



Bridgelux[®] Vero[®] SE 13 Array

Product Data Sheet DS121



Vero SE



Introduction

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 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 also a good replacement for halogen 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 167 lm/W typical
- Lumen output performance ranges from 511 to 6.931 lumens
- Broad range of CCT options from 2700K to 6500K
- CRI options; minimum 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_r 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

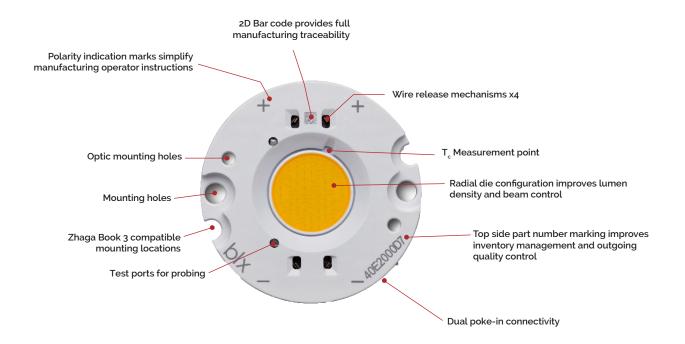


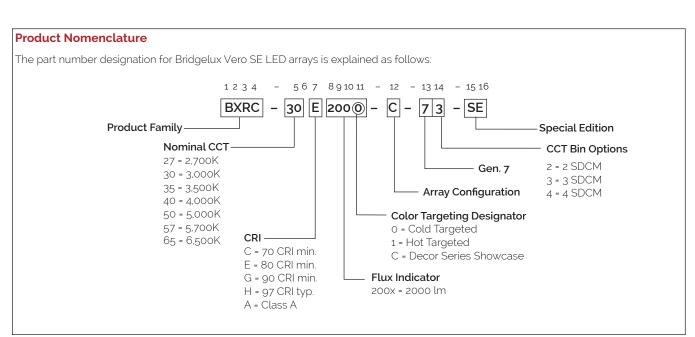
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Product Feature Map

Vero SE 13 is the second smallest form factor in the product family of the 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 for more information on the Vero SE family of products.





The following product configurations are available:

Part Number	Nominal CCT¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical Pulsed Flux ⁴⁵⁶ T _c = 25°C (lm)	Minimum Pulsed Flux ^{6,7} T _c = 25°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-27E2000-B-7X-SE	2700	80	450	2455	2210	34.8	15.7	157
BXRC-27E2000-C-7X-SE	2700	80	630	3438	3094	34.8	21.9	157
BXRC-27E2000-D-7X-SE	2700	80	500	2493	2244	31.8	15.9	157
BXRC-27G20H0-B-7X-SE	2700	90	450	2103	1892	34.8	15.7	134
BXRC-27G20H0-C-7X-SE	2700	90	630	2944	2649	34.8	21.9	134
BXRC-27G20H0-D-7X-SE	2700	90	500	2135	1921	31.8	15.9	134
BXRC-27G2000-B-7X-SE	2700	90	450	2026	1823	34.8	15.7	129
BXRC-27G2000-C-7X-SE	2700	90	630	2836	2552	34.8	21.9	129
BXRC-27G2000-D-7X-SE	2700	90	500	2057	1851	31.8	15.9	129
BXRC-27H2000-B-7x-SE	2700	97	450	1796	1616	34.8	15.7	115
BXRC-27H2000-C-7x-SE	2700	97	630	2514	2262	34.8	21.9	115
BXRC-27H2000-D-7x-SE	2700	97	500	1823	1641	31.8	15.9	115
BXRC-30C2001-B-7X-SE	3000	70	450	2732	2459	34.8	15.7	174
BXRC-30C2001-C-7X-SE	3000	70	630	3824	3442	34.8	21.9	174
BXRC-30C2001-D-7X-SE	3000	70	500	2774	2496	31.8	15.9	174
BXRC-30E2000-B-7X-SE	3000	80	450	2609	2348	34.8	15.7	167
BXRC-30E2000-C-7X-SE	3000	80	630	3653	3287	34.8	21.9	167
BXRC-30E2000-D-7X-SE	3000	80	500	2649	2384	31.8	15.9	167
BXRC-30G20H0-B-7X-SE	3000	90	450	2210	1989	34.8	15.7	141
BXRC-30G20H0-C-7X-SE	3000	90	630	3094	2785	34.8	21.9	141
BXRC-30G20H0-C-7X-SE	3000	90	500	2244	2019	31.8	15.9	141
BXRC-30G2000-B-7X-SE	3000	90	450	2118	1906	34.8	15.7	135
BXRC-30G2000-C-7X-SE	3000	90	630	2965	2669	34.8	21.9	135
BXRC-30G2000-D-7X-SE	3000	90	500	2150	1935	31.8	15.9	135
BXRC-30G200C-B-73-SE	3000	90	450	2053	1848	34.8	15.8	130
BXRC-30G200C-D-73-SE	3000	90	500	2072	1865	31.8	15.9	130
BXRC-30H2000-B-7x-SE	3000	97	450	1918	1727	34.8	15.7	123
BXRC-30H2000-C-7x-SE	3000	97	630	2686	2417	34.8	21.9	123
BXRC-30H2000-D-7x-SE	3000	97	500	1948	1753	31.8	15.9	123
BXRC-30A2001-B-73-SE ^{8,9}	3000	93	450	1903	1713	34.8	15.7	122
BXRC-30A2001-C-73-SE ^{8,9}	3000	93	630	2664	2398	34.8	21.9	122
BXRC-30A2001-D-73-SE ^{8,9}	3000	93	500	1932	1739	31.8	15.9	122

Table 1: Selection G	iuide, Pulsed Measurement	: Data (T _i = T _c = 25°C)
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Notes for Table 1:

1. Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to T_c = 85°C.

2. 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 R9 value for 80 CRI products is 0, the minimum R9 value for 90 CRI products is 50, the minimum R9 value for 97 CRI products is 93. Bridgelux maintains a ± 3 tolerance on CRI and R9 values.

3. Drive current is referred to as nominal drive current.

4. Products tested under pulsed condition (10ms pulse width) at nominal test current where T₁ (junction temperature) - T_c (case temperature) - 25°C.

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

6. Bridgelux maintains a ±7% tolerance on flux measurements.

7. Minimum flux values at the nominal test current are guaranteed by 100% test.

8. 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.

