.5	160
BXRC-30E1000-D-7x-SE	3000	80	350	1459	1284	26.0	9.1	160
BXRC-30G10H0-B-7x-SE	3000	90	270	1276	1123	34.8	9.4	136
BXRC-30G10H0-C-7x-SE	3000	90	360	1701	1497	34.8	12.5	136
BXRC-30G10H0-D-7x-SE	3000	90	350	1235	1087	26.0	9.1	136
BXRC-30G1000-B-7x-SE	3000	90	270	1223	1076	34.8	9.4	130
BXRC-30G1000-C-7x-SE	3000	90	360	1630	1434	34.8	12.5	130
BXRC-30G1000-D-7x-SE	3000	90	350	1184	1042	26.0	9.1	130
BXRC-30G100C-B-73-SE	3000	90	270	1178	1037	34.8	9.4	125
BXRC-30G100C-D-73-SE	3000	90	350	1141	1004	26.0	9.1	125
BXRC-30H1000-B-7x-SE	3000	97	270	1107	974	34.8	9.4	118
BXRC-30H1000-C-7x-SE	3000	97	360	1476	1299	34.8	12.5	118
BXRC-30H1000-D-7x-SE	3000	97	350	1072	944	26.0	9.1	118
BXRC-30A1001-B-73-SE <sup>8,9</sup>	3000	93	270	1099	967	34.8	9.4	117
BXRC-30A1001-C-73-SE <sup>8,9</sup>	3000	93	360	1465	1289	34.8	12.5	117
BXRC-30A1001-D-73-SE <sup>8,9</sup>	3000	93	350	1064	936	26.0	9.1	117

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, 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, the minimum Rg values for 90 CRI products is 50, the minimum Rg values for 97 CRI products is 93. Bridgelux maintains a  $\pm 3$  tolerance on CRI and 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) =  $25^\circ\text{C}$ .
- 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  $70^\circ\text{C}$ . 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 <sup>1</sup> (K)	CRI <sup>2</sup>	Nominal Drive Current <sup>3</sup> (mA)	Typical Pulsed Flux <sup>4,5,6</sup> $T_c = 25^\circ\text{C}$ (lm)	Minimum Pulsed Flux <sup>6,7</sup> $T_c = 25^\circ\text{C}$ (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-35E1000-B-7x-SE	3500	80	270	1541	1356	34.8	9.4	164
BXRC-35E1000-C-7x-SE	3500	80	360	2055	1809	34.8	12.5	164
BXRC-35E1000-D-7x-SE	3500	80	350	1493	1314	26.0	9.1	164
BXRC-35G1000-B-7x-SE	3500	90	270	1267	1115	34.8	9.4	135
BXRC-35G1000-C-7x-SE	3500	90	360	1689	1486	34.8	12.5	135
BXRC-35G1000-D-7x-SE	3500	90	350	1227	1080	26.0	9.1	135
BXRC-35A1001-B-73-SE <sup>8,9</sup>	3500	93	270	1169	1029	34.8	9.4	124
BXRC-35A1001-C-73-SE <sup>8,9</sup>	3500	93	360	1559	1372	34.8	12.5	124
BXRC-35A1001-D-73-SE <sup>8,9</sup>	3500	93	350	1133	997	26.0	9.1	124
BXRC-40C1001-B-74-SE	4000	70	270	1621	1427	34.8	9.4	173
BXRC-40C1001-C-74-SE	4000	70	360	2162	1902	34.8	12.5	173
BXRC-40C1001-D-74-SE	4000	70	350	1570	1382	26.0	9.1	173
BXRC-40E1000-B-7x-SE	4000	80	270	1550	1364	34.8	9.4	165
BXRC-40E1000-C-7x-SE	4000	80	360	2067	1819	34.8	12.5	165
BXRC-40E1000-D-7x-SE	4000	80	350	1501	1321	26.0	9.1	165
BXRC-40G1000-B-7x-SE	4000	90	270	1293	1138	34.8	9.4	138
BXRC-40G1000-C-7x-SE	4000	90	360	1725	1518	34.8	12.5	138
BXRC-40G1000-D-7x-SE	4000	90	350	1253	1102	26.0	9.1	138
BXRC-40H1000-B-7x-SE	4000	97	270	1169	1029	34.8	9.4	124
BXRC-40H1000-C-7x-SE	4000	97	360	1559	1372	34.8	12.5	124
BXRC-40H1000-D-7x-SE	4000	97	350	1133	997	26.0	9.1	124
BXRC-40A1001-B-73-SE <sup>8,9</sup>	4000	93	270	1267	1115	34.8	9.4	135
BXRC-40A1001-C-73-SE <sup>8,9</sup>	4000	93	360	1689	1486	34.8	12.5	135
BXRC-40A1001-D-73-SE <sup>8,9</sup>	4000	93	350	1227	1080	26.0	9.1	135
BXRC-50C1001-B-7x-SE	5000	70	270	1630	1434	34.8	9.4	173
BXRC-50C1001-C-7x-SE	5000	70	360	2173	1913	34.8	12.5	173
BXRC-50C1001-D-7x-SE	5000	70	350	1579	1389	26.0	9.1	173
BXRC-50E1001-B-7x-SE	5000	80	270	1568	1380	34.8	9.4	167
BXRC-50E1001-C-7x-SE	5000	80	360	2091	1840	34.8	12.5	167
BXRC-50E1001-D-7x-SE	5000	80	350	1519	1336	26.0	9.1	167
BXRC-50G1001-B-7x-SE	5000	90	270	1355	1193	34.8	9.4	144
BXRC-50G1001-C-7x-SE	5000	90	360	1807	1590	34.8	12.5	144
BXRC-50G1001-D-7x-SE	5000	90	350	1313	1155	26.0	9.1	144

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, Decor Series Street and Landmark and Decor Series Class A products. CRI values are minimums for all other products. Minimum R<sub>g</sub> value for 80 CRI products is 0, the minimum R<sub>g</sub> values for 90 CRI products is 50, the minimum R<sub>g</sub> values for 97 CRI products is 93. Bridgelux maintains a  $\pm 3$  tolerance on CRI and R<sub>g</sub> 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) =  $25^\circ\text{C}$ .
- 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  $70^\circ\text{C}$ . 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 <sup>1</sup> (K)	CRI <sup>2</sup>	Nominal Drive Current <sup>3</sup> (mA)	Typical Pulsed Flux <sup>4,5,6</sup> $T_c = 25^\circ\text{C}$ (lm)	Minimum Pulsed Flux <sup>6,7</sup> $T_c = 25^\circ\text{C}$ (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-57C1001-B-7x-SE	5700	70	270	1586	1395	34.8	9.4	169
BXRC-57C1001-C-7x-SE	5700	70	360	2114	1861	34.8	12.5	169
BXRC-57C1001-D-7x-SE	5700	70	350	1536	1351	26.0	9.1	169
BXRC-57E1001-B-7x-SE	5700	80	270	1506	1325	34.8	9.4	160
BXRC-57E1001-C-7x-SE	5700	80	360	2008	1767	34.8	12.5	160
BXRC-57E1001-D-7x-SE	5700	80	350	1459	1284	26.0	9.1	160
BXRC-65C1001-B-7x-SE	6500	70	270	1586	1395	34.8	9.4	169
BXRC-65C1001-C-7x-SE	6500	70	360	2114	1861	34.8	12.5	169
BXRC-65C1001-D-7x-SE	6500	70	350	1536	1351	26.0	9.1	169
BXRC-65E1001-B-7x-SE	6500	80	270	1524	1341	34.8	9.4	162
BXRC-65E1001-C-7x-SE	6500	80	360	2032	1788	34.8	12.5	162
BXRC-65E1001-D-7x-SE	6500	80	350	1476	1299	26.0	9.1	162

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, 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, the minimum Rg values for 90 CRI products is 50, the minimum Rg values for 97 CRI products is 93. Bridgelux maintains a  $\pm 3$  tolerance on CRI and 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) =  $25^\circ\text{C}$ .
- 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  $70^\circ\text{C}$ . GAI may vary depending on fixture design and performance.

# Product Selection Guide

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

Part Number	Nominal CCT <sup>1</sup> (K)	GAI <sup>2</sup>	CRI <sup>3</sup>	Nominal Drive Current <sup>4</sup> (mA)	Typical DC Flux <sup>5,6</sup> $T_c = 70^\circ\text{C}$ (lm)	Minimum DC Flux <sup>6,9</sup> $T_c = 70^\circ\text{C}$ (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-30A1001-B-73	3000	80	93	270	1022	899	34.3	9.3	110
BXRC-30A1001-C-73	3000	80	93	360	1362	1199	34.3	12.3	110
BXRC-30A1001-D-73	3000	80	93	350	989	871	25.5	8.9	111
BXRC-35A1001-B-73	3500	80	93	270	1088	957	34.3	9.3	117
BXRC-35A1001-C-73	3500	80	93	360	1450	1276	34.3	12.3	117
BXRC-35A1001-D-73	3500	80	93	350	1053	927	25.5	8.9	118
BXRC-40A1001-B-73	4000	80	93	270	1178	1037	34.3	9.3	127
BXRC-40A1001-C-73	4000	80	93	360	1571	1382	34.3	12.3	127
BXRC-40A1001-D-73	4000	80	93	350	1141	1004	25.5	8.9	128

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  $70^\circ\text{C}$ . GAI may vary depending on fixture design and performance.
- 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 ( $T_c = 85^\circ\text{C}$ )<sup>4,5</sup>

