



Bridgelux[®] Vero[®] SE 18 Array Series

Product Data Sheet DS122



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Vero SE



Introduction

Vero[®] SE 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 H Series[™].

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

Décor Series[™] Ultra products provide a high CRI of 97 and a typical R9 value of 98, 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[™] Food products offer color points developed to address the unique requirements of the food, grocery, and restaurant industries. Highlighting the distinctive colors and nuanced patterns found in meats and breads, the Décor Series Food products are a must have for any butcher counter or bakery.

Décor Series ™ Specialty products provide color points developed specifically for the healthcare and entertainment industries. The 5600K cool white color point combined with a CRI of 90 provides the bright white required by these industries.

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 153 lm/W typical
- Lumen output performance ranges from 1,372 to 13,060 lumens
- Broad range of CCT options from 1750K 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_f 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

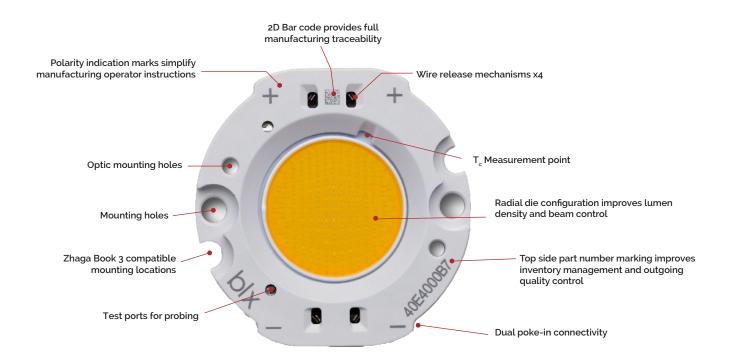


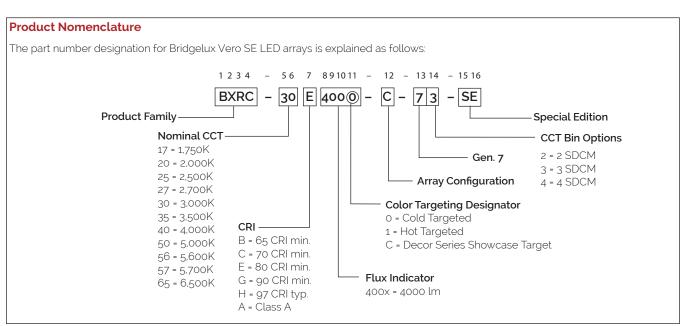
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Product Feature Map

Vero SE 18 is the second largest 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 for more information on the Vero SE family of products.





The following product configurations are available:

Part Number	Nominal CCT¹ (K)	CRI²	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-17E4000-B-74-SE	1750	80	900	2649	2385	35.0	31.5	84
BXRC-17E4000-C-74-SE	1750	80	1170	3445	3100	35.0	41.0	84
BXRC-17E4000-D-74-SE	1750	80	1050	2576	2318	29.0	30.5	85
BXRC-20B4001-C-73-SE	2000	65	1170	5868	5281	35.0	41.0	143
BXRC-20B4001-D-73-SE	2000	65	1050	4366	3929	29.0	30.5	143
BXRC-25E4000-B-74-SE	2500	80	900	4282	3853	35.0	31.5	136
BXRC-25E4000-C-74-SE	2500	80	1170	5568	5011	35.0	41.0	136
BXRC-25E4000-D-74-SE	2500	80	1050	4163	3747	29.0	30.5	137
BXRC-27E4000-B-7X-SE	2700	80	900	4584	4126	35.0	31.5	146
BXRC-27E4000-C-7X-SE	2700	80	1170	5960	5363	35.0	41.0	146
BXRC-27E4000-D-7X-SE	2700	80	1050	4457	4011	29.0	30.5	146
BXRC-27G4000-B-7X-SE	2700	90	900	3820	3438	35.0	31.5	121
BXRC-27G4000-C-7X-SE	2700	90	1170	4967	4470	35.0	41.0	121
BXRC-27G4000-D-7X-SE	2700	90	1050	3714	3343	29.0	30.5	122
BXRC-27H4000-B-7x-SE	2700	97	900	3352	3016	35.0	31.5	106
BXRC-27H4000-C-7x-SE	2700	97	1170	4358	3922	35.0	41.0	106
BXRC-27H4000-D-7x-SE	2700	97	1050	3259	2933	29.0	30.5	107
BXRC-30E4000-B-7X-SE	3000	80	900	4819	4297	35.0	31.5	153
BXRC-30E4000-C-7X-SE	3000	80	1170	6265	5587	35.0	41.0	153
BXRC-30E4000-D-7X-SE	3000	80	1050	4658	4178	29.0	30.5	153
BXRC-30G4000-B-7X-SE	3000	90	900	3963	3567	35.0	31.5	126
BXRC-30G4000-C-7X-SE	3000	90	1170	5153	4638	35.0	41.0	126
BXRC-30G4000-D-7X-SE	3000	90	1050	3853	3467	29.0	30.5	127
BXRC-30G400C-B-73-SE	3000	90	900	3731	3358	35.0	31.5	118
BXRC-30G400C-D-73-SE	3000	90	1050	3606	3245	29.0	30.5	118
BXRC-30H4000-B-7x-SE	3000	97	900	3581	3223	35.0	31.5	114
BXRC-30H4000-C-7x-SE	3000	97	1170	4657	4190	35.0	41.0	114
BXRC-30H4000-D-7x-SE	3000	97	1050	3482	3134	29.0	30.5	114
BXRC-30A4001-B-73-SE ^{8.9}	3000	93	900	3696	3327	35.0	31.5	117
BXRC-30A4001-C-73-SE ^{8.9}	3000	93	1170	4807	4326	35.0	41.0	117
BXRC-30A4001-D-73-SE ^{8.9}	3000	93	1050	3594	3234	29.0	30.5	118
BXRC-35E4000-B-7X-SE	3500	80	900	4918	4426	35.0	31.5	156
BXRC-35E4000-C-7X-SE	3500	80	1170	6394	5755	35.0	41.0	156
BXRC-35E4000-D-7X-SE	3500	80	1050	4782	4303	29.0	30.5	157