Part Number	Nominal CCT¹ (K)	CRI²	Nominal Drive Current³ (mA)	Typical Pulsed Flux ^{4.5.6} T _c = 25°C (lm)	Minimum Pulsed Flux ^{6.7} T _c = 25°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-35E2000-B-7X-SE	3500	80	450	2670	2403	34.8	15.7	171
BXRC-35E2000-C-7X-SE	3500	80	630	3738	3365	34.8	21.9	171
BXRC-35E2000-D-7X-SE	3500	80	500	2711	2440	31.8	15.9	171
BXRC-35G2000-B-7X-SE	3500	90	450	2195	1975	34.8	15.7	140
BXRC-35G2000-C-7X-SE	3500	90	630	3072	2765	34.8	21.9	140
BXRC-35G2000-D-7X-SE	3500	90	500	2228	2005	31.8	15.9	140
BXRC-35A2001-B-73-SE ^{8,9}	3500	93	450	2026	1823	34.8	15.7	129
BXRC-35A2001-C-73-SE ^{8,9}	3500	93	630	2836	2552	34.8	21.9	129
BXRC-35A2001-D-73-SE ^{8,9}	3500	93	500	2057	1851	31.8	15.9	129
BXRC-40C2001-B-7X-SE	4000	70	450	2808	2528	34.8	15.7	179
BXRC-40C2001-C-7X-SE	4000	70	630	3932	3539	34.8	21.9	179
BXRC-40C2001-D-7X-SE	4000	70	500	2852	2566	31.8	15.9	179
BXRC-40E2000-B-7X-SE	4000	80	450	2686	2417	34.8	15.7	172
BXRC-40E2000-C-7X-SE	4000	80	630	3760	3384	34.8	21.9	172
BXRC-40E2000-D-7X-SE	4000	80	500	2727	2454	31.8	15.9	172
BXRC-40G2000-B-7X-SE	4000	90	450	2241	2017	34.8	15.7	143
BXRC-40G2000-C-7X-SE	4000	90	630	3137	2823	34.8	21.9	143
BXRC-40G2000-D-7X-SE	4000	90	500	2275	2047	31.8	15.9	143
BXRC-40H2000-B-7X-SE	4000	97	450	2026	1823	34.8	15.7	129
BXRC-40H2000-C-7X-SE	4000	97	630	2836	2552	34.8	21.9	129
BXRC-40H2000-D-7X-SE	4000	97	500	2057	1851	31.8	15.9	129
BXRC-40A2001-B-73-SE ^{8,9}	4000	93	450	2195	1975	34.8	15.7	140
BXRC-40A2001-C-73-SE ^{8,9}	4000	93	630	3072	2765	34.8	21.9	140
BXRC-40A2001-D-73-SE ^{8,9}	4000	93	500	2228	2005	31.8	15.9	140
BXRC-50C2001-B-74-SE	5000	70	450	2824	2541	34.8	15.7	180
BXRC-50C2001-C-74-SE	5000	70	630	3953	3558	34.8	21.9	180
BXRC-50C2001-D-74-SE	5000	70	500	2867	2580	31.8	15.9	180
BXRC-50E2001-B-74-SE	5000	80	450	2716	2445	34.8	15.7	173
BXRC-50E2001-C-74-SE	5000	80	630	3803	3423	34.8	21.9	173
BXRC-50E2001-D-74-SE	5000	80	500	2758	2482	31.8	15.9	173
BXRC-50G2001-B-74-SE	5000	90	450	2348	2113	34.8	15.7	150
BXRC-50G2001-C-74-SE	5000	90	630	3287	2959	34.8	21.9	150
BXRC-50G2001-D-74-SE	5000	90	500	2384	2146	31.8	15.9	150

Table 1: Selection Guide, Pulsed Measurement Data (T₁ = T₂ = 25°C) (continued)

Notes for Table 1:

1. Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to T_c = 85°C.

2. 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 R9 value for 80 CRI products is 0, the minimum R9 value for 90 CRI products is 50, the minimum R9 value for 97 CRI products is 93. Bridgelux maintains a ± 3 tolerance on CRI and R9 values.

3. Drive current is referred to as nominal drive current.

4. Products tested under pulsed condition (10ms pulse width) at nominal test current where T₁ (junction temperature) - T_c (case temperature) - 25°C.

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

6. Bridgelux maintains a ±7% tolerance on flux measurements.

7. Minimum flux values at the nominal test current are guaranteed by 100% test.

8. 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.

Part Number	Nominal CCT¹ (K)	CRI²	Nominal Drive Current³ (mA)	Typical Pulsed Flux ⁴⁵⁶ T _c = 25°C (lm)	Minimum Pulsed Flux ^{6,7} T _c = 25°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-57C2001-B-74-SE	5700	70	450	2747	2472	34.8	15.7	175
BXRC-57C2001-C-74-SE	5700	70	630	3846	3461	34.8	21.9	175
BXRC-57C2001-D-74-SE	5700	70	500	2789	2510	31.8	15.9	175
BXRC-57E2001-B-74-SE	5700	80	450	2609	2348	34.8	15.7	167
BXRC-57E2001-C-74-SE	5700	80	630	3653	3287	34.8	21.9	167
BXRC-57E2001-D-74-SE	5700	80	500	2649	2384	31.8	15.9	167
BXRC-65C2001-B-74-SE	6500	70	450	2747	2472	34.8	15.7	175
BXRC-65C2001-C-74-SE	6500	70	630	3846	3461	34.8	21.9	175
BXRC-65C2001-D-74-SE	6500	70	500	2789	2510	31.8	15.9	175
BXRC-65E2001-B-74-SE	6500	80	450	2640	2376	34.8	15.7	169
BXRC-65E2001-C-74-SE	6500	80	630	3696	3326	34.8	21.9	169
BXRC-65E2001-D-74-SE	6500	80	500	2680	2412	31.8	15.9	169

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

Notes for Table 1:

1. Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to T, = 85°C.

2. 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 R9 value for 80 CRI products is 0, the minimum R9 value for 90 CRI products is 50, the minimum R9 value for 97 CRI products is 93. Bridgelux maintains a ± 3 tolerance on CRI and R9 values.

- 3. Drive current is referred to as nominal drive current.
- 4. Products tested under pulsed condition (10ms pulse width) at nominal test current where T_i (junction temperature) = T_c (case temperature) = 25°C.
- 5. Typical performance values are provided as a reference only and are not a guarantee of performance.
- 6. Bridgelux maintains a ±7% tolerance on flux measurements.
- 7. Minimum flux values at the nominal test current are guaranteed by 100% test.
- 8. 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.

Table 2: Selection Guide, Stabilized DC Performance ($T_c = 70^{\circ}$ C)^{7.8}

Part Number	Nominal CCT ¹ (K)	GAI²	CRI ³	Nominal Drive Current⁴ (mA)	Typical DC Flux ^{5.6} T _c = 70°C (lm)	Minimum DC Flux ^{6,9} T _c = 70°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-30A2001-B-73	3000	80	93	450	1770	1557	34.4	15.5	115
BXRC-30A2001-C-73	3000	80	93	630	2478	2180	34.4	21.6	115
BXRC-30A2001-D-73	3000	80	93	500	1797	1581	31.2	15.6	115
BXRC-35A2001-B-73	3500	80	93	450	1884	1658	34.4	15.5	122
BXRC-35A2001-C-73	3500	80	93	630	2638	2321	34.4	21.6	122
BXRC-35A2001-D-73	3500	80	93	500	1913	1683	31.2	15.6	123
BXRC-40A2001-B-73	4000	80	93	450	2041	1796	34.4	15.5	132
BXRC-40A2001-C-73	4000	80	93	630	2857	2514	34.4	21.6	132
BXRC-40A2001-D-73	4000	80	93	500	2072	1824	31.2	15.6	133

Notes for Table 2:

1. 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.

- 3. CRI Values are specified as typical.
- 4. Drive current is referred to as nominal drive current.
- 5. Typical performance values are provided as a reference only and are not a guarantee of performance.
- 6. Bridgelux maintains a ±7% tolerance on flux measurements.
- 7. 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.
- 9. 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

Table 3: Selection Guide, Stabilized DC Performance (T_ = 85°C) 45

Part Number	Nominal CCT ¹ (K)	CRI²	Nominal Drive Current³ (mA)	Typical DC Flux⁴⁵ T _c = 85°C (lm)	Minimum DC Flux ⁶ T _c = 85°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-27E2000-B-7X-SE	2700	80	450	2210	1989	33.9	15.3	145
BXRC-27E2000-C-7X-SE	2700	80	630	3094	2785	33.9	21.4	145
BXRC-27E2000-D-7X-SE	2700	80	500	2244	2019	30.9	15.5	145
BXRC-27G20H0-B-7X-SE	2700	90	450	1892	1703	33.9	15.3	124
BXRC-27G20H0-C-7X-SE	2700	90	630	2649	2384	33.9	21.4	124
BXRC-27G20H0-D-7X-SE	2700	90	500	1921	1729	30.9	15.5	124
BXRC-27G2000-B-7X-SE	2700	90	450	1823	1641	33.9	15.3	119
BXRC-27G2000-C-7X-SE	2700	90	630	2552	2297	33.9	21.4	119
BXRC-27G2000-D-7X-SE	2700	90	500	1851	1666	30.9	15.5	120
BXRC-27H2000-B-7x-SE	2700	97	450	1616	1454	33.9	15.3	106
BXRC-27H2000-C-7x-SE	2700	97	630	2262	2036	33.9	21.4	106
BXRC-27H2000-D-7x-SE	2700	97	500	1641	1477	30.9	15.5	106
BXRC-30C2001-B-7X-SE	3000	70	450	2459	2213	33.9	15.3	161
BXRC-30C2001-C-7X-SE	3000	70	630	3442	3098	33.9	21.4	161
BXRC-30C2001-D-7X-SE	3000	70	500	2496	2247	30.9	15.5	161
BXRC-30E2000-B-7X-SE	3000	80	450	2348	2113	33.9	15.3	154
BXRC-30E2000-C-7X-SE	3000	80	630	3287	2959	33.9	21.4	154
BXRC-30E2000-D-7X-SE	3000	80	500	2384	2146	30.9	15.5	154
BXRC-30G20H0-B-7X-SE	3000	90	450	1989	1790	33.9	15.3	130
BXRC-30G20H0-C-7X-SE	3000	90	630	2785	2506	33.9	21.4	130
BXRC-30G20H0-D-7X-SE	3000	90	500	2019	1817	30.9	15.5	131
BXRC-30G2000-B-7X-SE	3000	90	450	1906	1715	33.9	15.3	125
BXRC-30G2000-C-7X-SE	3000	90	630	2669	2402	33.9	21.4	125
BXRC-30G2000-D-7X-SE	3000	90	500	1935	1742	30.9	15.5	125
BXRC-30G200C-B-73-SE	3000	90	450	1848	1663	33.9	15.3	121
BXRC-30G200C-D-73-SE	3000	90	500	1865	1679	30.9	15.5	121
BXRC-30H2000-B-7x-SE	3000	97	450	1727	1554	33.9	15.3	113
BXRC-30H2000-C-7x-SE	3000	97	630	2417	2175	33.9	21.4	113
BXRC-30H2000-D-7x-SE	3000	97	500	1753	1578	30.9	15.5	113
BXRC-30A2001-B-73-SE ^{7.8}	3000	93	450	1713	1541	33.9	15.3	112
BXRC-30A2001-C-73-SE ^{7.8}	3000	93	630	2398	2158	33.9	21.4	112
BXRC-30A2001-D-73-SE7.8	3000	93	500	1739	1565	30.9	15.5	112