Part Number	Nominal CCT <sup>1</sup> (K)	CRI <sup>2</sup>	Nominal Drive Current <sup>3</sup> (mA)	Typical DC Flux <sup>4,5</sup> $T_c = 85^\circ\text{C}$ (lm)	Minimum DC Flux <sup>6</sup> $T_c = 85^\circ\text{C}$ (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-20B1001-B-73-SE	2000	65	270	1252	1102	33.8	9.1	137
BXRC-20B1001-D-73-SE	2000	65	350	1212	1067	25.3	8.9	137
BXRC-27E1000-B-7x-SE	2700	80	270	1276	1123	33.8	9.1	140
BXRC-27E1000-C-7x-SE	2700	80	360	1701	1497	33.8	12.2	140
BXRC-27E1000-D-7x-SE	2700	80	350	1235	1087	25.3	8.9	140
BXRC-27G10H0-B-7x-SE	2700	90	270	1092	961	33.8	9.1	120
BXRC-27G10H0-C-7x-SE	2700	90	360	1456	1282	33.8	12.2	120
BXRC-27G10H0-D-7x-SE	2700	90	350	1058	931	25.3	8.9	120
BXRC-27G1000-B-7x-SE	2700	90	270	1052	926	33.8	9.1	115
BXRC-27G1000-C-7x-SE	2700	90	360	1403	1235	33.8	12.2	115
BXRC-27G1000-D-7x-SE	2700	90	350	1019	897	25.3	8.9	115
BXRC-27H1000-B-7x-SE	2700	97	270	933	821	33.8	9.1	102
BXRC-27H1000-C-7x-SE	2700	97	360	1244	1095	33.8	12.2	102
BXRC-27H1000-D-7x-SE	2700	97	350	903	795	25.3	8.9	102
BXRC-30C1001-B-74-SE	3000	70	270	1419	1249	33.8	9.1	155
BXRC-30C1001-C-74-SE	3000	70	360	1892	1665	33.8	12.2	155
BXRC-30C1001-D-74-SE	3000	70	350	1374	1210	25.3	8.9	155
BXRC-30E1000-B-7x-SE	3000	80	270	1355	1193	33.8	9.1	148
BXRC-30E1000-C-7x-SE	3000	80	360	1807	1590	33.8	12.2	148
BXRC-30E1000-D-7x-SE	3000	80	350	1313	1155	25.3	8.9	148
BXRC-30G10H0-B-7x-SE	3000	90	270	1148	1010	33.8	9.1	126
BXRC-30G10H0-C-7x-SE	3000	90	360	1531	1347	33.8	12.2	126
BXRC-30G10H0-D-7x-SE	3000	90	350	1112	979	25.3	8.9	126
BXRC-30G1000-B-7x-SE	3000	90	270	1100	968	33.8	9.1	120
BXRC-30G1000-C-7x-SE	3000	90	360	1467	1291	33.8	12.2	120
BXRC-30G1000-D-7x-SE	3000	90	350	1066	938	25.3	8.9	120
BXRC-30G100C-B-73-SE	3000	90	270	1060	933	34.0	9.2	115
BXRC-30G100C-D-73-SE	3000	90	350	1027	904	25.3	8.9	116
BXRC-30H1000-B-7x-SE	3000	97	270	997	877	33.8	9.1	109
BXRC-30H1000-C-7x-SE	3000	97	360	1329	1169	33.8	12.2	109
BXRC-30H1000-D-7x-SE	3000	97	350	965	849	25.3	8.9	109
BXRC-30A1001-B-73-SE <sup>7,8</sup>	3000	93	270	989	870	33.8	9.1	108
BXRC-30A1001-C-73-SE <sup>7,8</sup>	3000	93	360	1318	1160	33.8	12.2	108
BXRC-30A1001-D-73-SE <sup>7,8</sup>	3000	93	350	958	843	25.3	8.9	108

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, 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, the minimum Rg values for 90 CRI products is 50, the minimum Rg values for 97 CRI products is 93. Bridgelux maintains a  $\pm 3$  tolerance on CRI and 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  $85^\circ\text{C}$ . 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  $70^\circ\text{C}$ . GAI may vary depending on fixture design and performance.

# Product Selection Guide

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

Part Number	Nominal CCT <sup>1</sup> (K)	CRI <sup>2</sup>	Nominal Drive Current <sup>3</sup> (mA)	Typical DC Flux <sup>4,5</sup> $T_c = 85^\circ\text{C}$ (lm)	Minimum DC Flux <sup>6</sup> $T_c = 85^\circ\text{C}$ (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-35E1000-B-7x-SE	3500	80	270	1387	1221	33.8	9.1	152
BXRC-35E1000-C-7x-SE	3500	80	360	1850	1628	33.8	12.2	152
BXRC-35E1000-D-7x-SE	3500	80	350	1344	1182	25.3	8.9	152
BXRC-35G1000-B-7x-SE	3500	90	270	1140	1003	33.8	9.1	125
BXRC-35G1000-C-7x-SE	3500	90	360	1520	1338	33.8	12.2	125
BXRC-35G1000-D-7x-SE	3500	90	350	1104	972	25.3	8.9	125
BXRC-35A1001-B-73-SE <sup>7,8</sup>	3500	93	270	1052	926	33.8	9.1	115
BXRC-35A1001-C-73-SE <sup>7,8</sup>	3500	93	360	1403	1235	33.8	12.2	115
BXRC-35A1001-D-73-SE <sup>7,8</sup>	3500	93	350	1019	897	25.3	8.9	115
BXRC-40C1001-B-74-SE	4000	70	270	1459	1284	33.8	9.1	160
BXRC-40C1001-C-74-SE	4000	70	360	1945	1712	33.8	12.2	160
BXRC-40C1001-D-74-SE	4000	70	350	1413	1244	25.3	8.9	160
BXRC-40E1000-B-7x-SE	4000	80	270	1395	1228	33.8	9.1	153
BXRC-40E1000-C-7x-SE	4000	80	360	1860	1637	33.8	12.2	153
BXRC-40E1000-D-7x-SE	4000	80	350	1351	1189	25.3	8.9	153
BXRC-40G1000-B-7x-SE	4000	90	270	1164	1024	33.8	9.1	127
BXRC-40G1000-C-7x-SE	4000	90	360	1552	1366	33.8	12.2	127
BXRC-40G1000-D-7x-SE	4000	90	350	1127	992	25.3	8.9	127
BXRC-40H1000-B-7x-SE	4000	97	270	1052	926	33.8	9.1	115
BXRC-40H1000-C-7x-SE	4000	97	360	1403	1235	33.8	12.2	115
BXRC-40H1000-D-7x-SE	4000	97	350	1019	897	25.3	8.9	115
BXRC-40A1001-B-73-SE <sup>7,8</sup>	4000	93	270	1140	1003	33.8	9.1	125
BXRC-40A1001-C-73-SE <sup>7,8</sup>	4000	93	360	1520	1338	33.8	12.2	125
BXRC-40A1001-D-73-SE <sup>7,8</sup>	4000	93	350	1104	972	25.3	8.9	125
BXRC-50C1001-B-7x-SE	5000	70	270	1467	1291	33.8	9.1	161
BXRC-50C1001-C-7x-SE	5000	70	360	1956	1721	33.8	12.2	161
BXRC-50C1001-D-7x-SE	5000	70	350	1421	1250	25.3	8.9	161
BXRC-50E1001-B-7x-SE	5000	80	270	1411	1242	33.8	9.1	154
BXRC-50E1001-C-7x-SE	5000	80	360	1882	1656	33.8	12.2	154
BXRC-50E1001-D-7x-SE	5000	80	350	1367	1203	25.3	8.9	154
BXRC-50G1001-B-7x-SE	5000	90	270	1220	1073	33.8	9.1	134
BXRC-50G1001-C-7x-SE	5000	90	360	1626	1431	33.8	12.2	134
BXRC-50G1001-D-7x-SE	5000	90	350	1181	1040	25.3	8.9	133

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  $T_s = T_c = 25^\circ\text{C}$ . 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 R<sub>g</sub> value for 80 CRI products is 0, the minimum R<sub>g</sub> values for 90 CRI products is 50, the minimum R<sub>g</sub> values for 97 CRI products is 93. Bridgelux maintains a  $\pm 3$  tolerance on CRI and R<sub>g</sub> 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  $85^\circ\text{C}$ . 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  $70^\circ\text{C}$ . GAI may vary depending on fixture design and performance.

# Product Selection Guide

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

Part Number	Nominal CCT <sup>1</sup> (K)	CRI <sup>2</sup>	Nominal Drive Current <sup>3</sup> (mA)	Typical DC Flux <sup>4,5</sup> $T_c = 85^\circ\text{C}$ (lm)	Minimum DC Flux <sup>6</sup> $T_c = 85^\circ\text{C}$ (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-57C1001-B-7x-SE	5700	70	270	1427	1256	33.8	9.1	156
BXRC-57C1001-C-7x-SE	5700	70	360	1903	1675	33.8	12.2	156
BXRC-57C1001-D-7x-SE	5700	70	350	1382	1216	25.3	8.9	156
BXRC-57E1001-B-7x-SE	5700	80	270	1355	1193	33.8	9.1	148
BXRC-57E1001-C-7x-SE	5700	80	360	1807	1590	33.8	12.2	148
BXRC-57E1001-D-7x-SE	5700	80	350	1313	1155	25.3	8.9	148
BXRC-65C1001-B-7x-SE	6500	70	270	1427	1256	33.8	9.1	156
BXRC-65C1001-C-7x-SE	6500	70	360	1903	1675	33.8	12.2	156
BXRC-65C1001-D-7x-SE	6500	70	350	1382	1216	25.3	8.9	156
BXRC-65E1001-B-7x-SE	6500	80	270	1371	1207	33.8	9.1	150
BXRC-65E1001-C-7x-SE	6500	80	360	1828	1609	33.8	12.2	150
BXRC-65E1001-D-7x-SE	6500	80	350	1328	1169	25.3	8.9	150

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, the minimum Rg values for 90 CRI products is 50, the minimum Rg values for 97 CRI products is 93. Bridgelux maintains a  $\pm 3$  tolerance on CRI and 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  $85^\circ\text{C}$ . 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  $70^\circ\text{C}$ . GAI may vary depending on fixture design and performance.

# Performance at Commonly Used Drive Currents

Vero SE LED arrays are tested to the specifications shown using the nominal drive currents in Table 1. Vero SE 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 <sup>1</sup> (mA)	Typical $V_f$ $T_c = 25^\circ\text{C}$ (V)	Typical Power $T_c = 25^\circ\text{C}$ (W)	Typical Flux <sup>2</sup> $T_c = 25^\circ\text{C}$ (lm)	Typical DC Flux <sup>3</sup> $T_c = 85^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRC-20B1001-B-73-SE	65	135	33.1	4.5	741	666	166
		180	33.6	6.1	972	872	160
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1391</b>	<b>1252</b>	<b>148</b>
		405	36.2	14.7	2040	1815	139
		540	37.5	20.3	2614	2314	129
BXRC-20B1001-D-73-SE	65	175	24.9	4.4	719	654	165
		233	25.4	5.9	944	848	159
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1347</b>	<b>1212</b>	<b>148</b>
		525	27.4	14.4	1983	1710	138
		700	28.4	19.9	2540	2139	128
BXRC-27E1000-B-7x-SE	80	135	33.1	4.5	755	679	169
		180	33.6	6.1	990	888	164
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1417</b>	<b>1276</b>	<b>151</b>
		405	36.2	14.7	2079	1850	142
		540	37.5	20.3	2664	2358	131
BXRC-27E1000-C-7x-SE	80	180	33.1	6.0	1005	897	169
		240	33.6	8.1	1316	1169	163
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1890</b>	<b>1701</b>	<b>151</b>
		540	36.2	19.5	2752	2391	141
		720	37.5	27.0	3515	3009	130
BXRC-27E1000-D-7x-SE	80	175	24.9	4.4	733	666	168
		233	25.4	5.9	962	865	162
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1373</b>	<b>1235</b>	<b>151</b>
		525	27.4	14.4	2021	1743	141
		700	28.4	19.9	2589	2180	130
BXRC-27G10H0-B-7x-SE	90	135	33.1	4.5	647	581	145
		180	33.6	6.1	848	761	140
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1214</b>	<b>1355</b>	<b>129</b>
		405	36.2	14.7	1781	1584	121
		540	37.5	20.3	2281	2019	113
BXRC-27G10H0-C-7x-SE	90	180	33.1	6.0	860	768	144
		240	33.6	8.1	1127	1001	140
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1618</b>	<b>1807</b>	<b>129</b>
		540	36.2	19.5	2356	2047	121
		720	37.5	27.0	3010	2577	111
BXRC-27G10H0-D-7x-SE	90	175	24.9	4.4	628	571	144
		233	25.4	5.9	823	740	139
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1175</b>	<b>1313</b>	<b>129</b>
		525	27.4	14.4	1730	1492	120
		700	28.4	19.9	2217	1867	111

Notes for Table 4:

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

Part Number	CRI	Drive Current <sup>1</sup> (mA)	Typical V <sub>f</sub> T <sub>c</sub> = 25°C (V)	Typical Power T <sub>c</sub> = 25°C (W)	Typical Flux <sup>2</sup> T <sub>c</sub> = 25°C (lm)	Typical DC Flux <sup>3</sup> T <sub>c</sub> = 85°C (lm)	Typical Efficacy T <sub>c</sub> = 25°C (lm/W)
BXRC-27G1000-B-7x-SE	90	135	33.1	4.5	623	560	140
		180	33.6	6.1	817	733	135
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1169</b>	<b>1052</b>	<b>124</b>
		405	36.2	14.7	1716	1526	117
		540	37.5	20.3	2198	1945	108
BXRC-27G1000-C-7x-SE	90	180	33.1	6.0	829	740	139
		240	33.6	8.1	1086	965	135
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1559</b>	<b>1403</b>	<b>124</b>
		540	36.2	19.5	2270	1972	116
		720	37.5	27.0	2900	2483	107
BXRC-27G1000-D-7x-SE	90	175	24.9	4.4	605	550	139
		233	25.4	5.9	793	713	134
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1133</b>	<b>1019</b>	<b>124</b>
		525	27.4	14.4	1667	1438	116
		700	28.4	19.9	2136	1798	107
BXRC-27H1000-B-7x-SE	97	135	33.1	4.5	552	496	124
		180	33.6	6.1	724	650	120
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1036</b>	<b>933</b>	<b>110</b>
		405	36.2	14.7	1521	1353	104
		540	37.5	20.3	1948	1724	96
BXRC-27H1000-C-7x-SE	97	180	33.1	6.0	735	656	123
		240	33.6	8.1	963	855	119
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1382</b>	<b>1244</b>	<b>110</b>
		540	36.2	19.5	2012	1748	103
		720	37.5	27.0	2571	2200	95
BXRC-27H1000-D-7x-SE	97	175	24.9	4.4	536	487	123
		233	25.4	5.9	703	632	119
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1004</b>	<b>903</b>	<b>110</b>
		525	27.4	14.4	1478	1274	103
		700	28.4	19.9	1893	1594	95
BXRC-30C1001-B-7x-SE	70	135	33.1	4.5	840	755	188
		180	33.6	6.1	1102	988	182
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1577</b>	<b>1419</b>	<b>168</b>
		405	36.2	14.7	2313	2058	158
		540	37.5	20.3	2964	2623	146
BXRC-30C1001-C-7x-SE	70	180	33.1	6.0	1118	997	188
		240	33.6	8.1	1464	1301	181
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2103</b>	<b>1892</b>	<b>168</b>
		540	36.2	19.5	3062	2660	157
		720	37.5	27.0	3911	3348	145
BXRC-30C1001-D-7x-SE	70	175	24.9	4.4	815	741	187
		233	25.4	5.9	1070	962	181
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1527</b>	<b>1374</b>	<b>168</b>
		525	27.4	14.4	2248	1939	156
		700	28.4	19.9	2880	2425	145

Notes for Table 4:

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

Part Number	CRI	Drive Current <sup>1</sup> (mA)	Typical V <sub>f</sub> T <sub>c</sub> = 25°C (V)	Typical Power T <sub>c</sub> = 25°C (W)	Typical Flux <sup>2</sup> T <sub>c</sub> = 25°C (lm)	Typical DC Flux <sup>3</sup> T <sub>c</sub> = 85°C (lm)	Typical Efficacy T <sub>c</sub> = 25°C (lm/W)
BXRC-30E1000-B-7x-SE	80	135	33.1	4.5	803	721	180
		180	33.6	6.1	1052	944	174
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1506</b>	<b>1355</b>	<b>160</b>
		405	36.2	14.7	2209	1965	151
		540	37.5	20.3	2831	2505	140
BXRC-30E1000-C-7x-SE	80	180	33.1	6.0	1068	953	179
		240	33.6	8.1	1399	1243	173
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2008</b>	<b>1807</b>	<b>160</b>
		540	36.2	19.5	2924	2540	150
		720	37.5	27.0	3735	3197	138
BXRC-30E1000-D-7x-SE	80	175	24.9	4.4	779	708	179
		233	25.4	5.9	1022	919	173
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1459</b>	<b>1313</b>	<b>160</b>
		525	27.4	14.4	2147	1852	149
		700	28.4	19.9	2751	2316	138
BXRC-30G10H0-B-7x-SE	90	135	33.1	4.5	680	611	152
		180	33.6	6.1	891	799	147
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1276</b>	<b>1148</b>	<b>136</b>
		405	36.2	14.7	1872	1665	128
		540	37.5	20.3	2398	2122	118
BXRC-30G10H0-C-7x-SE	90	180	33.1	6.0	904	807	152
		240	33.6	8.1	1185	1052	147
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1701</b>	<b>1531</b>	<b>136</b>
		540	36.2	19.5	2477	2152	127
		720	37.5	27.0	3164	2708	117
BXRC-30G10H0-D-7x-SE	90	175	24.9	4.4	660	600	151
		233	25.4	5.9	865	778	146
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1235</b>	<b>1112</b>	<b>136</b>
		525	27.4	14.4	1819	1568	127
		700	28.4	19.9	2330	1962	117
BXRC-30G1000-B-7x-SE	90	135	33.1	4.5	651	585	146
		180	33.6	6.1	854	766	141
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1223</b>	<b>1100</b>	<b>130</b>
		405	36.2	14.7	1794	1595	122
		540	37.5	20.3	2298	2034	113
BXRC-30G1000-C-7x-SE	90	180	33.1	6.0	867	773	145
		240	33.6	8.1	1135	1009	141
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1630</b>	<b>1467</b>	<b>130</b>
		540	36.2	19.5	2374	2062	121
		720	37.5	27.0	3032	2595	112
BXRC-30G1000-D-7x-SE	90	175	24.9	4.4	632	575	145
		233	25.4	5.9	829	746	140
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1184</b>	<b>1066</b>	<b>130</b>
		525	27.4	14.4	1743	1503	121
		700	28.4	19.9	2233	1880	112

Notes for Table 4:

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

Part Number	CRI	Drive Current <sup>1</sup> (mA)	Typical V <sub>f</sub> T <sub>c</sub> = 25°C (V)	Typical Power T <sub>c</sub> = 25°C (W)	Typical Flux <sup>2</sup> T <sub>c</sub> = 25°C (lm)	Typical DC Flux <sup>3</sup> T <sub>c</sub> = 85°C (lm)	Typical Efficacy T <sub>c</sub> = 25°C (lm/W)
BXRC-30G100C-B-73-SE	90	135	33.1	4.5	628	564	141
		180	33.6	6.1	823	738	136
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1178</b>	<b>1060</b>	<b>125</b>
		405	36.2	14.7	1729	1538	118
		540	37.5	20.3	2214	1960	109
BXRC-30G100C-D-73-SE	90	175	24.9	4.4	609	554	140
		233	25.4	5.9	799	719	135
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1141</b>	<b>1027</b>	<b>125</b>
		525	27.4	14.4	1680	1449	117
		700	28.4	19.9	2152	1812	108
BXRC-30H1000-B-7x-SE	97	135	33.1	4.5	590	530	132
		180	33.6	6.1	774	694	128
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1107</b>	<b>997</b>	<b>118</b>
		405	36.2	14.7	1625	1445	111
		540	37.5	20.3	2081	1842	103
BXRC-30H1000-C-7x-SE	97	180	33.1	6.0	785	700	132
		240	33.6	8.1	1028	914	127
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1476</b>	<b>1329</b>	<b>118</b>
		540	36.2	19.5	2150	1868	110
		720	37.5	27.0	2746	2351	102
BXRC-30H1000-D-7x-SE	97	175	24.9	4.4	573	521	131
		233	25.4	5.9	751	675	127
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1072</b>	<b>965</b>	<b>118</b>
		525	27.4	14.4	1579	1362	110
		700	28.4	19.9	2022	1703	102
BXRC-30A1001-B-73	93	135	33.1	4.5	585	526	131
		180	33.6	6.1	768	688	127
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1099</b>	<b>989</b>	<b>117</b>
		405	36.2	14.7	1612	1434	110
		540	37.5	20.3	2065	1827	102
BXRC-30A1001-C-73	93	180	33.1	6.0	779	695	131
		240	33.6	8.1	1020	906	126
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1465</b>	<b>1318</b>	<b>117</b>
		540	36.2	19.5	2133	1853	109
		720	37.5	27.0	2724	2332	101
BXRC-30A1001-D-73	93	175	24.9	4.4	568	517	130
		233	25.4	5.9	745	670	126
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1064</b>	<b>958</b>	<b>117</b>
		525	27.4	14.4	1566	1351	109
		700	28.4	19.9	2006	1689	101
BXRC-35E1000-B-7x-SE	80	135	33.1	4.5	821	738	184
		180	33.6	6.1	1077	966	178
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1541</b>	<b>1387</b>	<b>164</b>
		405	36.2	14.7	2261	2012	154
		540	37.5	20.3	2897	2564	143

Notes for Table 4:

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

Part Number	CRI	Drive Current <sup>1</sup> (mA)	Typical V <sub>f</sub> T <sub>c</sub> = 25°C (V)	Typical Power T <sub>c</sub> = 25°C (W)	Typical Flux <sup>2</sup> T <sub>c</sub> = 25°C (lm)	Typical DC Flux <sup>3</sup> T <sub>c</sub> = 85°C (lm)	Typical Efficacy T <sub>c</sub> = 25°C (lm/W)
BXRC-35E1000-C-7x-SE	80	180	33.1	6.0	1093	975	183
		240	33.6	8.1	1432	1272	177
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2055</b>	<b>1850</b>	<b>164</b>
		540	36.2	19.5	2993	2600	153
		720	37.5	27.0	3823	3272	142
BXRC-35E1000-D-7x-SE	80	175	24.9	4.4	797	725	183
		233	25.4	5.9	1046	940	177
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1493</b>	<b>1344</b>	<b>164</b>
		525	27.4	14.4	2197	1895	153
		700	28.4	19.9	2815	2371	142
BXRC-35G1000-B-7x-SE	90	135	33.1	4.5	675	607	151
		180	33.6	6.1	885	794	146
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1267</b>	<b>1140</b>	<b>135</b>
		405	36.2	14.7	1859	1653	127
		540	37.5	20.3	2381	2107	117
BXRC-35G1000-C-7x-SE	90	180	33.1	6.0	898	801	151
		240	33.6	8.1	1177	1045	146
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1689</b>	<b>1520</b>	<b>135</b>
		540	36.2	19.5	2460	2137	126
		720	37.5	27.0	3142	2689	116
BXRC-35G1000-D-7x-SE	90	175	24.9	4.4	655	596	150
		233	25.4	5.9	859	773	145
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1227</b>	<b>1104</b>	<b>135</b>
		525	27.4	14.4	1806	1558	126
		700	28.4	19.9	2314	1948	116
BXRC-35A1001-B-73-SE	93	135	33.1	4.5	623	560	140
		180	33.6	6.1	817	733	135
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1169</b>	<b>1052</b>	<b>124</b>
		405	36.2	14.7	1716	1526	117
		540	37.5	20.3	2198	1945	108
BXRC-35A1001-C-73-SE	93	180	33.1	6.0	829	740	139
		240	33.6	8.1	1086	965	135
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1559</b>	<b>1403</b>	<b>124</b>
		540	36.2	19.5	2270	1972	116
		720	37.5	27.0	2900	2483	107
BXRC-35A1001-D-73-SE	93	175	24.9	4.4	605	550	139
		233	25.4	5.9	793	713	134
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1133</b>	<b>1019</b>	<b>124</b>
		525	27.4	14.4	1667	1438	116
		700	28.4	19.9	2136	1798	107
BXRC-40C1001-B-7x-SE	70	135	33.1	4.5	864	776	194
		180	33.6	6.1	1133	1016	187
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1621</b>	<b>1459</b>	<b>173</b>
		405	36.2	14.7	2378	2116	162
		540	37.5	20.3	3047	2697	150