Table 1: Selection	Guide, Pulsed Meas	surement 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 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 values for 90 CRI products is 50, the typical R9 values for 97 CRI products is 98.

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.

9. 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.

Part Number	Nominal CCT ¹ (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-35G4000-B-7X-SE	3500	90	900	4106	3695	35.0	31.5	130
BXRC-35G4000-C-7X-SE	3500	90	1170	5339	4805	35.0	41.0	130
BXRC-35G4000-D-7X-SE	3500	90	1050	3992	3593	29.0	30.5	131
BXRC-35A4001-B-73-SE ^{8.9}	3500	93	900	3974	3576	35.0	31.5	126
BXRC-35A4001-C-73-SE ^{8.9}	3500	93	1170	5167	4650	35.0	41.0	126
BXRC-35A4001-D-73-SE ^{8,9}	3500	93	1050	3864	3477	29.0	30.5	127
BXRC-40E4000-B-7X-SE	4000	80	900	4966	4469	35.0	31.5	158
BXRC-40E4000-C-7X-SE	4000	80	1170	6456	5810	35.0	41.0	158
BXRC-40E4000-D-7X-SE	4000	80	1050	4828	4345	29.0	30.5	159
BXRC-40G4000-B-7X-SE	4000	90	900	4249	3825	35.0	31.5	135
BXRC-40G4000-C-7X-SE	4000	90	1170	5525	4973	35.0	41.0	135
BXRC-40G4000-D-7X-SE	4000	90	1050	4132	3718	29.0	30.5	136
BXRC-40A4001-B-73-SE ^{8,9}	4000	93	900	4251	3826	35.0	31.5	135
BXRC-40A4001-C-73-SE ^{8.9}	4000	93	1170	5527	4974	35.0	41.0	135
BXRC-40A4001-D-73-SE ^{8.9}	4000	93	1050	4134	3720	29.0	30.5	136
BXRC-50C4001-B-74-SE	5000	70	900	5443	4898	35.0	31.5	173
BXRC-50C4001-C-74-SE	5000	70	1170	7077	6369	35.0	41.0	173
BXRC-50C4001-D-74-SE	5000	70	1050	5292	4763	29.0	30.5	174
BXRC-50E4001-B-74-SE	5000	80	900	5117	4605	35.0	31.5	162
BXRC-50E4001-C-74-SE	5000	80	1170	6653	5987	35.0	41.0	162
BXRC-50E4001-D-74-SE	5000	80	1050	4975	4477	29.0	30.5	163
BXRC-50G4001-B-74-SE	5000	90	900	4354	3919	35.0	31.5	138
BXRC-50G4001-C-74-SE	5000	90	1170	5662	5096	35.0	41.0	138
BXRC-50G4001-D-74-SE	5000	90	1050	4234	3811	29.0	30.5	139
BXRC-56G4001-B-74-SE	5600	90	900	4559	4103	35.0	31.5	145
BXRC-56G4001-C-74-SE	5600	90	1170	5928	5335	35.0	41.0	145
BXRC-56G400x-D-74-SE	5600	90	1050	4433	3989	29.0	30.5	146
BXRC-57C4001-B-74-SE	5700	70	900	5252	4727	35.0	31.5	167
BXRC-57C4001-C-74-SE	5700	70	1170	6829	6146	35.0	41.0	167
BXRC-57C4001-D-74-SE	5700	70	1050	5107	4595	29.0	30.5	168
BXRC-57E4001-B-74-SE	5700	80	900	5204	4684	35.0	31.5	165
BXRC-57E4001-C-74-SE	5700	80	1170	6767	6090	35.0	41.0	165
BXRC-57E4001-D-74-SE	5700	80	1050	5060	4554	29.0	30.5	166
BXRC-65C4001-B-74-SE	6500	70	900	5348	4813	35.0	31.5	170
BXRC-65C4001-C-74-SE	6500	70	1170	6953	6258	35.0	41.0	170