Notes for Table 3:

1. Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to T_c = 85°C.

2. All CRI values are measured at T₁ = T₂ = 25°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 R9 value for 80 CRI products is 0, the minimum R9 value for 90 CRI products is 50, the minimum R9 value for 97 CRI products is 93. Bridgelux maintains a ± 3 tolerance on CRI and R9 values.

3. Drive current is referred to as nominal drive current.

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

5. Typical performance is estimated based on operation under DC (direct current) with LED array mounted onto a heat sink with thermal interface material and the case temperature maintained at 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.

6. Minimum flux values at elevated temperatures are provided for reference only and are not guaranteed by 100% production testing. Based on Bridgelux test setup, values may vary depending on the thermal design of the luminaire and/or the exposed environment to which the product is subjected.

7. 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.

Part Number	Nominal CCT ¹ (K)	CRI²	Nominal Drive Current³ (mA)	Typical DC Flux⁴⁵ Tॢ = 85°C (lm)	Minimum DC Flux ⁶ T _c = 85°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-35E2000-B-7X-SE	3500	80	450	2403	2163	33.9	15.3	158
BXRC-35E2000-C-7X-SE	3500	80	630	3365	3028	33.9	21.4	158
BXRC-35E2000-D-7X-SE	3500	80	500	2440	2196	30.9	15.5	158
BXRC-35G2000-B-7X-SE	3500	90	450	1975	1778	33.9	15.3	129
BXRC-35G2000-C-7X-SE	3500	90	630	2765	2489	33.9	21.4	129
BXRC-35G2000-D-7X-SE	3500	90	500	2005	1805	30.9	15.5	130
BXRC-35A2001-B-73-SE7.8	3500	93	450	1823	1641	33.9	15.3	119
BXRC-35A2001-C-73-SE7.8	3500	93	630	2552	2297	33.9	21.4	119
BXRC-35A2001-D-73-SE7.8	3500	93	500	1851	1666	30.9	15.5	120
BXRC-40C2001-B-7X-SE	4000	70	450	2528	2275	33.9	15.3	166
BXRC-40C2001-C-7X-SE	4000	70	630	3539	3185	33.9	21.4	166
BXRC-40C2001-D-7X-SE	4000	70	500	2566	2310	30.9	15.5	166
BXRC-40E2000-B-7X-SE	4000	80	450	2417	2175	33.9	15.3	158
BXRC-40E2000-C-7X-SE	4000	80	630	3384	3046	33.9	21.4	158
BXRC-40E2000-D-7X-SE	4000	80	500	2454	2209	30.9	15.5	159
BXRC-40G2000-B-7X-SE	4000	90	450	2017	1815	33.9	15.3	132
BXRC-40G2000-C-7X-SE	4000	90	630	2823	2541	33.9	21.4	132
BXRC-40G2000-D-7X-SE	4000	90	500	2047	1843	30.9	15.5	132
BXRC-40H2000-B-7X-SE	4000	97	450	1823	1641	33.9	15.3	119
BXRC-40H2000-C-7X-SE	4000	97	630	2552	2297	33.9	21.4	119
BXRC-40H2000-D-7X-SE	4000	97	500	1851	1666	30.9	15.5	120
BXRC-40A2001-B-73-SE7.8	4000	93	450	1975	1778	33.9	15.3	129
BXRC-40A2001-C-73-SE ^{7.8}	4000	93	630	2765	2489	33.9	21.4	129
BXRC-40A2001-D-73-SE ^{7.8}	4000	93	500	2005	1805	30.9	15.5	130
BXRC-50C2001-B-74-SE	5000	70	450	2541	2287	33.9	15.3	167
BXRC-50C2001-C-74-SE	5000	70	630	3558	3202	33.9	21.4	167
BXRC-50C2001-D-74-SE	5000	70	500	2580	2322	30.9	15.5	167
BXRC-50E2001-B-74-SE	5000	80	450	2445	2200	33.9	15.3	160
BXRC-50E2001-C-74-SE	5000	80	630	3423	3080	33.9	21.4	160
BXRC-50E2001-D-74-SE	5000	80	500	2482	2234	30.9	15.5	161
BXRC-50G2001-B-74-SE	5000	90	450	2113	1902	33.9	15.3	139
BXRC-50G2001-C-74-SE	5000	90	630	2959	2663	33.9	21.4	139
BXRC-50G2001-D-74-SE	5000	90	500	2146	1931	30.9	15.5	139

Table 3: Selection Guide, Stabilized DC Performance (T_ = 85°C) 45 (continued)

Notes for Table 3:

1. Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to T_c = 85°C.

All CRI values are measured at T = T = 25°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 value for 90 CRI products is 50, the minimum Rg value for 97 CRI products is 93. Bridgelux maintains a ± 3 tolerance on CRI and Rg values.

3. Drive current is referred to as nominal drive current.

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

5. Typical performance is estimated based on operation under DC (direct current) with LED array mounted onto a heat sink with thermal interface material and the case temperature maintained at 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.

6. Minimum flux values at elevated temperatures are provided for reference only and are not guaranteed by 100% production testing. Based on Bridgelux test setup, values may vary depending on the thermal design of the luminaire and/or the exposed environment to which the product is subjected.

7. 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.

Part Number	Nominal CCT ¹ (K)	CRI²	Nominal Drive Current³ (mA)	Typical DC Flux ^{4.5} T _c = 85°C (lm)	Minimum DC Flux [°] T _c = 85°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-57C2001-B-74-SE	5700	70	450	2472	2225	33.9	15.3	162
BXRC-57C2001-C-74-SE	5700	70	630	3461	3115	33.9	21.4	162
BXRC-57C2001-D-74-SE	5700	70	500	2510	2259	30.9	15.5	162
BXRC-57E2001-B-74-SE	5700	80	450	2348	2113	33.9	15.3	154
BXRC-57E2001-C-74-SE	5700	80	630	3287	2959	33.9	21.4	154
BXRC-57E2001-D-74-SE	5700	80	500	2384	2146	30.9	15.5	154
BXRC-65C2001-B-74-SE	6500	70	450	2472	2225	33.9	15.3	162
BXRC-65C2001-C-74-SE	6500	70	630	3461	3115	33.9	21.4	162
BXRC-65C2001-D-74-SE	6500	70	500	2510	2259	30.9	15.5	162
BXRC-65E2001-B-74-SE	6500	80	450	2376	2138	33.9	15.3	156
BXRC-65E2001-C-74-SE	6500	80	630	3326	2993	33.9	21.4	156
BXRC-65E2001-D-74-SE	6500	80	500	2412	2171	30.9	15.5	156

Table 3: Selection Guide, Stabilized DC Performance (T_ = 85°C) ⁴⁵ (continued)

Notes for Table 3:

1. Nominal CCT as defined by ANSI C78.377-2011. Products with a CCT of 5000K-6500K are hot targeted to T_c = 85°C.

All CRI values are measured at T, • T, • 25°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 R9 value for 80 CRI products is 0, the minimum R9 value for 90 CRI products is 50,
the minimum R9 value for 97 CRI products is 93. Bridgelux maintains a ± 3 tolerance on CRI and R9 values.