Notes for Table 4:

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

Part Number	CRI	Drive Current <sup>1</sup> (mA)	Typical V <sub>f</sub> T <sub>c</sub> = 25°C (V)	Typical Power T <sub>c</sub> = 25°C (W)	Typical Flux <sup>2</sup> T <sub>c</sub> = 25°C (lm)	Typical DC Flux <sup>3</sup> T <sub>c</sub> = 85°C (lm)	Typical Efficacy T <sub>c</sub> = 25°C (lm/W)
BXRC-40C1001-C-7X-SE	70	180	33.1	6.0	1149	1025	193
		240	33.6	8.1	1506	1338	186
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2162</b>	<b>1945</b>	<b>173</b>
		540	36.2	19.5	3148	2734	161
BXRC-40C1001-D-7X-SE	70	720	37.5	27.0	4021	3442	149
		175	24.9	4.4	838	762	192
		233	25.4	5.9	1100	989	186
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1570</b>	<b>1413</b>	<b>173</b>
BXRC-40E1000-B-7X-SE	80	525	27.4	14.4	2311	1993	161
		700	28.4	19.9	2961	2493	149
		135	33.1	4.5	826	742	185
		180	33.6	6.1	1083	972	179
BXRC-40E1000-C-7X-SE	70	<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1550</b>	<b>1395</b>	<b>165</b>
		405	36.2	14.7	2274	2023	155
		540	37.5	20.3	2914	2579	144
		180	33.1	6.0	1099	981	184
BXRC-40E1000-D-7X-SE	70	240	33.6	8.1	1440	1279	178
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2067</b>	<b>1860</b>	<b>165</b>
		540	36.2	19.5	3010	2615	154
		720	37.5	27.0	3845	3291	142
BXRC-40G1000-B-7X-SE	80	175	24.9	4.4	802	729	184
		233	25.4	5.9	1052	946	178
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1501</b>	<b>1351</b>	<b>165</b>
		525	27.4	14.4	2210	1906	154
BXRC-40G1000-C-7X-SE	80	700	28.4	19.9	2831	2384	142
		135	33.1	4.5	689	619	154
		180	33.6	6.1	904	811	149
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1293</b>	<b>1164</b>	<b>138</b>
BXRC-40G1000-D-7X-SE	80	405	36.2	14.7	1898	1688	129
		540	37.5	20.3	2431	2152	120
		180	33.1	6.0	917	818	154
		240	33.6	8.1	1201	1067	149
BXRC-40H1000-B-7X-SE	97	<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1725</b>	<b>1552</b>	<b>138</b>
		540	36.2	19.5	2511	2182	128
		720	37.5	27.0	3208	2746	119
		175	24.9	4.4	669	608	153
BXRC-40H1000-C-7X-SE	97	233	25.4	5.9	877	789	148
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1253</b>	<b>1127</b>	<b>138</b>
		525	27.4	14.4	1844	1590	128
		700	28.4	19.9	2362	1989	119
BXRC-40H1000-D-7X-SE	97	135	33.1	4.5	623	560	140
		180	33.6	6.1	817	733	135
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1169</b>	<b>1052</b>	<b>124</b>
		405	36.2	14.7	1716	1526	117
BXRC-40H1000-E-7X-SE	97	540	37.5	20.3	2198	1945	108

Notes for Table 4:

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

Part Number	CRI	Drive Current <sup>1</sup> (mA)	Typical $V_f$ $T_c = 25^\circ\text{C}$ (V)	Typical Power $T_c = 25^\circ\text{C}$ (W)	Typical Flux <sup>2</sup> $T_c = 25^\circ\text{C}$ (lm)	Typical DC Flux <sup>3</sup> $T_c = 85^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRC-40H1000-C-7x-SE	97	180	33.1	6.0	829	740	139
		240	33.6	8.1	1086	965	135
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>1559</b>	<b>1403</b>	<b>124</b>
		540	36.2	19.5	2270	1972	116
BXRC-40H1000-D-7x-SE	97	720	37.5	27.0	2900	2483	107
		175	24.9	4.4	605	550	139
		233	25.4	5.9	793	713	134
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1133</b>	<b>1019</b>	<b>124</b>
BXRC-40A1001-B-73-SE	93	525	27.4	14.4	1667	1438	116
		700	28.4	19.9	2136	1798	107
		135	33.1	4.5	675	607	151
		180	33.6	6.1	885	794	146
BXRC-40A1001-C-73-SE	93	<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1267</b>	<b>1140</b>	<b>135</b>
		405	36.2	14.7	1859	1653	127
		540	37.5	20.3	2381	2107	117
		180	33.1	6.0	898	801	151
BXRC-40A1001-D-73-SE	93	240	33.6	8.1	1177	1045	146
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1227</b>	<b>1104</b>	<b>135</b>
		525	27.4	14.4	1806	1558	126
		700	28.4	19.9	2314	1948	116
BXRC-50C1001-B-7x-SE	70	175	24.9	4.4	655	596	150
		233	25.4	5.9	859	773	145
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1227</b>	<b>1104</b>	<b>135</b>
		525	27.4	14.4	1806	1558	126
BXRC-50C1001-C-7x-SE	70	700	28.4	19.9	2314	1948	116
		135	33.1	4.5	869	781	195
		180	33.6	6.1	1139	1022	188
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1630</b>	<b>1467</b>	<b>173</b>
BXRC-50C1001-D-7x-SE	70	405	36.2	14.7	2391	2127	163
		540	37.5	20.3	3064	2712	151
		180	33.1	6.0	1156	1031	194
		240	33.6	8.1	1514	1345	188
BXRC-50E1001-B-7x-SE	80	<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2173</b>	<b>1956</b>	<b>173</b>
		540	36.2	19.5	3165	2749	162
		720	37.5	27.0	4043	3461	150
		175	24.9	4.4	843	766	193
BXRC-50C1001-D-7x-SE	70	233	25.4	5.9	1106	994	187
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1579</b>	<b>1421</b>	<b>173</b>
		525	27.4	14.4	2324	2004	162
		700	28.4	19.9	2977	2507	150
BXRC-50E1001-B-7x-SE	80	135	33.1	4.5	836	751	187
		180	33.6	6.1	1096	983	181
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1568</b>	<b>1411</b>	<b>167</b>
		405	36.2	14.7	2300	2046	157
BXRC-50E1001-B-7x-SE	80	540	37.5	20.3	2947	2608	145

Notes for Table 4:

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

Part Number	CRI	Drive Current <sup>1</sup> (mA)	Typical $V_f$ $T_c = 25^\circ\text{C}$ (V)	Typical Power $T_c = 25^\circ\text{C}$ (W)	Typical Flux <sup>2</sup> $T_c = 25^\circ\text{C}$ (lm)	Typical DC Flux <sup>3</sup> $T_c = 85^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRC-50E1001-C-7x-SE	80	180	33.1	6.0	1112	992	187
		240	33.6	8.1	1456	1294	180
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2091</b>	<b>1882</b>	<b>167</b>
		540	36.2	19.5	3044	2645	156
BXRC-50E1001-D-7x-SE	80	720	37.5	27.0	3889	3329	144
		175	24.9	4.4	811	737	186
		233	25.4	5.9	1064	956	180
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1519</b>	<b>1367</b>	<b>167</b>
BXRC-50G1001-B-7x-SE	90	525	27.4	14.4	2235	1928	156
		700	28.4	19.9	2864	2412	144
		135	33.1	4.5	722	649	162
		180	33.6	6.1	947	849	156
BXRC-50G1001-C-7x-SE	90	<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1355</b>	<b>1220</b>	<b>144</b>
		405	36.2	14.7	1988	1769	136
		540	37.5	20.3	2548	2255	126
		180	33.1	6.0	961	857	161
BXRC-50G1001-D-7x-SE	90	240	33.6	8.1	1259	1118	156
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1313</b>	<b>1181</b>	<b>144</b>
		525	27.4	14.4	1932	1666	134
		700	28.4	19.9	2476	2085	124
BXRC-57C1001-B-7x-SE	70	175	24.9	4.4	701	637	161
		233	25.4	5.9	920	827	155
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1313</b>	<b>1181</b>	<b>144</b>
		525	27.4	14.4	1932	1666	134
BXRC-57C1001-C-7x-SE	70	700	28.4	19.9	2476	2085	124
		135	33.1	4.5	845	759	189
		180	33.6	6.1	1108	994	183
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1586</b>	<b>1427</b>	<b>169</b>
BXRC-57C1001-D-7x-SE	70	405	36.2	14.7	2326	2070	159
		540	37.5	20.3	2980	2638	147
		180	33.1	6.0	1124	1003	189
		240	33.6	8.1	1473	1308	182
BXRC-57E1001-B-7x-SE	80	<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2114</b>	<b>1903</b>	<b>169</b>
		540	36.2	19.5	3079	2675	157
		720	37.5	27.0	3933	3366	146
		175	24.9	4.4	820	746	188
BXRC-57C1001-D-7x-SE	70	233	25.4	5.9	1076	967	182
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1536</b>	<b>1382</b>	<b>169</b>
		525	27.4	14.4	2261	1950	157
		700	28.4	19.9	2896	2439	146
BXRC-57E1001-B-7x-SE	80	135	33.1	4.5	803	721	180
		180	33.6	6.1	1052	944	174
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1506</b>	<b>1355</b>	<b>160</b>
		405	36.2	14.7	2209	1965	151
BXRC-57E1001-B-7x-SE	80	540	37.5	20.3	2831	2505	140

Notes for Table 4:

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

Part Number	CRI	Drive Current <sup>1</sup> (mA)	Typical $V_f$ $T_c = 25^\circ\text{C}$ (V)	Typical Power $T_c = 25^\circ\text{C}$ (W)	Typical Flux <sup>2</sup> $T_c = 25^\circ\text{C}$ (lm)	Typical DC Flux <sup>3</sup> $T_c = 85^\circ\text{C}$ (lm)	Typical Efficacy $T_c = 25^\circ\text{C}$ (lm/W)
BXRC-57E1001-C-7x-SE	80	180	33.1	6.0	1068	953	179
		240	33.6	8.1	1399	1243	173
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2008</b>	<b>1807</b>	<b>160</b>
		540	36.2	19.5	2924	2540	150
BXRC-57E1001-D-7x-SE	80	720	37.5	27.0	3735	3197	138
		175	24.9	4.4	779	708	179
		233	25.4	5.9	1022	919	173
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1459</b>	<b>1313</b>	<b>160</b>
BXRC-65C1001-B-7x-SE	70	525	27.4	14.4	2147	1852	149
		700	28.4	19.9	2751	2316	138
		135	33.1	4.5	845	759	189
		180	33.6	6.1	1108	994	183
BXRC-65C1001-C-7x-SE	70	<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1586</b>	<b>1427</b>	<b>169</b>
		405	36.2	14.7	2326	2070	159
		540	37.5	20.3	2980	2638	147
		180	33.1	6.0	1124	1003	189
BXRC-65C1001-D-7x-SE	70	240	33.6	8.1	1473	1308	182
		<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1536</b>	<b>1382</b>	<b>169</b>
		525	27.4	14.4	2261	1950	157
		700	28.4	19.9	2896	2439	146
BXRC-65E1001-B-7x-SE	80	135	33.1	4.5	812	730	182
		180	33.6	6.1	1065	955	176
		<b>270</b>	<b>34.8</b>	<b>9.4</b>	<b>1524</b>	<b>1371</b>	<b>162</b>
		405	36.2	14.7	2235	1989	152
BXRC-65E1001-C-7x-SE	80	540	37.5	20.3	2864	2535	141
		180	33.1	6.0	1080	964	181
		240	33.6	8.1	1415	1257	175
		<b>360</b>	<b>34.8</b>	<b>12.5</b>	<b>2032</b>	<b>1828</b>	<b>162</b>
BXRC-65E1001-D-7x-SE	80	540	36.2	19.5	2958	2570	151
		720	37.5	27.0	3779	3235	140
		175	24.9	4.4	788	716	181
		233	25.4	5.9	1034	929	175
BXRC-65E1001-D-7x-SE	80	<b>350</b>	<b>26.0</b>	<b>9.1</b>	<b>1476</b>	<b>1328</b>	<b>162</b>
		525	27.4	14.4	2172	1873	151
		700	28.4	19.9	2783	2343	140
		175	24.9	4.4	788	716	181

Notes for Table 4:

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.

# Electrical Characteristics

**Table 5:** Electrical Characteristics

Part Number	Drive Current (mA)	Forward Voltage Pulsed, $T_c = 25^\circ\text{C}$ (V) <sup>1, 2, 3, 8</sup>			Typical Coefficient of Forward Voltage <sup>4</sup> $\Delta V_f / \Delta T_c$ (mV/ $^\circ\text{C}$ )	Typical Thermal Resistance Junction to Case <sup>5,6</sup> $R_{j-c}$ ( $^\circ\text{C}/\text{W}$ )	Driver Selection Voltages <sup>7</sup> (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)
BXRC-xxx100x-B-7x-SE	270	32.2	34.8	37.4	-16.1	0.49	30.9	38.5
	540	34.7	37.5	40.3	-16.1	0.56	33.4	41.4
BXRC-xxx100x-C-7x-SE	360	32.2	34.8	37.4	-16.1	0.37	30.9	38.5
	720	34.7	37.5	40.3	-16.1	0.45	33.4	41.4
BXRC-xxx100x-D-7x-SE	350	24.1	26.0	28.0	-11.8	0.49	23.1	28.7
	700	26.3	28.4	30.5	-11.8	0.57	25.3	31.3

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 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 62031:2014. 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 6:** Eye Safety Risk Group (RG) Classifications

Part Number	Drive Current <sup>5</sup> (mA)	CCT <sup>5</sup>			
		2700K/3000K	4000K <sup>2</sup>	5000K <sup>3</sup>	6500K <sup>4</sup>
BXRC-xxx100x-B-7x-SE	270	RG1	RG1	RG1	RG1
	405	RG1	RG1	RG1	RG2
	540	RG1	RG1	RG2	RG2
BXRC-xxx100x-C-7x-SE	360	RG1	RG1	RG1	RG2
	540	RG1	RG1	RG2	RG2
	720	RG1	RG2	RG2	RG2
BXRC-xxx100x-D-7x-SE	350	RG1	RG1	RG1	RG1
	525	RG1	RG1	RG1	RG2
	700	RG1	RG1	RG2	RG2

Notes for Table 6:

1. Eye safety classification for the use of Bridgelux Vero SE 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 7:** Maximum Ratings

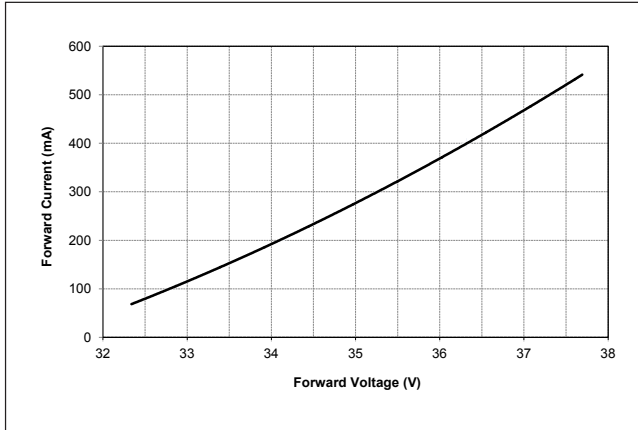
Parameter	Maximum Rating		
LED Junction Temperature (T <sub>j</sub> )	150°C		
Storage Temperature	-40°C to +105°C		
Operating Case Temperature <sup>1</sup> (T <sub>c</sub> )	105°C		
	BXRC-xxx100x-B-7x-SE	BXRC-xxx100x-C-7x-SE	BXRC-xxx100x-D-7x-SE
Maximum Drive Current <sup>3</sup>	540mA	720mA	700mA
Maximum Peak Pulsed Drive Current <sup>4</sup>	770mA	1030mA	1000mA
Maximum Reverse Voltage <sup>5</sup>	-60V	-60V	-45V

Notes for Table 7:

1. For IEC 62717 requirement, please consult your Bridgelux sales representative.
2. Refer to Bridgelux Application Note AN120: Assembly Considerations for Bridgelux Vero SE 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

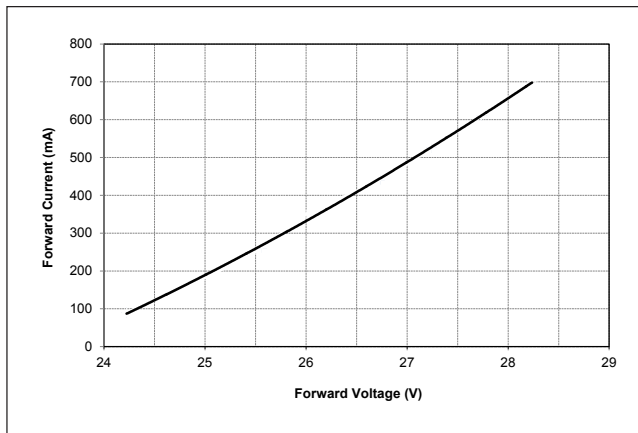
**Figure 1: Vero SE 10B Drive Current vs. Voltage**



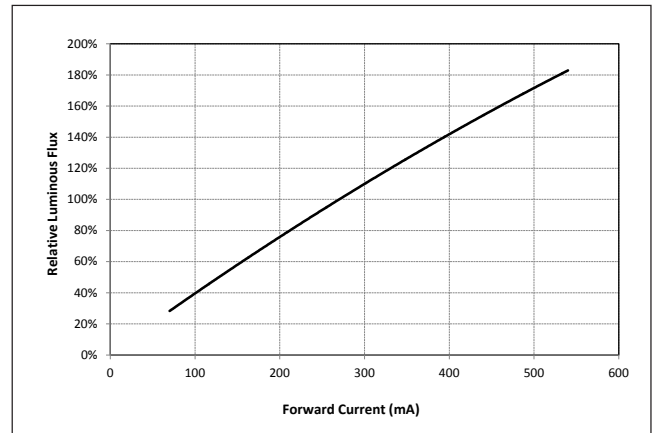
**Figure 2: Vero SE 10C Drive Current vs. Voltage**



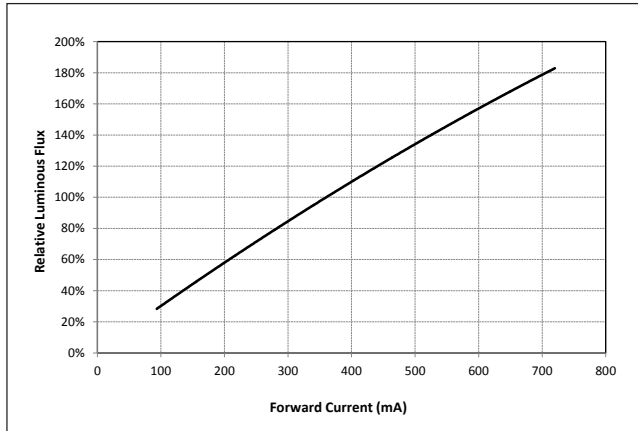
**Figure 3: Vero SE 10D Drive Current vs. Voltage**



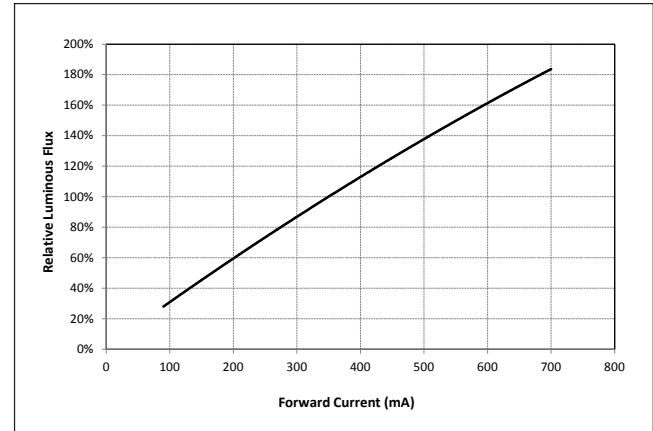
**Figure 4: Vero 10B SE Typical Relative Flux vs. Current**



**Figure 5: Vero 10C SE Typical Relative Flux vs. Current**



**Figure 6 Vero 10D SE Typical Relative Flux vs. Current**



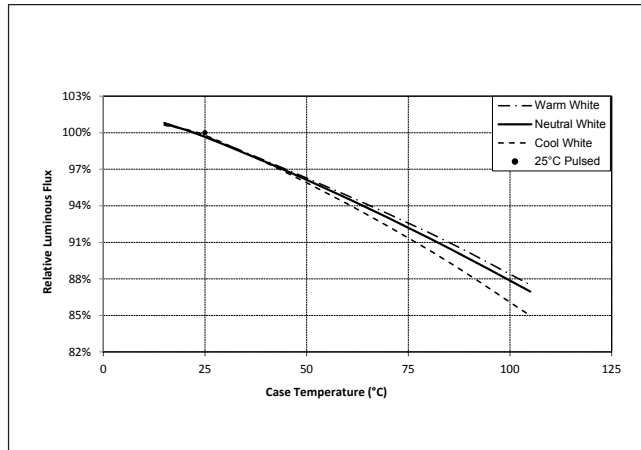
Notes for Figure 1-6:

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.