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_c = 85°C.

 CRI values are typical for Decor Series Ultra 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 typical Rg values for 97 CRI products is 98.

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.

9. 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.

Part Number	Nominal CCT ¹ (K)	CRI²	Nominal Drive Current³ (mA)	Typical Pulsed Flux ^{4.56} 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-65C4001-D-74-SE	6500	70	1050	5199	4679	29.0	30.5	171
BXRC-65E4001-B-74-SE	6500	80	900	5300	4770	35.0	31.5	168
BXRC-65E4001-C-74-SE	6500	80	1170	6891	6202	35.0	41.0	168
BXRC-65E4001-D-74-SE	6500	80	1050	5153	4638	29.0	30.5	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.

 CRI values are typical for Decor Series Ultra 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 typical Rg values for 97 CRI products is 98.

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.
- 9. 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.

Part Number	Nominal CCT¹ (K)	GAI²	CRI³	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-30A4001-B-73-SE	3000	80	93	900	3438	3094	34.3	30.9	111
BXRC-30A4001-C-73-SE	3000	80	93	1170	4470	4023	34.3	40.2	111
BXRC-30A4001-D-73-SE	3000	80	93	1050	3342	3008	28.5	29.9	112
BXRC-35A4001-B-73-SE	3500	80	93	900	3696	3326	34.3	30.9	120
BXRC-35A4001-C-73-SE	3500	80	93	1170	4805	4324	34.3	40.2	120
BXRC-35A4001-D-73-SE	3500	80	93	1050	3594	3234	28.5	29.9	120
BXRC-40A4001-B-73-SE	4000	80	93	900	3953	3558	34.3	30.9	128
BXRC-40A4001-C-73-SE	4000	80	93	1170	5140	4626	34.3	40.2	128
BXRC-40A4001-D-73-SE	4000	80	93	1050	3844	3460	28.5	29.9	129

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

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.

2. 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.