3. Drive current is referred to as nominal drive current.

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

5. Typical performance is estimated based on operation under DC (direct current) with LED array mounted onto a heat sink with thermal interface material and the case temperature maintained at 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.

6. Minimum flux values at elevated temperatures are provided for reference only and are not guaranteed by 100% production testing. Based on Bridgelux test setup, values may vary depending on the thermal design of the luminaire and/or the exposed environment to which the product is subjected.

7. 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.

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.

Part Number	CRI	Drive Current¹ (mA)	Typical V _f T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² T _c = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy Tू = 25°C (lm/W)
	Í	113	32.1	3.6	669	613	185
		225	33.0	7.4	1294	1174	174
BXRC-27E2000-B-7X	80	450	34.8	15.7	2455	2210	157
	[675	36.1	24.3	3549	3108	146
		900	37.3	33.6	4526	3888	135
		158	32.1	5.1	929	878	184
		315	33.0	10.4	1798	1693	173
BXRC-27E2000-C-7X	80	630	34.8	21.9	3438	3094	157
		945	36.1	34.1	4934	4613	145
		1260	37.3	47.0	6297	5868	134
		125	29.6	3.7	660	630	179
		250	30.3	7.6	1279	1219	169
BXRC-27E2000-D-7X	80	500	31.8	15.9	2493	2244	157
		750	33.2	24.9	3523	3338	142
		1000	34.4	34.4	4505	4257	131
		113	32.1	3.6	573	525	158
		225	33.0	7.4	1108	1005	149
BXRC-27G20H0-B-7X	90	450	34.8	15.7	2103	1892	134
		675	36.1	24.3	3038	2661	125
		900	37.3	33.6	3876	3329	116
		158	32.1	5.1	795	752	157
		315	33.0	10.4	1540	1450	148
BXRC-27G20H0-C-7X	90	630	34.8	21.9	2944	2649	134
		945	36.1	34.1	4225	3950	124
		1260	37.3	47.0	5392	5024	115
		125	29.6	3.7	565	540	153
		250	30.3	7.6	1095	1043	144
BXRC-27G20H0-D-7X	90	500	31.8	15.9	2135	1921	134
		750	33.2	24.9	3017	2858	121
		1000	34.4	34.4	3857	3645	112
		113	32.1	3.6	552	506	153
		225	33.0	7.4	1068	968	144
BXRC-27G2000-B-7X	90	450	34.8	15.7	2026	1823	129
		675	36.1	24.3	2928	2564	120
		900	37.3	33.6	3734	3208	111
		158	32.1	5.1	766	724	151
		315	33.0	10.4	1483	1397	143
BXRC-27G2000-C-7X	90	630	34.8	21.9	2836	2552	129
		945	36.1	34.1	4071	3805	119
		1260	37.3	47.0	5195	4841	111

Table 4: Product Performance at Commonly Used Drive Currents

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.

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

Part Number	CRI	Drive Current¹ (mA)	Typical V _r T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² T _c = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy T _c = 25°C (lm/W)
		125	29.6	3.7	544	520	147
		250	30.3	7.6	1055	1005	139
BXRC-27G2000-D-7X	90	500	31.8	15.9	2057	1851	129
		750	33.2	24.9	2907	2754	117
		1000	34.4	34.4	3716	3512	108
		113	32.1	3.6	489	448	135
		225	33.0	7.4	947	858	127
(RC-27H2000-B-7X-SE	80	450	34.8	15.7	1796	1616	115
		675	36.1	24.3	2595	2272	107
		900	37.3	33.6	3310	2843	99
		158	32.1	5.1	679	642	134
		315	33.0	10.4	1315	1238	126
BXRC-27H2000-C-7X-SE	80	630	34.8	21.9	2514	2262	115
		945	36.1	34.1	3608	3373	106
		1260	37.3	47.0	4605	4291	98
		125	29.6	3.7	483	461	131
		250	30.3	7.6	936	891	123
BXRC-27H2000-D-7X-SE	80	500	31.8	15.9	1823	1641	115
		750	33.2	24.9	2576	2441	103
		1000	34.4	34.4	3294	3113	96
		113	32.1	3.6	744	682	206
		225	33.0	7.4	1440	1306	194
BXRC-30C2001-B-74-SE	70	450	34.8	15.7	2732	2459	174
		675	36.1	24.3	3948	3457	162
		900	37.3	33.6	5036	4325	150
		158	32.1	5.1	1033	977	204
		315	33.0	10.4	2000	1884	192
BXRC-30C2001-C-74-SE	70	630	34.8	21.9	3824	3442	174
		945	36.1	34.1	5489	5132	161
		1260	37.3	47.0	7006	6528	149
		125	29.6	3.7	734	701	199
		250	30.3	7.6	1423	1356	188
BXRC-30C2001-D-74-SE	70	500	31.8	15.9	2774	2496	174
		750	33.2	24.9	3920	3713	157
		1000	34.4	34.4	5012	4736	146
		113	32.1	3.6	711	651	197
		225	33.0	7.4	1375	1247	185
BXRC-30E2000-B-7X-SE	80	450	34.8	15.7	2609	2348	167
DARC-30E2000-D-7A-3E		675	36.1	24.3	3770	3302	155
		900	37.3	33.6	4809	4131	143
		158	32.1	5.1	987	933	195
		315	33.0	10.4	1910	1799	184
BXRC-30E2000-C-7X-SE	80	630	34.8	21.9	3653	3287	167
<u>.</u>	-	945	36.1	34.1	5242	4901	154
		1260	37.3	47.0	6691	6234	142

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.

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

Part Number	CRI	Drive Current¹ (mA)	Typical V, T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² T _c = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy T _c = 25°C (lm/W)
		125	29.6	3.7	701	670	190
		250	30.3	7.6	1359	1295	179
BXRC-30E2000-D-7X-SE	80	500	31.8	15.9	2649	2384	167
		750	33.2	24.9	3743	3546	150
		1000	34.4	34.4	4786	4523	139
		113	32.1	3.6	602	552	166
		225	33.0	7.4	1165	1057	157
BXRC-30G20H0-B-7X	90	450	34.8	15.7	2210	1989	141
		675	36.1	24.3	3194	2797	131
		900	37.3	33.6	4074	3499	121
		158	32.1	5.1	836	790	165
		315	33.0	10.4	1618	1524	156
BXRC-30G20H0-C-7X	90	630	34.8	21.9	3094	2785	141
		945	36.1	34.1	4441	4151	130
		1260	37.3	47.0	5668	5281	121
		125	29.6	3.7	594	567	161
		250	30.3	7.6	1151	1097	152
BXRC-30G20H0-D-7X	90	500	31.8	15.9	2244	2019	141
		750	33.2	24.9	3171	3004	127
		1000	34.4	34.4	4054	3831	118
		113	32.1	3.6	577	529	160
		225	33.0	7.4	1116	1013	150
BXRC-30G2000-B-7X-SE	90	450	34.8	15.7	2118	1906	135
		675	36.1	24.3	3061	2680	126
		900	37.3	33.6	3904	3353	116
		158	32.1	5.1	801	757	158
		315	33.0	10.4	1551	1460	149
BXRC-30G2000-C-7X-SE	90	630	34.8	21.9	2965	2669	135
		945	36.1	34.1	4256	3978	125
		1260	37.3	47.0	5432	5061	116
		125	29.6	3.7	569	544	154
		250	30.3	7.6	1103	1051	145
BXRC-30G2000-D-7X-SE	90	500	31.8	15.9	2150	1935	135
		750	33.2	24.9	3039	2879	122
		1000	34.4	34.4	3885	3672	113
		113	32.1	3.6	559	512	155
		225	33.0	7.4	1082	981	146
BXRC-30G200C-B-73-SE	90	450	34.8	15.7	2053	1848	131
		675	36.1	24.3	2967	2598	122
		900	37.3	33.6	3784	3250	113
		125	29.6	3.7	549	524	149
		250	30.3	7.6	1063	1013	140
BXRC-30G200C-D-73-SE	90	500	31.8	15.9	2072	1865	130
		750	33.2	24.9	2929	2774	118
		1000	34.4	34.4	3745	3539	109

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.