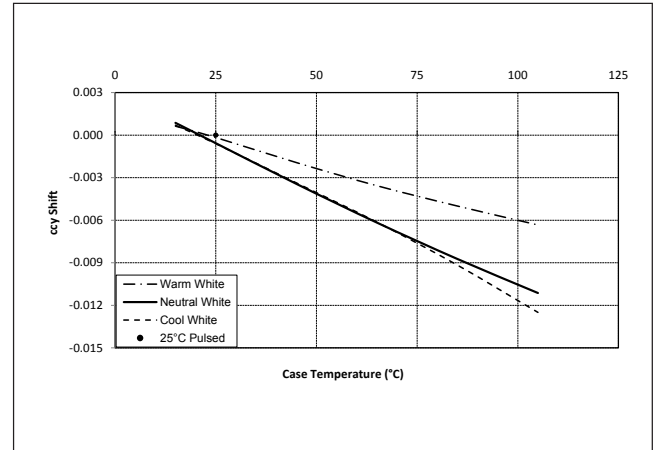


# Performance Curves

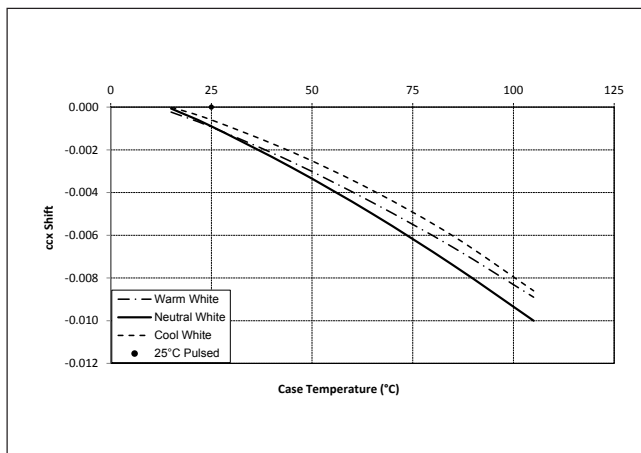
**Figure 7: Typical DC Flux vs. Case Temperature**



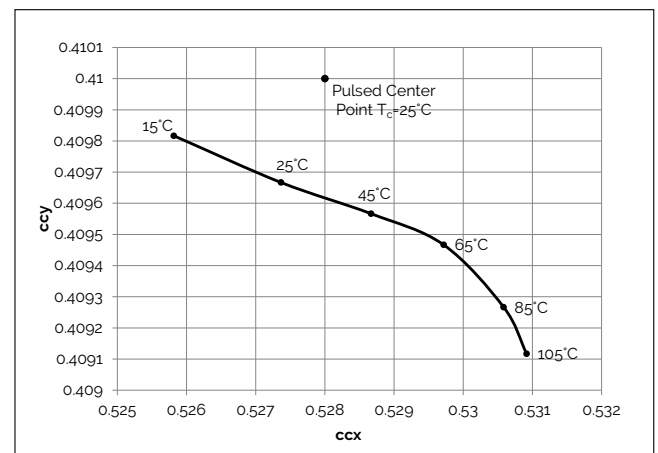
**Figure 8: Typical DC ccy Shift vs. Case Temperature**



**Figure 9: Typical DC ccx Shift vs. Case Temperature**



**Figure 10: 2000K, 65 CRI Color Shift vs. Case Temperature**

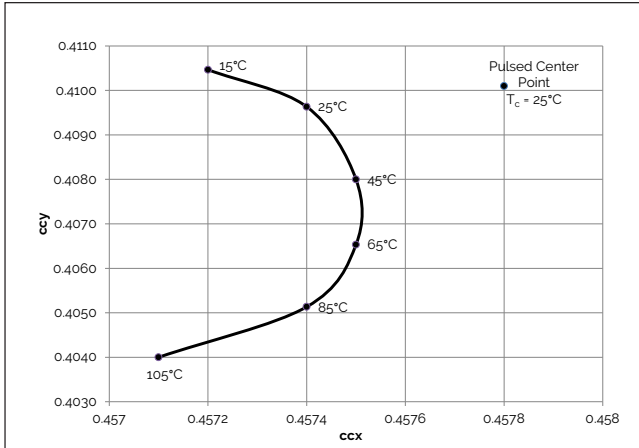


Notes for Figures 7 - 9:

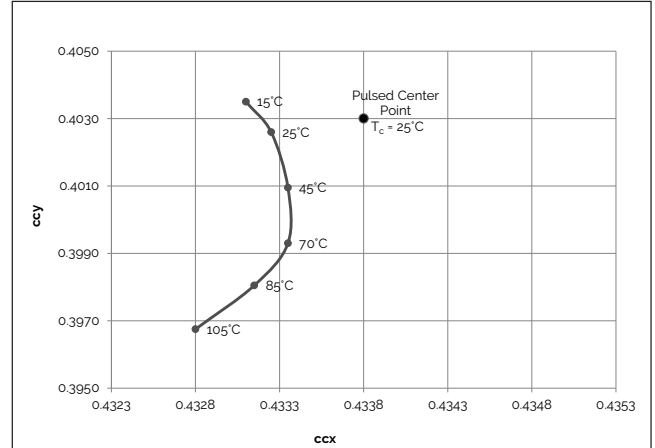
1. Characteristics shown for warm white based on 3000K and 80 CRI.
2. Characteristics shown for neutral white based on 4000K and 80 CRI.
3. Characteristics shown for cool white based on 5000K and 70 CRI.
4. For other color SKUs, the shift in color will vary. Please contact your Bridgelux Sales Representative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

# Performance Curves

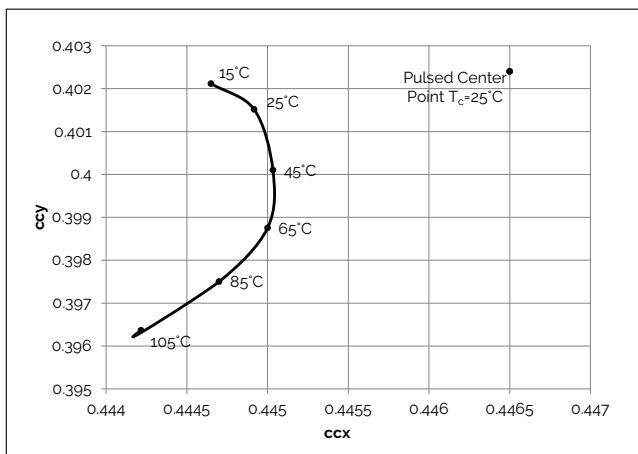
**Figure 11: 2700K, 97 CRI Color Shift vs. Case Temperature<sup>1</sup>**



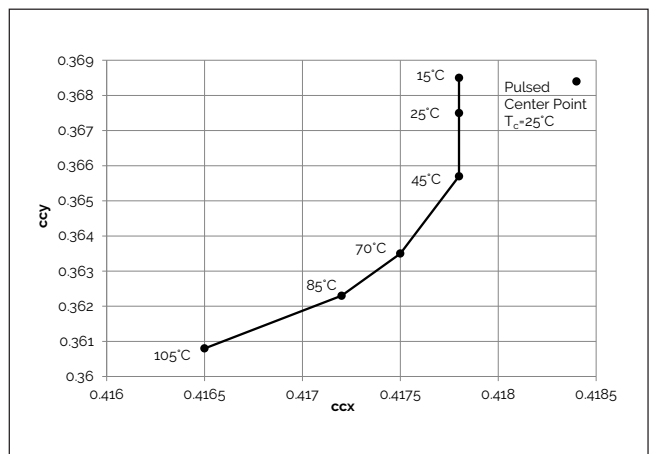
**Figure 12: 3000K, 97 CRI Color Shift vs. Case Temperature<sup>1</sup>**



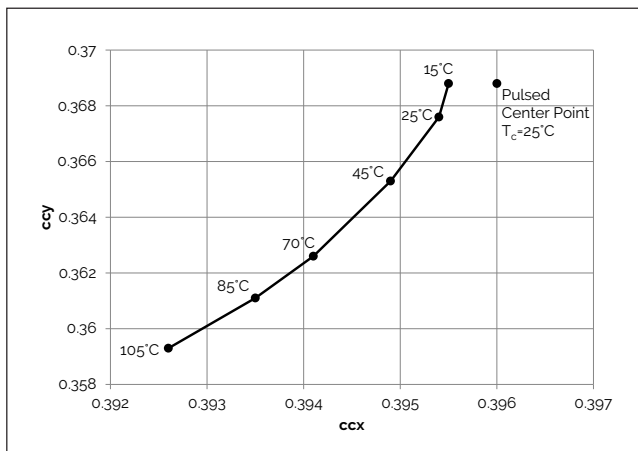
**Figure 13: 3000K, 90 CRI Color Shift vs. Case Temperature<sup>1,3</sup>**



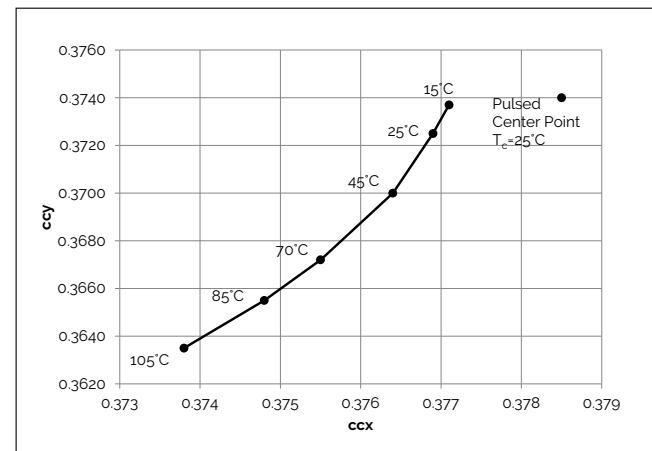
**Figure 14: 3000K Class A Color Shift vs. Case Temperature<sup>1</sup>**



**Figure 15: 3500K Class A Color Shift vs. Case Temperature<sup>1</sup>**



**Figure 16: 4000K Class A Color Shift vs. Case Temperature<sup>1</sup>**

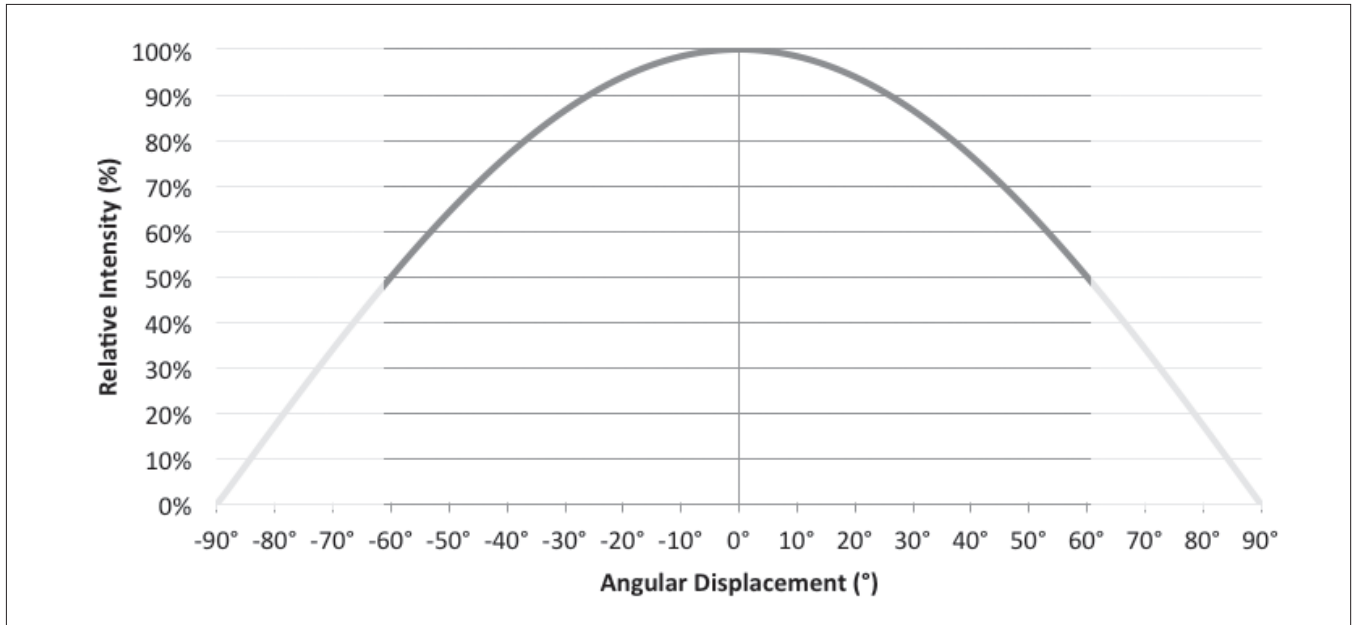


Note for Figures 10-16:

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

# Typical Radiation Pattern

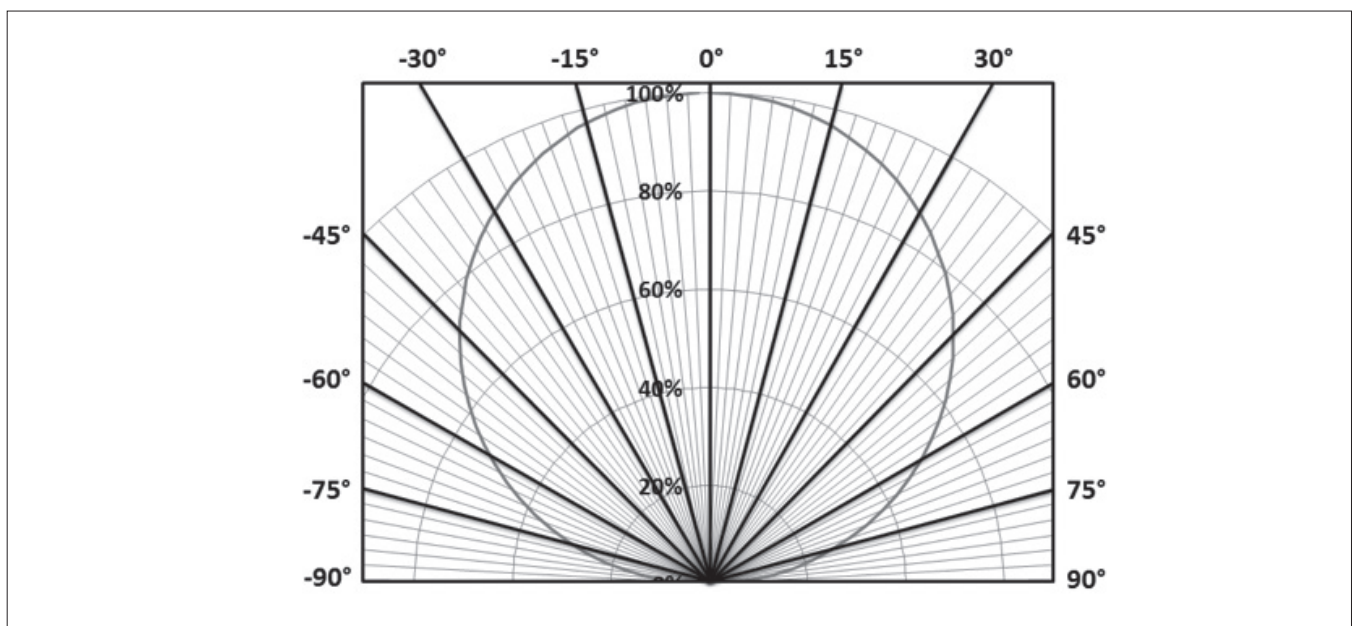
Figure 17: Typical Spatial Radiation Pattern



Note for Figure 17:

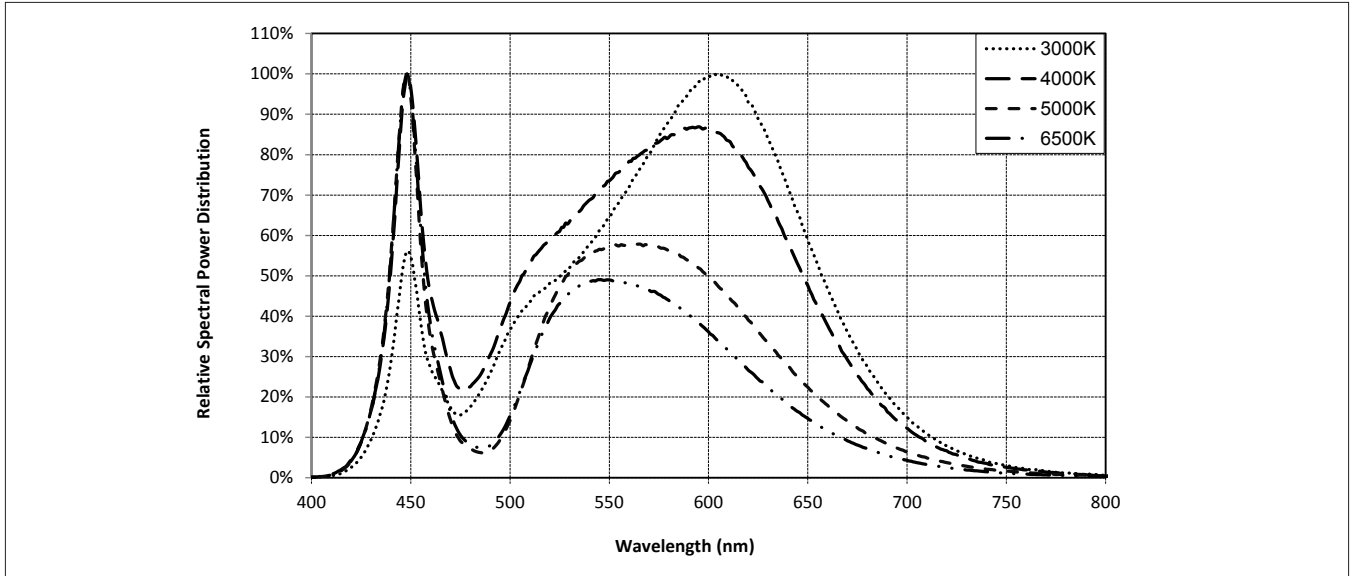
1. Typical viewing angle is 120°.
2. The viewing angle is defined as the off axis angle from the centerline where intensity is ½ of the peak value.

Figure 18: Typical Polar Radiation Pattern



# Typical Color Spectrum

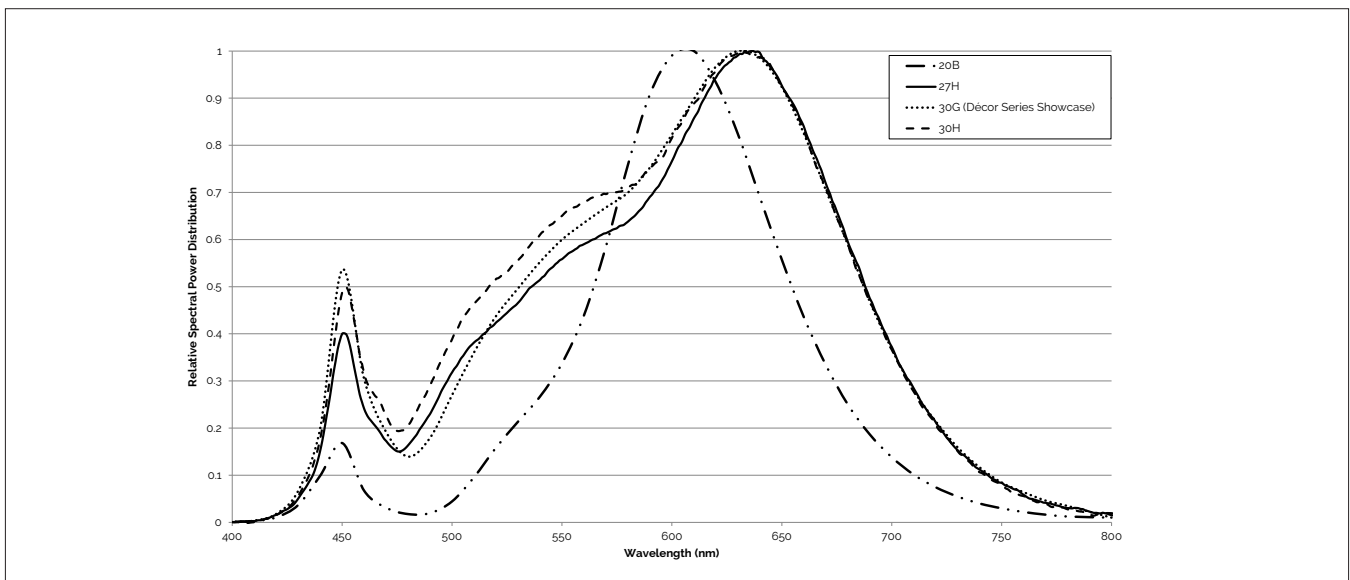
Figure 19: Typical Color Spectrum



Note for Figure 19:

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 20: Typical Color Spectrum for Vero SE 10 with Décor Series

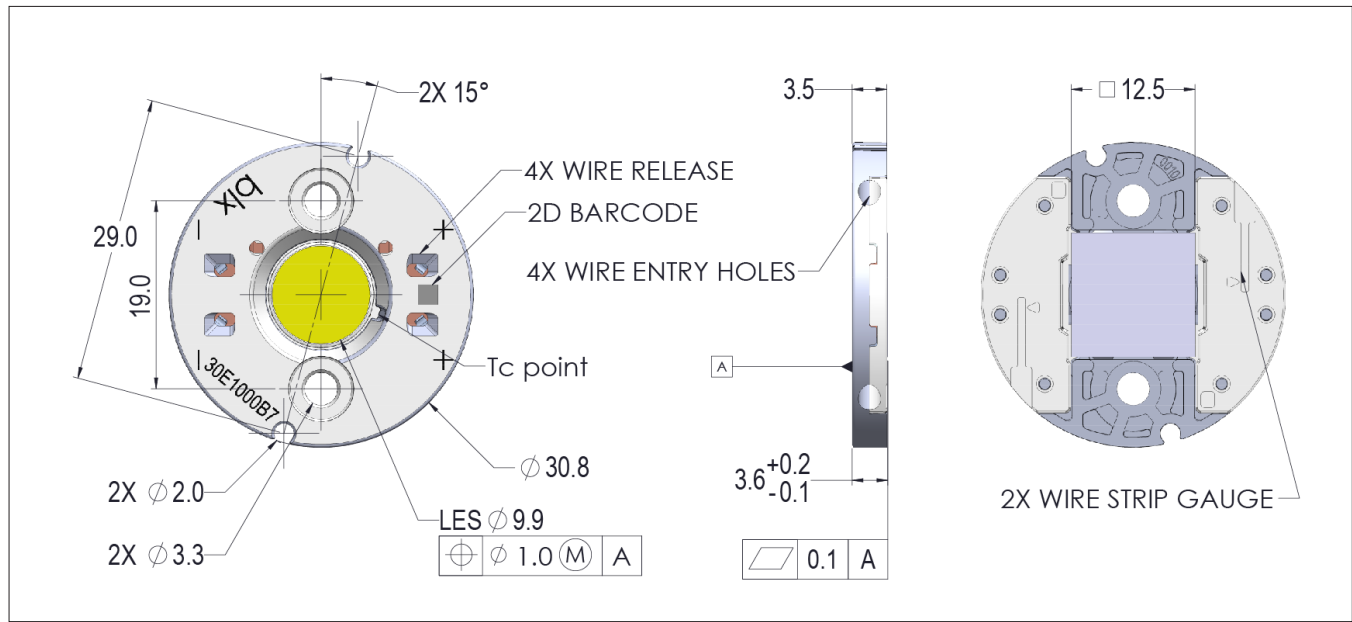


Note for Figure 20:

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

# Mechanical Dimensions

**Figure 21: Drawing for Vero SE 10 LED Array**

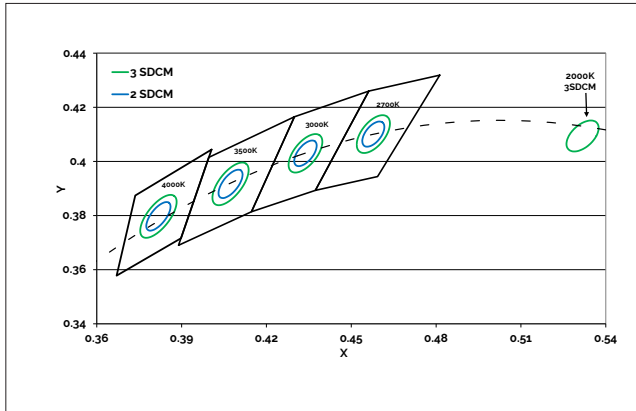


Notes for Figure 21:

1. Drawings are not to scale.
2. Dimensions are in mm.
3. Unless otherwise specified, tolerances are  $\pm 0.10$ mm.
4. Mounting holes (2X) are for M3 screws.
5. Bridgelux recommends two tapped holes for mounting screws with  $19.0 \pm 0.10$ mm 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. The optical center of the LED Array is nominally defined by the mechanical center of the array to a tolerance of  $\pm 0.2$ mm.
8. Bridgelux maintains a flatness of 0.10mm across the mounting surface of the array.

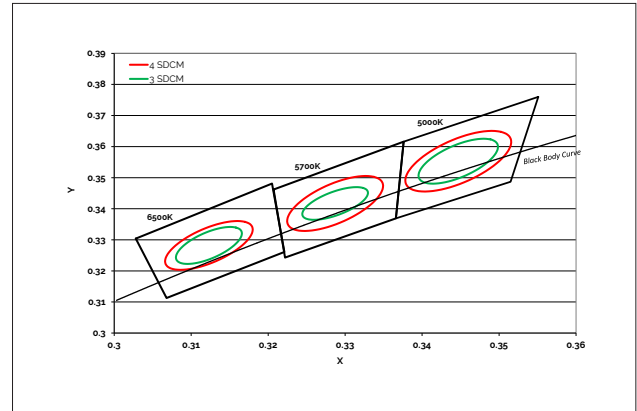
# Color Binning Information

**Figure 22: Warm and Neutral White Test Bins in xy Color Space**



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

**Figure 23: Cool White Test Bins in xy Color Space**



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

**Table 8: Warm and Neutral White xy Bin Coordinates and Associated Typical CCT**

Bin Code <sup>1</sup>	2000K	2700K	3000K <sup>2</sup>	3500K <sup>1</sup>	4000K <sup>1</sup>
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) <sup>2</sup>	(0.4073, 0.3917)	(0.3818, 0.3797)

Note for Table 8:

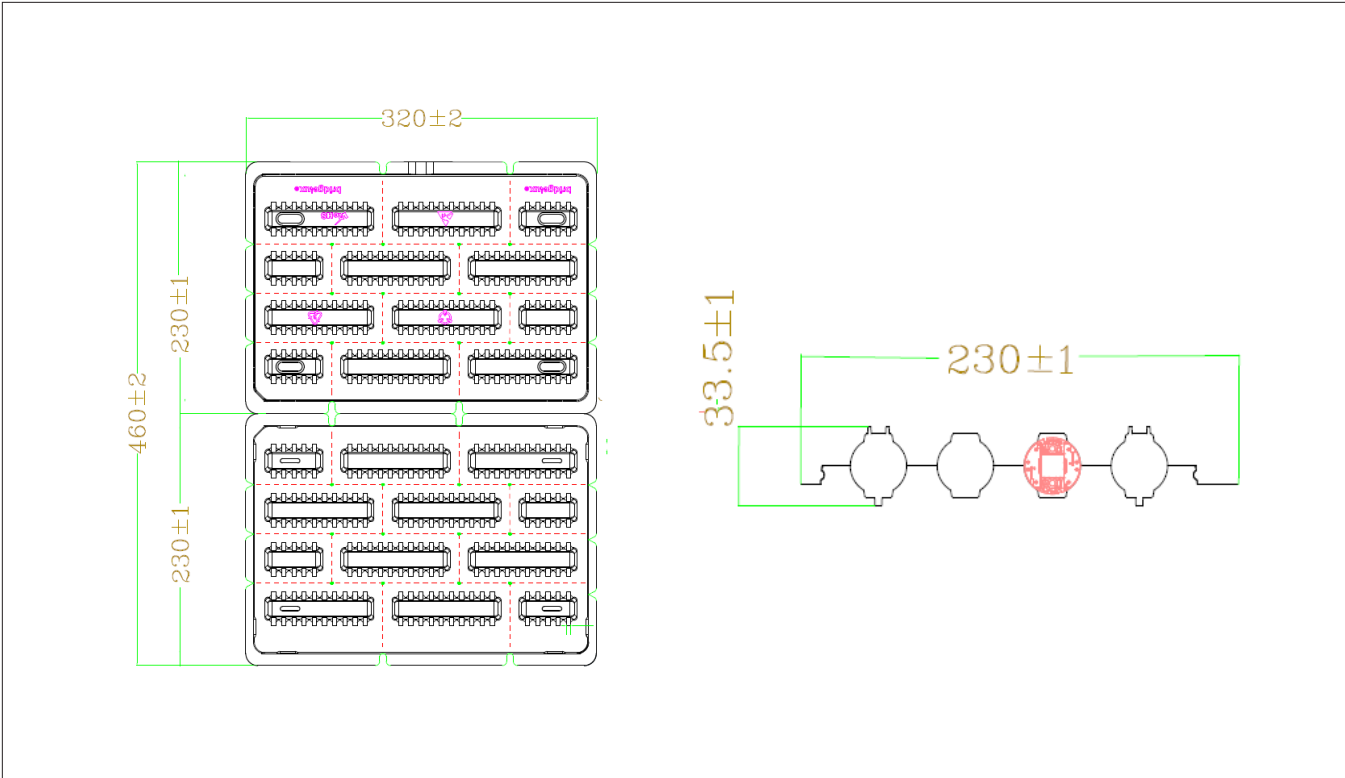
1. Color Binning information excludes Decor Series Class A products. Please contact your Bridgelux Sales Representative for more information.
2. Center Point for Decor Series Showcase.

**Table 9: 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)	(5481K - 5829K)	(6270K - 6765K)
73 (3 SDCM)	(4835K - 5215K)	(5490K - 5820K)	(6250K - 6745K)
Center Point (x,y)	(0.3447, 0.3553)	(0.3287, 0.3417)	(0.3123, 0.3282)

# Packaging and Labeling

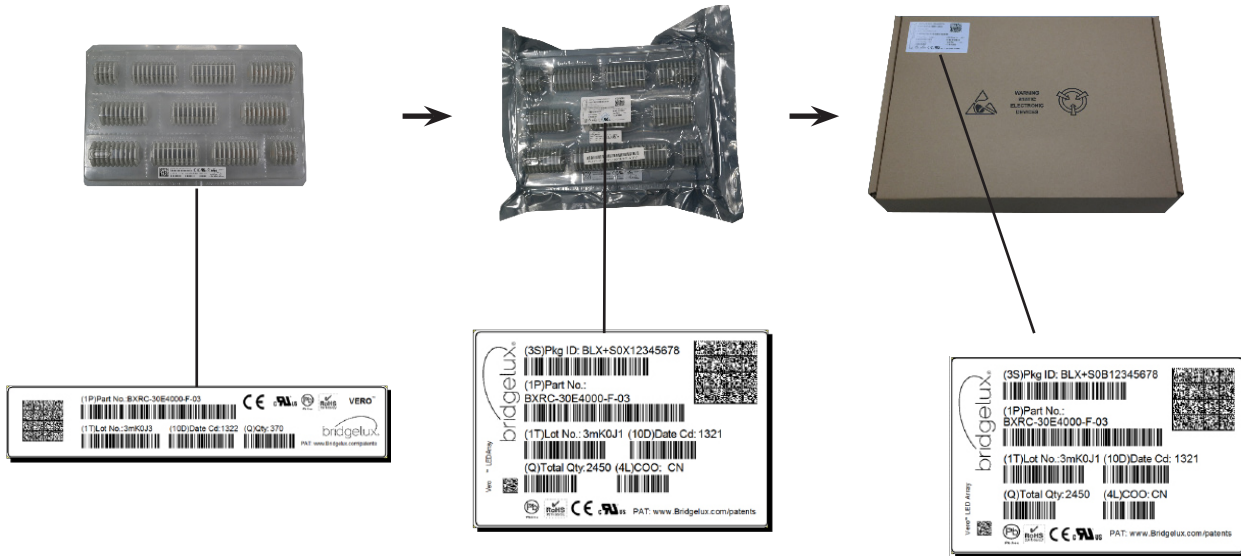
Figure 24: Drawing for Vero SE 10 Packaging Tray



- Notes for Figure 24:
- 1. Dimensions are in millimeters.
  - 2. Drawings are not to scale.

# Packaging and Labeling

**Figure 25: Vero SE Series Packaging and Labeling**



Notes for Figure 25:

1. Each tray holds 200 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 26: Vero SE 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.



Customer Use- 2D Barcode  
Scannable barcode provides product part number, V<sub>1</sub> bin and other Bridgelux internal production information.

Customer Use- Product part number

**30E1000C 72 2F**

Customer Use- V<sub>1</sub> Bin Code included to enable greater luminaire design flexibility. Refer to ANg2 for bin code definitions.



# 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](http://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](http://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 AN121 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**  
**bridgelux.com**  
**twitter.com/Bridgelux**  
**facebook.com/Bridgelux**  
**youtube.com/user/Bridgelux**  
**linkedin.com/company/bridgelux-inc-\_2**  
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