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.
- 8. 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 Flux ⁴⁵ 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-17E4000-B-74-SE	1750	80	900	2384	2146	34.1	30.7	78
BXRC-17E4000-C-74-SE	1750	80	1170	3100	2790	34.1	39.9	78
BXRC-17E4000-D-74-SE	1750	80	1050	2318	2087	28.3	29.7	78
BXRC-20B4001-C-73-SE	2000	65	1170	5281	4753	34.1	39.9	132
BXRC-20B4001-D-73-SE	2000	65	1050	3929	3536	28.3	29.7	132
BXRC-25E4000-B-74-SE	2500	80	900	3853	3468	34.1	30.7	126
BXRC-25E4000-C-74-SE	2500	80	1170	5011	4510	34.1	39.9	126
BXRC-25E4000-D-74-SE	2500	80	1050	3747	3372	28.3	29.7	126
BXRC-27E4000-B-7X-SE	2700	80	900	4125	3713	34.1	30.7	134
BXRC-27E4000-C-7X-SE	2700	80	1170	5364	4827	34.1	39.9	134
BXRC-27E4000-D-7X-SE	2700	80	1050	4011	3610	28.3	29.7	135
BXRC-27G4000-B-7X-SE	2700	90	900	3438	3094	34.1	30.7	112
BXRC-27G4000-C-7X-SE	2700	90	1170	4470	4023	34.1	39.9	112
BXRC-27G4000-D-7X-SE	2700	90	1050	3342	3009	28.3	29.7	113
BXRC-27H4000-B-7x-SE	2700	97	900	3017	2715	34.1	30.7	98
BXRC-27H4000-C-7x-SE	2700	97	1170	3922	3530	34.1	39.9	98
BXRC-27H4000-D-7x-SE	2700	97	1050	2933	2639	28.3	29.7	99
BXRC-30E4000-B-7X-SE	3000	80	900	4337	3868	34.1	30.7	141
BXRC-30E4000-C-7X-SE	3000	80	1170	5638	5029	34.1	39.9	141
BXRC-30E4000-D-7X-SE	3000	80	1050	4193	3760	28.3	29.7	141
BXRC-30G4000-B-7X-SE	3000	90	900	3567	3210	34.1	30.7	116
BXRC-30G4000-C-7X-SE	3000	90	1170	4637	4174	34.1	39.9	116
BXRC-30G4000-D-7X-SE	3000	90	1050	3468	3121	28.3	29.7	117
BXRC-30G400C-B-73-SE	3000	90	900	3358	3022	34.1	30.7	109
BXRC-30G400C-D-73-SE	3000	90	1050	3245	2921	28.3	29.7	109
BXRC-30H4000-B-7x-SE	3000	97	900	3223	2901	34.1	30.7	105
BXRC-30H4000-C-7x-SE	3000	97	1170	4191	3771	34.1	39.9	105
BXRC-30H4000-D-7x-SE	3000	97	1050	3133	2820	28.3	29.7	106
BXRC-30A4001-B-73-SE ^{7.8}	3000	93	900	3327	2994	34.1	30.7	108
BXRC-30A4001-C-73-SE ^{7.8}	3000	93	1170	4326	3893	34.1	39.9	108
BXRC-30A4001-D-73-SE ^{7.8}	3000	93	1050	3234	2911	28.3	29.7	109
BXRC-35E4000-B-7X-SE	3500	80	900	4426	3983	34.1	30.7	144
BXRC-35E4000-C-7X-SE	3500	80	1170	5755	5180	34.1	39.9	144
BXRC-35E4000-D-7X-SE	3500	80	1050	4303	3873	28.3	29.7	145
BXRC-35G4000-B-7X-SE	3500	90	900	3696	3326	34.1	30.7	120

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_ = 85°C.

 CRI values are typical for Decor Series Ultra 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 typical Rg values for 97 CRI products is 98.

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.

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.

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current³ (mA)	Typical DC Flux⁴⁵ T _c = 85°C (lm)	Minimum DC Flux ^e T _c = 85°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-35G4000-C-7X-SE	3500	90	1170	4805	4324	34.1	39.9	120
BXRC-35G4000-D-7X-SE	3500	90	1050	3593	3233	28.3	29.7	121
BXRC-35A4001-B-73-SE7.8	3500	93	900	3576	3218	34.1	30.7	117
BXRC-35A4001-C-73-SE7.8	3500	93	1170	4650	4185	34.1	39.9	117
BXRC-35A4001-D-73-SE ^{7.8}	3500	93	1050	3478	3129	28.3	29.7	117
BXRC-40E4000-B-7X-SE	4000	80	900	4469	4022	34.1	30.7	146
BXRC-40E4000-C-7X-SE	4000	80	1170	5811	5229	34.1	39.9	146
BXRC-40E4000-D-7X-SE	4000	80	1050	4345	3910	28.3	29.7	146
BXRC-40G4000-B-7X-SE	4000	90	900	3825	3442	34.1	30.7	125
BXRC-40G4000-C-7X-SE	4000	90	1170	4973	4475	34.1	39.9	125
BXRC-40G4000-D-7X-SE	4000	90	1050	3719	3346	28.3	29.7	125
BXRC-40A4001-B-73-SE7.8	4000	93	900	3826	3443	34.1	30.7	125
BXRC-40A4001-C-73-SE ^{7.8}	4000	93	1170	4974	4477	34.1	39.9	125
BXRC-40A4001-D-73-SE7.8	4000	93	1050	3720	3348	28.3	29.7	125
BXRC-50C4001-B-74-SE	5000	70	900	4899	4409	34.1	30.7	160
BXRC-50C4001-C-74-SE	5000	70	1170	6370	5732	34.1	39.9	160
BXRC-50C4001-D-74-SE	5000	70	1050	4763	4287	28.3	29.7	160
BXRC-50E4001-B-74-SE	5000	80	900	4605	4145	34.1	30.7	150
BXRC-50E4001-C-74-SE	5000	80	1170	5987	5388	34.1	39.9	150
BXRC-50E4001-D-74-SE	5000	80	1050	4477	4029	28.3	29.7	151
BXRC-50G4001-B-74-SE	5000	90	900	3919	3527	34.1	30.7	128
BXRC-50G4001-C-74-SE	5000	90	1170	5096	4586	34.1	39.9	128
BXRC-50G4001-D-74-SE	5000	90	1050	3810	3430	28.3	29.7	128
BXRC-56G4001-B-74-SE	5600	90	900	4103	3693	34.1	30.7	134
BXRC-56G4001-C-74-SE	5600	90	1170	5335	4801	34.1	39.9	134
BXRC-56G400x-D-74-SE	5600	90	1050	3989	3591	28.3	29.7	134
BXRC-57C4001-B-74-SE	5700	80	900	4727	4254	34.1	30.7	154
BXRC-57C4001-C-74-SE	5700	80	1170	6146	5531	34.1	39.9	154
BXRC-57C4001-D-74-SE	5700	80	1050	4596	4136	28.3	29.7	155
BXRC-57E4001-B-74-SE	5700	80	900	4684	4216	34.1	30.7	153
BXRC-57E4001-C-74-SE	5700	80	1170	6090	5481	34.1	39.9	153
BXRC-57E4001-D-74-SE	5700	80	1050	4554	4099	28.3	29.7	153
BXRC-65C4001-B-74-SE	6500	70	900	4813	4331	34.1	30.7	157
BXRC-65C4001-C-74-SE	6500	70	1170	6258	5632	34.1	39.9	157