Part Number	CRI	Drive Current¹ (mA)	Typical V, T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² T _c = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy T _c = 25°C (lm/W)
		113	32.1	3.6	522	479	145
		225	33.0	7.4	1011	917	136
BXRC-30H2000-B-7X-SE	80	450	34.8	15.7	1918	1727	123
	-	675	36.1	24.3	2772	2428	114
		900	37.3	33.6	3536	3038	105
		158	32.1	5.1	726	686	143
		315	33.0	10.4	1405	1323	135
BXRC-30H2000-C-7X-SE	80	630	34.8	21.9	2686	2417	123
		945	36.1	34.1	3855	3604	113
		1260	37.3	47.0	4920	4584	105
		125	29.6	3.7	516	492	140
		250	30.3	7.6	999	952	132
BXRC-30H2000-D-7X-SE	80	500	31.8	15.9	1948	1753	123
		750	33.2	24.9	2752	2608	111
		1000	34.4	34.4	3519	3326	102
		113	32.1	3.6	518	475	143
BXRC-30A2001-B-73-SE	93	225	33.0	7.4	1003	910	135
		450	34.8	15.7	1903	1713	122
		675	36.1	24.3	2750	2408	113
		900	37.3	33.6	3508	3013	105
BXRC-30A2001-C-73-SE		158	32.1	5.1	720	681	142
		315	33.0	10.4	1394	1312	134
	93	630	34.8	21.9	2664	2398	122
		945	36.1	34.1	3824	3575	112
		1260	37.3	47.0	4881	4547	104
		125	29.6	3.7	511	488	138
		250	30.3	7.6	991	944	131
BXRC-30A2001-D-73-SE	93	500	31.8	15.9	1932	1739	122
		750	33.2	24.9	2730	2587	110
		1000	34.4	34.4	3491	3299	101
		113	32.1	3.6	727	666	201
		225	33.0	7.4	1408	1277	189
BXRC-35E2000-B-7X-SE	80	450	34.8	15.7	2670	2403	171
		675	36.1	24.3	3859	3380	159
		900	37.3	33.6	4923	4228	147
		158	32.1	5.1	1010	955	200
		315	33.0	10.4	1955	1841	188
BXRC-35E2000-C-7X-SE	80	630	34.8	21.9	3738	3365	171
		945	36.1	34.1	5366	5016	157
		1260	37.3	47.0	6848	6381	146
		125	29.6	3.7	718	685	194
		250	30.3	7.6	1391	1325	183
BXRC-35E2000-D-7X-SE	80	500	31.8	15.9	2711	2440	171
		750	33.2	24.9	3831	3630	154
		1000	34.4	34.4	4899	4629	142

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.

Table 4 Draduat Darfarmance at Comman	VI load Drive Currente (Contin	au ad)
Table 4: Product Performance at Commonl	y Osed Drive Currents (Contin	iueu)

Part Number	CRI	Drive Current¹ (mA)	Typical V, T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² Tू = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy T _c = 25°C (lm/W)
		113	32.1	3.6	598	548	165
		225	33.0	7.4	1157	1049	156
BXRC-35G2000-B-7X-SE	90	450	34.8	15.7	2195	1975	140
		675	36.1	24.3	3172	2777	130
		900	37.3	33.6	4046	3475	121
		158	32.1	5.1	830	785	164
		315	33.0	10.4	1607	1513	155
BXRC-35G2000-C-7X-SE	90	630	34.8	21.9	3072	2765	140
		945	36.1	34.1	4410	4123	129
		1260	37.3	47.0	5628	5244	120
		125	29.6	3.7	590	563	160
		250	30.3	7.6	1143	1089	151
BXRC-35G2000-D-7X-SE	90	500	31.8	15.9	2228	2005	140
		750	33.2	24.9	3149	2983	126
		1000	34.4	34.4	4026	3805	117
		113	32.1	3.6	552	506	153
BXRC-35A2001-B-73-SE	93	225	33.0	7.4	1068	968	144
		450	34.8	15.7	2026	1823	129
		675	36.1	24.3	2928	2564	120
		900	37.3	33.6	3734	3208	111
BXRC-35A2001-C-73-SE		158	32.1	5.1	766	724	151
	93	315	33.0	10.4	1483	1397	143
		630	34.8	21.9	2836	2552	129
		945	36.1	34.1	4071	3805	119
		1260	37.3	47.0	5195	4841	111
		125	29.6	3.7	544	520	147
		250	30.3	7.6	1055	1005	139
BXRC-35A2001-D-73-SE	93	500	31.8	15.9	2057	1851	129
		750	33.2	24.9	2907	2754	117
		1000	34.4	34.4	3716	3512	108
		113	32.1	3.6	765	701	212
		225	33.0	7.4	1480	1343	199
BXRC-40C2001-B-74-SE	70	450	34.8	15.7	2808	2528	179
		675	36.1	24.3	4059	3554	167
		900	37.3	33.6	5177	4447	154
	ĺ	158	32.1	5.1	1062	1004	210
		315	33.0	10.4	2057	1937	198
BXRC-40C2001-C-74-SE	70	630	34.8	21.9	3932	3539	179
		945	36.1	34.1	5643	5276	166
		1260	37.3	47.0	7203	6711	153
		125	29.6	3.7	755	721	204
		250	30.3	7.6	1463	1394	193
BXRC-40C2001-D-74-SE	70	500	31.8	15.9	2852	2566	179
		750	33.2	24.9	4030	3817	162
		1000	34.4	34.4	5152	4869	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.

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

Part Number	CRI	Drive Current¹ (mA)	Typical V, T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² T _c = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy T _c = 25°C (lm/W)
		113	32.1	3.6	731	670	202
		225	33.0	7.4	1416	1284	191
BXRC-40E2000-B-7X-SE	80	450	34.8	15.7	2686	2417	172
		675	36.1	24.3	3881	3399	159
		900	37.3	33.6	4951	4253	148
		158	32.1	5.1	1016	960	201
		315	33.0	10.4	1967	1852	189
BXRC-40E2000-C-7X-SE	80	630	34.8	21.9	3760	3384	172
		945	36.1	34.1	5397	5045	158
		1260	37.3	47.0	6888	6418	147
		125	29.6	3.7	722	689	195
		250	30.3	7.6	1399	1333	184
BXRC-40E2000-D-7X-SE	80	500	31.8	15.9	2727	2454	172
		750	33.2	24.9	3853	3651	155
		1000	34.4	34.4	4927	4656	143
		113	32.1	3.6	610	559	169
		225	33.0	7.4	1181	1071	159
BXRC-40G2000-B-7X-SE	90	450	34.8	15.7	2241	2017	143
		675	36.1	24.3	3238	2836	133
		900	37.3	33.6	4130	3548	123
BXRC-40G2000-C-7X-SE		158	32.1	5.1	848	801	167
		315	33.0	10.4	1641	1545	158
	90	630	34.8	21.9	3137	2823	143
		945	36.1	34.1	4502	4209	132
		1260	37.3	47.0	5746	5354	122
		125	29.6	3.7	602	575	163
		250	30.3	7.6	1167	1112	154
BXRC-40G2000-D-7X-SE	90	500	31.8	15.9	2275	2047	143
		750	33.2	24.9	3215	3046	129
		1000	34.4	34.4	4111	3885	119
		113	32.1	3.6	552	506	153
		225	33.0	7.4	1068	968	144
BXRC-40H2000-B-7X-SE	97	450	34.8	15.7	2026	1823	129
		675	36.1	24.3	2928	2564	120
		900	37.3	33.6	3734	3208	111
		158	32.1	5.1	766	724	151
		315	33.0	10.4	1483	1397	143
BXRC-40H2000-C-7X-SE	97	630	34.8	21.9	2836	2552	129
,		945	36.1	34.1	4071	3805	119
		1260	37.3	47.0	5195	4841	111
		125	29.6	3.7	544	520	147
		250	30.3	7.6	1055	1005	139
BXRC-40H2000-D-7X-SE	97	500	31.8	15.9	2057	1851	129
,		750	33.2	24.9	2907	2754	117
		1000	34.4	34.4	3716	3512	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.