Table 3: Selection Guide, Stabilized DC Performance ($T_c = 85^{\circ}$ C) ^{4.5} (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.

 CRI values are typical for Decor Series Ultra 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 values for 90 CRI products is 50, the typical R9 values for 97 CRI products is 98.

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.

8. 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.

Part Number	Nominal CCT ¹ (K)	CRI²	Nominal Drive Current³ (mA)	Typical DC Flux ^{4.5} T _c = 85°C (lm)	Minimum DC Flux ⁶ T _c = 85°C (lm)	Typical V _f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-65C4001-D-74-SE	6500	70	1050	4679	4211	28.3	28.3	158
BXRC-65E4001-B-74-SE	6500	80	900	4770	4293	34.1	34.1	155
BXRC-65E4001-C-74-SE	6500	80	1170	6202	5582	34.1	34.1	155
BXRC-65E4001-D-74-SE	6500	80	1050	4638	4174	28.3	28.3	156

Table 3: Selection Guide, Stabilized DC Performance (T_ = 85°C) ^{4.5} (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_ = 85°C.

 CRI values are typical for Decor Series Ultra 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 typical Rg values for 97 CRI products is 98.

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.

Minimum flux values at elevated temperatures are provided for reference only and are not guaranteed by 100% production testing. Based on Bridgelux test setup, values may vary depending on the thermal design of the luminaire and/or the exposed environment to which the product is subjected.
 Nominal CCT is defined by the Lighting Research Center's Class A definition. The center of the Class A color bin is on the corresponding isothermal line.

GAI value is 80. To help ensure optimal fixture level performance, GAI is measured at the fixture level, on axis, at a case temperature of 70°C. GAI may
vary depending on fixture design and performance.

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, 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)	
		450	33.3	15.0	1422	1278	95	
		600	33.9	20.4	1866	1673	92	
BXRC-17E4000-B-74-SE	80	900	35.0	31.5	2649	2384	84	
		1350	36.7	49.5	3940	3472	80	
		1800	38.0	68.4	5070	4407	74	
		585	33.4	19.5	1800	1703	92	
		780	34.0	26.5	2358	2186	89	
BXRC-17E4000-C-74-SE	80	1170	35.0	41.0	3445	3100	84	
		1755	36.8	64.5	4955	4362	77	
		2340	38.1	89.3	6356	5479	71	
		525	27.7	14.6	1372	1274	94	
		700	28.2	19.8	1784	1635	90	
BXRC-17E4000-D-74-SE	80	1050	29.0	30.5	2576	2318	85	
		1575	30.4	47.9	3680	3254	77	
		2100	31.5	66.2	4684	4073	71	
		585	33.4	19.5	3066	2902	157	
		780	34.0	26.5	4018	3723	152	
BXRC-20B4001-C-73-SE	65	1170	35.0	41.0	5868	5281	143	
		1755	36.8	64.5	8442	7430	131	
		2340	38.1	89.3	10828	9333	121	
		525	27.7	14.6	2326	2159	160	
		700	28.2	19.8	3024	2772	153	
BXRC-20B4001-D-73-SE	65	65	1050	29.0	30.5	4366	3929	143
		1575	30.4	47.9	6236	5514	130	
		2100	31.5	66.2	7939	6904	120	
		450	33.3	15.0	2299	2066	153	
		600	33.9	20.4	3016	2705	148	
BXRC-25E4000-B-74-SE	80	900	35.0	31.5	4282	3853	136	
		1350	36.7	49.5	6368	5611	129	
		1800	38.0	68.4	8195	7123	120	
		585	33.4	19.5	2909	2753	149	
		780	34.0	26.5	3812	3533	144	
BXRC-25E4000-C-74-SE	80	1170	35.0	41.0	5568	5011	136	
		1755	36.8	64.5	8010	7050	124	
		2340	38.1	89.3	10274	8855	115	
		525	27.7	14.6	2218	2058	152	
		700	28.2	19.8	2884	2643	146	
BXRC-25E4000-D-74-SE	80	1050	29.0	30.5	4163	3747	137	
		1575	30.4	47.9	5946	5258	124	
		2100	31.5	66.2	7570	6583	114	

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 Tू = 25°C (lm)	Typical DC Flux ³ T _c = 85°C (lm)	Typical Efficacy T _c = 25°C (lm/W)
		450	33.3	15.0	2461	2211	164
		600	33.9	20.4	3228	2896	159
BXRC-27E4000-B-7x-SE	80	900	35.0	31.5	4584	4125	146
		1350	36.7	49.5	6817	6007	138
		1800	38.0	68.4	8773	7626	128
		585	33.4	19.5	3114	2947	160
		780	34.0	26.5	4081	3781	154
BXRC-27E4000-C-7x-SE	80	1170	35.0	41.0	5960	5364	146
		1755	36.8	64.5	8574	7546	133
		2340	38.1	89.3	10998	9479	123
		525	27.7	14.6	2374	2204	163
		700	28.2	19.8	3087	2829	156
BXRC-27E4000-D-7x-SE	80	1050	29.0	30.5	4457	4011	146
		1575	30.4	47.9	6366	5629	133
		2100	31.5	66.2	8104	7047	122
		450	33.3	15.0	2051	1843	137
		600	33.9	20.4	2690	2413	132
BXRC-27G4000-B-7x-SE	90	900	35.0	31.5	3820	3438	121
		1350	36.7	49.5	5681	5006	115
		1800	38.0	68.4	7311	6355	107
		585	33.4	19.5	2595	2456	133
		780	34.0	26.5	3400	3151	128
BXRC-27G4000-C-7x-SE	90	1170	35.0	41.0	4967	4470	121
		1755	36.8	64.5	7145	6289	111
		2340	38.1	89.3	9165	7899	103
		525	27.7	14.6	1978	1836	136
		700	28.2	19.8	2573	2358	130
BXRC-27G4000-D-7x-SE	90	1050	29.0	30.5	3714	3342	122
		1575	30.4	47.9	5305	4691	111
		2100	31.5	66.2	6753	5872	102
		450	33.3	15.0	1800	1617	120
		600	33.9	20.4	2361	2118	116
BXRC-27H4000-B-7x-SE	80	900	35.0	31.5	3352	3017	106
		1350	36.7	49.5	4986	4393	101
		1800	38.0	68.4	6416	5577	94
		585	33.4	19.5	2277	2155	117
		780	34.0	26.5	2984	2765	113
3XRC-27H4000-C-7x-SE	80	1170	35.0	41.0	4358	3922	106
		1755	36.8	64.5	6270	5518	97
		2340	38.1	89.3	8042	6932	90
		525	27.7	14.6	1736	1611	119
		700	28.2	19.8	2257	2069	114
BXRC-27H4000-D-7x-SE	80	1050	29.0	30.5	3259	2933	107
		1575	30.4	47.9	4654	4116	97
		2100	31.5	66.2	5925	5152	89

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.