Part Number	CRI	Drive Current¹ (mA)	Typical V, T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² T _c = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy T _c = 25°C (lm/W)
		113	32.1	3.6	598	548	165
		225	33.0	7.4	1157	1049	156
BXRC-40A2001-B-73-SE	93	450	34.8	15.7	2195	1975	140
		675	36.1	24.3	3172	2777	130
		900	37.3	33.6	4046	3475	121
		158	32.1	5.1	830	785	164
		315	33.0	10.4	1607	1513	155
BXRC-40A2001-C-73-SE	93	630	34.8	21.9	3072	2765	140
		945	36.1	34.1	4410	4123	129
		1260	37.3	47.0	5628	5244	120
		125	29.6	3.7	590	563	160
	[250	30.3	7.6	1143	1089	151
BXRC-40A2001-D-73-SE	93	500	31.8	15.9	2228	2005	140
		750	33.2	24.9	3149	2983	126
		1000	34.4	34.4	4026	3805	117
BXRC-50C2001-B-74-SE		113	32.1	3.6	769	705	213
	70	225	33.0	7.4	1489	1350	200
		450	34.8	15.7	2824	2541	180
		675	36.1	24.3	4081	3574	168
		900	37.3	33.6	5205	4471	155
BXRC-50C2001-C-74-SE		158	32.1	5.1	1068	1010	211
		315	33.0	10.4	2068	1947	199
	70	630	34.8	21.9	3953	3558	180
		945	36.1	34.1	5674	5305	166
		1260	37.3	47.0	7242	6748	154
		125	29.6	3.7	759	725	205
		250	30.3	7.6	1471	1401	194
BXRC-50C2001-D-74-SE	70	500	31.8	15.9	2867	2580	180
		750	33.2	24.9	4052	3838	163
		1000	34.4	34.4	5181	4896	150
		113	32.1	3.6	740	678	205
		225	33.0	7.4	1432	1299	193
BXRC-50E2001-B-74-SE	80	450	34.8	15.7	2716	2445	173
		675	36.1	24.3	3926	3438	161
		900	37.3	33.6	5007	4301	149
		158	32.1	5.1	1028	971	203
	[315	33.0	10.4	1989	1873	191
BXRC-50E2001-C-74-SE	80	630	34.8	21.9	3803	3423	173
		945	36.1	34.1	5458	5103	160
		1260	37.3	47.0	6967	6491	148
		125	29.6	3.7	730	697	198
		250	30.3	7.6	1415	1348	187
BXRC-50E2001-D-74-SE	80	500	31.8	15.9	2758	2482	173
		750	33.2	24.9	3897	3692	157
		1000	34.4	34.4	4983	4709	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.

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

Part Number	CRI	Drive Current¹ (mA)	Typical V, T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² T _c = 25°C (lm)	Typical DC Flux³ T _c = 85°C (lm)	Typical Efficacy T _c = 25°C (lm/W)
		113	32.1	3.6	639	586	177
		225	33.0	7.4	1238	1123	167
BXRC-50G2001-B-74-SE	90	450	34.8	15.7	2348	2113	150
-		675	36.1	24.3	3393	2972	139
		900	37.3	33.6	4328	3718	129
		158	32.1	5.1	888	840	175
		315	33.0	10.4	1719	1619	165
BXRC-50G2001-C-74-SE	90	630	34.8	21.9	3287	2959	150
		945	36.1	34.1	4718	4411	138
		1260	37.3	47.0	6022	5611	128
		125	29.6	3.7	631	603	171
		250	30.3	7.6	1223	1165	161
BXRC-50G2001-D-74-SE	90	500	31.8	15.9	2384	2146	150
		750	33.2	24.9	3369	3192	135
	-	1000	34.4	34.4	4308	4071	125
		113	32.1	3.6	748	686	207
BXRC-57C2001-B-74-SE	70	225	33.0	7.4	1448	1313	195
		450	34.8	15.7	2747	2472	175
		675	36.1	24.3	3970	3477	163
		900	37.3	33.6	5064	4350	151
BXRC-57C2001-C-74-SE		158	32.1	5.1	1039	982	205
		315	33.0	10.4	2012	1894	193
	70	<u> </u>	34.8	21.9	3846	3461	175
5, 5, 02001 0 , 4 02		945	36.1	34.1	5520	5160	162
		1260	37.3	47.0	7045	6565	150
		125	29.6	3.7	738	705	200
	-	250	30.3	7.6	1431	1363	189
BXRC-57C2001-D-74-SE	70	<u> </u>	30.5 31.8	15.9	2789	2510	10g 175
DARC 3702001 D 74 JL	/0	750	33.2	24.9	3942	3734	158
		1000	34.4	34.4	5040	4763	130
		113	32.1	3.6	711	651	140
		225	33.0	7.4	1375	1247	197
BXRC-57E2001-B-74-SE	80	450	34.8	15.7	2609	2348	10 5 167
DXRC-5/L2001-D-/4-3L	00	675	36.1	24.3	3770	3302	155
			1				
		900 158	37.3 32.1	33.6 5.1	4809 987	4131	143
				-		933	195 184
	80	315 620	33.0	10.4	1910 2652	1799	
3XRC-57E2001-C-74-SE	80	630	34.8	21.9	3653	3287	167
		945	36.1	34.1	5242	4901	154
		1260	37.3	47.0	6691	6234	142
		125	29.6	3.7	701	670	190
	80	250	30.3	7.6	1359	1295	179
3XRC-57E2001-D-74-SE	80	500	31.8	15.9	2649	2384	167
		750	33.2	24.9	3743	3546	150
		1000	34.4	34.4	4786	4523	139

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.

Part Number	CRI	Drive Current¹ (mA)	Typical V _f T _c = 25°C (V)	Typical Power T _c = 25°C (W)	Typical Flux² T _c = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy Tू = 25°C (lm/W)
		113	32.1	3.6	748	686	207
		225	33.0	7.4	1448	1313	195
BXRC-65C2001-B-74-SE	70	450	34.8	15.7	2747	2472	175
		675	36.1	24.3	3970	3477	163
		900	37.3	33.6	5064	4350	151
		158	32.1	5.1	1039	982	205
		315	33.0	10.4	2012	1894	193
BXRC-65C2001-C-74-SE	70	630	34.8	21.9	3846	3461	175
		945	36.1	34.1	5520	5160	162
		1260	37.3	47.0	7045	6565	150
	70	125	29.6	3.7	738	705	200
		250	30.3	7.6	1431	1363	189
BXRC-65C2001-D-74-SE		500	31.8	15.9	2789	2510	175
		750	33.2	24.9	3942	3734	158
		1000	34.4	34.4	5040	4763	146
	80	113	32.1	3.6	719	659	199
		225	33.0	7.4	1391	1262	187
BXRC-65E2001-B-74-SE		450	34.8	15.7	2640	2376	169
		675	36.1	24.3	3815	3341	157
		900	37.3	33.6	4866	4180	145
		158	32.1	5.1	998	944	197
		315	33.0	10.4	1933	1820	186
BXRC-65E2001-C-74-SE	80	630	34.8	21.9	3696	3326	169
		945	36.1	34.1	5304	4959	156
		1260	37.3	47.0	6770	6308	144
		125	29.6	3.7	709	678	192
		250	30.3	7.6	1375	1310	181
BXRC-65E2001-D-74-SE	80	500	31.8	15.9	2680	2412	169
		750	33.2	24.9	3787	3588	152
		1000	34.4	34.4	4843	4576	141

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

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.

Electrical Characteristics

Table 5: Electrical Characteristics

	Drive	Forward Voltage Pulsed, T _c = 25°C (V) ^{1,2,3,8}			Typical Coefficient of Forward	Typical Thermal Resistance	Driver So Volta (\	iges ⁷
Part Number	Current (mA)	Minimum	Typical	Maximum	Voltage₄ ∆V _r ∕∆T _c (mV∕°C)	Junction to Case ^{5,6} R _{j-c} (°C/W)	V _F Min. Hot T _c = 105°C (V)	V _r Max. Cold T _c = -40°C (V)
	450	32.2	34.8	37.4	-14.3	0.28	31.0	38.3
BXRC-xxx200x-B-7x-SE	900	34.5	37.3	40.1	-14.3	0.35	33.4	41.0
	630	32.2	34.8	37.4	-14.3	0.20	31.0	38.3
BXRC-xxx200x-C-7x-SE	1260	34.5	37.3	40.1	-14.3	0.24	33.4	41.0
	500	29.4	31.8	34.2	-13.3	0.34	28.4	35.0
BXRC-xxx200x-D-7x-SE	1000	31.8	34.4	37.0	-13.3	0.41	30.8	37.9

Notes for Table 5:

1. Parts are tested in pulsed conditions, $T_c = 25^{\circ}$ C. Pulse width is 10ms.

2. Voltage minimum and maximum are provided for reference only and are not a guarantee of performance.

3. Bridgelux maintains a tester tolerance of ± 0.10V on forward voltage measurements.

4. Typical coefficient of forward voltage tolerance is ± 0.1mV for nominal current.

5. Thermal resistance values are based from test data of a 3000K 80 CRI product.

6. Thermal resistance value was calculated using total electrical input power; optical power was not subtracted from input power. The thermal interface material used during testing is not included in the thermal resistance value.

7. V, min hot and max cold values are provided as reference only and are not guaranteed by test. These values are provided to aid in driver design and selection over the operating range of the product.

8. This product has been designed and manufactured per IEC 62031:2014. 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

	Drive	CCT ^{1.5}						
Part Number	Current⁵ (mA)	2700K/3000K	4000K²	5000K3	6500K⁴			
	450	RG1	RG1	RG1	RG1			
BXRC-xxx200x-B-7x-SE	675	RG1	RG1	RG1	RG2			
	900	RG1	RG1	RG2	RG2			
	630	RG1	RG1	RG1	RG1			
BXRC-xxx200x-C-7x-SE	945	RG1	RG1	RG2	RG2			
	1260	RG1	RG2	RG2	RG2			
	500	RG1	RG1	RG1	RG1			
BXRC-xxx200x-D-7x-SE	750	RG1	RG1	RG1	RG2			
	1000	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 $\rm E_{thr}^{""}$ = 1315.8 k.

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 _j)	150°C					
Storage Temperature	-40°C to +105°C					
Operating Case Temperature ¹ (T _c)	105°C					
	BXRC-xxx200x-B-7x-SE	BXRC-xxx200x-C-7x-SE	BXRC-xxx200x-D-7x-SE			
Maximum Drive Current ³	900mA	1260mA	1000mA			
Maximum Peak Pulsed Drive Current4	1290mA	1800mA	1430mA			
Maximum Reverse Voltage ⁵	-60V	-60V	-55V			

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

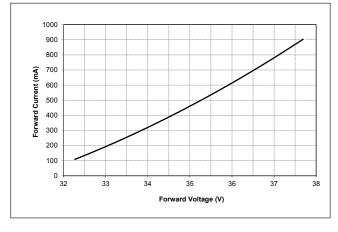
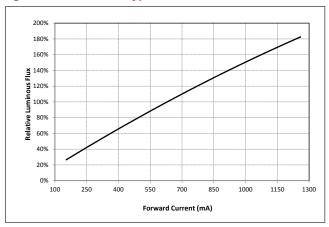


Figure 1: Vero SE 13B Drive Current vs. Voltage





Figure 5: Vero SE 13C Typical Relative Flux vs. Current



Notes for Figures 1-6:

1. Bridgelux does not recommend driving high power LEDs at low currents. Doing so may produce unpredictable results. Pulse width modulation (PWM) is recommended for dimming effects.

2. Products tested under pulsed condition (10ms pulse width) at nominal test current where T_i (junction temperature) - T_c (case temperature) - 25*C.



Figure 2: Vero SE 13C Drive Current vs. Voltage

Figure 4: Vero SE 13B Typical Relative Flux vs. Current

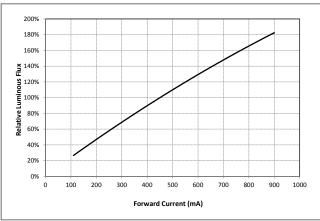
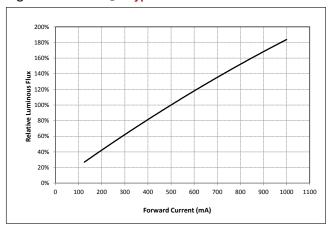


Figure 6 Vero SE 13D Typical Relative Flux vs. Current



Performance Curves

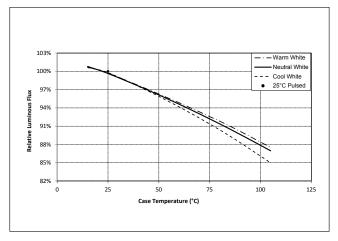
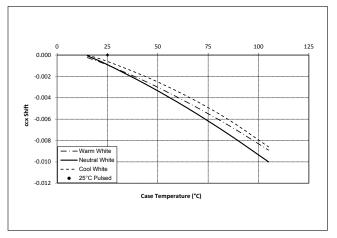


Figure 7: Typical DC Flux vs. Case Temperature

Figure 9: Typical DC ccx 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.

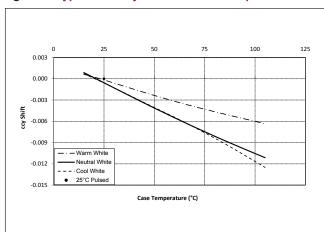


Figure 8: Typical DC ccy Shift vs. Case Temperature

Performance Curves

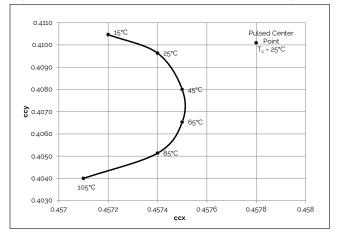
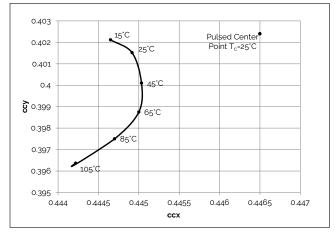
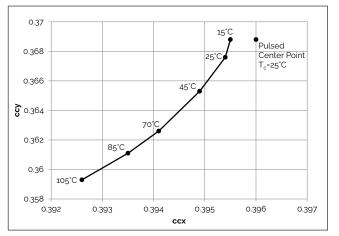


Figure 10: 2700K, 97 CRI Color Shift vs. Case Temperature¹









Notes for Figures 10-15:

2. Typical color shift is shown with a tolerance of ± 0.002 .

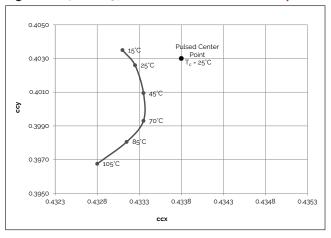
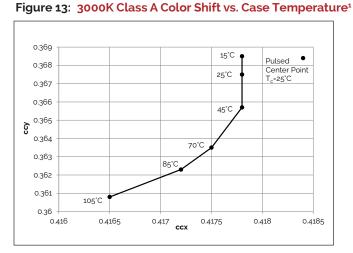
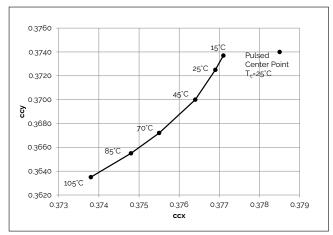


Figure 11: 3000K, 97 CRI Color Shift vs. Case Temperature¹





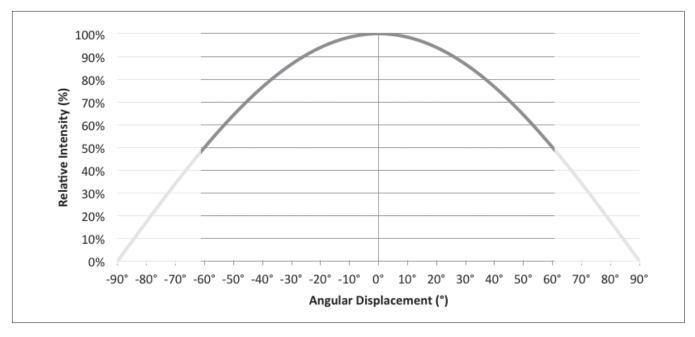


^{1.} Measurements made under DC test conditions at the nominal drive current.