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)																
		450	33.3	15.0	2587	2325	172																
		600	33.9	20.4	3394	3044	167																
BXRC-30E4000-B-7x-SE	80	900	35.0	31.5	4819	4337	153																
		1350	36.7	49.5	7167	6315	145																
		1800	38.0	68.4	9223	8017	135																
		585	33.4	19.5	3273	3098	168																
		780	34.0	26.5	4289	3975	162																
BXRC-30E4000-C-7x-SE	80	1170	35.0	41.0	6265	5638	153																
		1755	36.8	64.5	9012	7932	140																
		2340	38.1	89.3	11560	9964	130																
		525	27.7	14.6	2482	2303	170																
		700	28.2	19.8	3227	2957	163																
BXRC-30E4000-D-7x-SE	80	1050	29.0	30.5	4658	4193	153																
,		1575	30.4	47.9	6654	5884	139																
		2100	31.5	66.2	8470	7366	128																
		450	33.3	15.0	2128	1912	142																
		600	33.9	20.4	2791	2503	137																
BXRC-30G4000-B-7x-SE	90	900	35.0	31.5	3963	3567	126																
		1350	36.7	49.5	5894	5193	119																
		1800	38.0	68.4	7585	6593	111																
		585	33.4	19.5	2692	2548	138																
			780	34.0	26.5	3528	3269	133															
BXRC-30G4000-C-7x-SE	90	1170	35.0	41.0	5153	4637	126																
	gu	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	1755	36.8	64.5	7413	6524	115
		2340	38.1	89.3	9508	8195	107																
		525	27.7	14.6	2053	1905	141																
		700	28.2	19.8	2669	2446	135																
BXRC-30G4000-D-7x-SE	90	1050	29.0	30.5	3853	3468	127																
	90	1575	30.4	47.9	5504	4867	115																
		2100	31.5	66.2	7006	6093	106																
		450	33.3	15.0	2003	1800	134																
		600	33.9	20.4	2628	2357	129																
BXRC-30G400C-B-73-SE	90	900	35.0	31.5	3731	3358	118																
B/((0 5004000 B / 5 5E	90	1350	36.7	49.5	5549	4889	112																
		1800	38.0	68.4	7141	6207	104																
		525	27.7	14.6	1921	1783	104																
		700	28.2	14.0	2498	2289	132																
	00				3606	~	120																
BXRC-30G400C-D-73-SE	90	1050 1575	29.0 30.4	30.5		3245	107																
		2100	30.4	47.9 66.2	5151 6557	4555 5702																	
					1		99 128																
		450	33.3	15.0	1923	1728																	
	80	600	33.9	20.4	2522	2262	124																
BXRC-30H4000-B-7x-SE	80	900	35.0	31.5	3581	3223	114																
		1350	36.7	49.5	5326	4692	108 100																
		1800	30.7	68.4	6853	5957																	

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.

Typical Typical Typical Typical Typical V, Drive Efficacy Flux² DC Flux³ Power T_c = 25°C CRI Part Number Current¹ T_c = 85°C T_c = 25°C T_c = 25°C T_ = 25°C (V) (mA) (W) (ľm/W) . (lm) (lm) 585 33.4 19.5 2433 2303 125 780 3188 34.0 26.5 2955 120 BXRC-30H4000-C-7x-SE 80 1170 35.0 41.0 4657 4191 114 1755 36.8 64.5 6699 5896 104 2340 38.1 89.3 8593 7406 96 525 14.6 1855 1721 127 27.7 19.8 28.2 700 2412 2210 122 80 BXRC-30H4000-D-7x-SE 30.5 3482 1050 29.0 114 3133 1575 30.4 47.9 4973 4397 104 66.2 2100 31.5 6331 5505 96 450 33.3 15.0 1985 1783 132 600 2603 128 33.9 20.4 2335 BXRC-30A4001-B-73-SE 93 900 35.0 31.5 3696 3327 117 1350 36.7 49.5 5498 4844 111 1800 38.0 68.4 7074 6150 103 585 2511 129 33.4 19.5 2377 3050 780 26.5 34.0 3291 124 BXRC-30A4001-C-73-SE 93 1170 41.0 4807 4326 117 35.0 6086 1755 36.8 64.5 6915 107 2340 38.1 89.3 8870 7645 99 525 27.7 14.6 1914 1777 131 700 28.2 19.8 2489 2281 126 BXRC-30A4001-D-73-SE 93 1050 29.0 30.5 3594 3234 118 1575 30.4 47.9 5133 4539 107 2100 66.2 6534 5682 31.5 99 450 33.3 15.0 2640 2373 176 600 33.9 20.4 3464 3107 170 900 BXRC-35E4000-B-7x-SE 80 35.0 31.5 4918 4426 156 1350 36.7 49.5 7314 6445 148 1800 38.0 68.4 9412 8182 138 585 3162 171 33.4 19.5 3341 780 34.0 26.5 4378 4057 165 BXRC-35E4000-C-7x-SE 80 1170 35.0 41.0 6394 5755 156 64.5 36.8 8097 143 1755 9199 11800 38.1 89.3 10170 2340 132 27.7 14.6 2547 2364 175 525 28.2 168 700 19.8 3312 3035 BXRC-35E4000-D-7x-SE 80 1050 29.0 30.5 4782 4303 157 1575 30.4 6830 6039 47.9 143 2100 66.2 8694 7561 31.5 131 450 15.0 2205 1981 147 33.3 2892 600 20.4 2594 142 33.9 BXRC-35G4000-B-7x-SE 900 35.0 4106 3696 90 31.5 130 1350 49.5 6107 5381 36.7 123 38.0 7859 1800 68.4 6832 115