^{3.} Characteristics shown for Decor Series Showcase products, BXRC-30G400C-x-73-SE

Typical Radiation Pattern

Figure 16: Typical Spatial Radiation Pattern

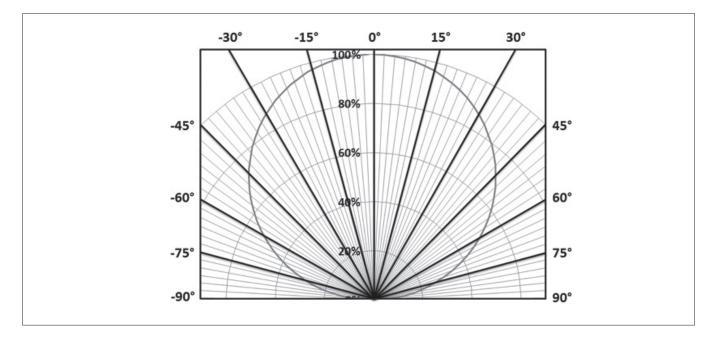


Note for Figure 16:

1. Typical viewing angle is 120°.

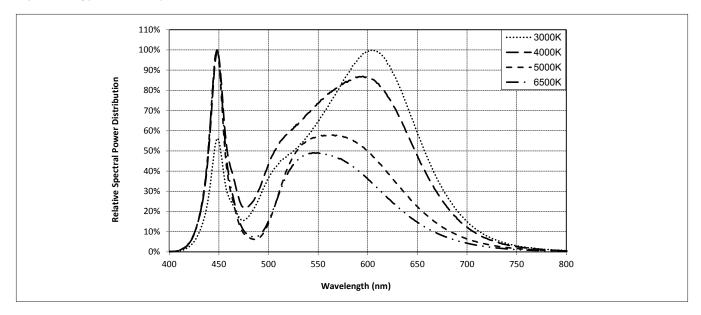
2. The viewing angle is defined as the off axis angle from the centerline where intensity is ½ of the peak value.

Figure 17: Typical Polar Radiation Pattern



Typical Color Spectrum

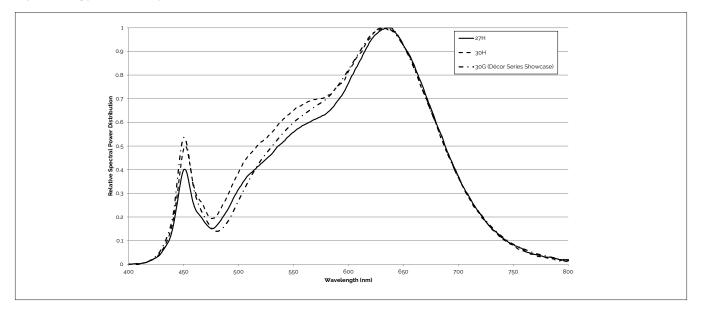
Figure 18: Typical Color Spectrum



Note for Figure 18:

- 1. Color spectra measured at nominal current for $T_i = T_c = 25^{\circ}C$.
- 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 19: Typical Color Spectrum for Vero SE 13 with Décor Series

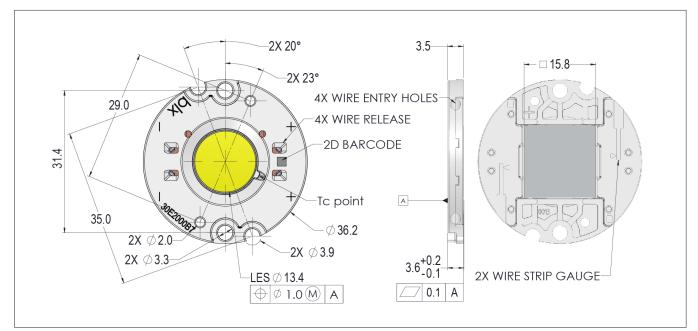


Note for Figure 19:

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

Mechanical Dimensions

Figure 20: Drawing for Vero SE 13 LED Array



Notes for Figure 20:

- 1. Drawings are not to scale.
- 2. Drawing dimensions are in millimeters.
- 3. Unless otherwise specified, tolerances are ±0.1mm.
- 4. Mounting holes (2X) are for M3 screws.
- 5. Bridgelux recommends two tapped holes for mounting screws with 31.4 ± 0.10mm center-to-center spacing.
- 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 ± 0.2mm.
- 8. Bridgelux maintains a flatness of 0.10mm across the mounting surface of the array.

Color Binning Information

0.44 -3 SDCM -2 SDCM 2700 0.42 - -**B**la 0.4 ≻ 0.38 0.36 0.34 +-0.36 0.39 0.42 0.45 0.48 x

Figure 21: Warm and Neutral White Test Bins in xy Color

Space



Bin Code	2700K	3000K1	3500K1	4000K1
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)	(0.4578, 0.4101)	(0.4338, 0.403) (0.4465, 0.4024)²	(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_ = 85°C)

- ,	<i>,</i> ,	1 0	C =
Bin Code	5000K	5700K	6500K
ANSI Bin (for reference only)	(4745K - 5311K)	(5312K - 6022K)	(6022K - 7042K)
74 (4 SDCM)	(4801K - 5282K)	(5829K - 5481K)	(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)

Figure 22: Cool White Test Bins in xy Color Space

0.39

0.38

0.37

0.36

0.35

0.34

0.33 0.32

0.3

0.3 + 0.3 4 SDCM

3 SDCN

0.31

Note: Pulsed Test Conditions, T_ = 25°C

0.32

0.33 X 0.34

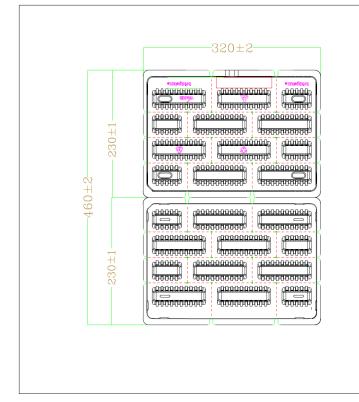
0.35

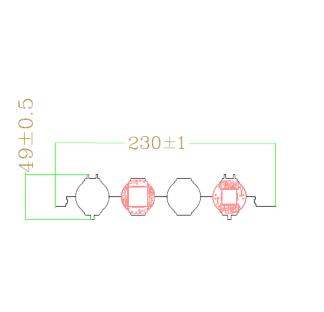
0.36

Note: Pulsed Test Conditions, T_c = 25°C

Packaging and Labeling

Figure 23: Drawing for Vero SE 13 Packaging Tray





Notes for Figure 23:

1. Dimensions are in millimeters.

2. Drawings are not to scale.

Packaging and Labeling

Figure 24: Vero SE Series Packaging and Labeling



Notes for Figure 24:

1. Each tray holds 100 COBs.

2. Each tray is vacuum sealed in an anti-static bag and placed in its own box.

3. Each tray, bag and box is to be labeled as shown above.

Figure 25: 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 and other Bridgelux internal production information.

Customer Use- Product part number

Customer Use-V, 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.

Optical Source Models

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

Precautions

CAUTION: CHEMICAL EXPOSURE HAZARD

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

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.

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.

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46430 Fremont Boulevard Fremont, CA 94538 U.S.A. Tel (925) 583-8400 www.bridgelux.com

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