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.

Typical Typical Typical Typical Drive Typical V_r Flux² DC Flux³ Efficacy Power Part Number CRI **Current**¹ T_c = 85°C T_c = 25°C (W) T_c = 25°C T_ = 25°C (V) (mA) (ľm/W) (lm) (lm) 33.4 19.5 34.0 26.5 BXRC-35G4000-C-7x-SE 35.0 41.0 36.8 64.5 38.1 89.3 14.6 27.7 19.8 28.2 BXRC-35G4000-D-7x-SE 29.0 30.5 30.4 47.9 31.5 33.3 15.0 20.4 33.9 BXRC-35A4001-B-73-SE 35.0 31.5 36.7 49.5 38.0 68.4 33.4 19.5 26.5 34.0 BXRC-35A4001-C-73-SE 41.0 35.0 36.8 64.5 38.1 89.3 27.7 14.6 28.2 19.8 BXRC-35A4001-D-73-SE 29.0 30.5 30.4 47.9 66.2 31.5 33.3 15.0 33.9 20.4 BXRC-40E4000-B-7x-SE 35.0 31.5 36.7 49.5 38.0 68.4 33.4 19.5 34.0 26.5 BXRC-40E4000-C-7x-SE 35.0 41.0 64.5 36.8 38.1 89.3 27.7 14.6 28.2 19.8 BXRC-40E4000-D-7x-SE 29.0 30.5 30.4 47.9 66.2 31.5 15.0 33.3 20.4 33.9 BXRC-40G4000-B-7x-SE 35.0 31.5 49.5 36.7 38.0 68.4

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 ± 7% tolerance on flux measurements.

Typical Typical Typical Typical Typical V, Drive Efficacy Flux² DC Flux³ Power T_c = 25°C CRI Part Number Current¹ T_c = 85°C T_c = 25°C T_c = 25°C T_ = 25°C (V) (mA) (W) (ľm/W) (lm) (lm) 148 585 33.4 19.5 2887 2732 780 26.5 3783 34.0 3506 143 BXRC-40G4000-C-7x-SE 90 1170 35.0 41.0 4973 135 5525 1755 36.8 64.5 7949 6996 123 8788 2340 38.1 89.3 10196 114 525 14.6 2201 2043 151 27.7 19.8 2862 28.2 700 2623 145 BXRC-40G4000-D-7x-SE 30.5 90 1050 29.0 4132 136 3719 1575 30.4 47.9 5902 5219 123 66.2 2100 31.5 7513 6533 113 450 33.3 15.0 2282 2051 152 600 2685 33.9 20.4 2994 147 BXRC-40A4001-B-73-SE 93 900 35.0 31.5 4251 3826 135 1350 36.7 49.5 6323 5571 128 1800 38.0 68.4 8136 7072 119 585 148 33.4 19.5 2733 780 26.5 3784 34.0 3507 143 BXRC-40A4001-C-73-SE 93 1170 41.0 4974 35.0 5527 135 1755 36.8 64.5 7951 6999 123 2340 38.1 89.3 10199 8791 114 525 27.7 14.6 2202 2044 151 700 2863 28.2 19.8 2624 145 BXRC-40A4001-D-73-SE 93 1050 29.0 30.5 4134 3720 136 1575 30.4 5904 5221 123 47.9 2100 31.5 66.2 7516 6536 114 450 33.3 15.0 2922 2626 195 600 33.9 20.4 3834 3438 188 BXRC-50C4001-B-74-SE 70 900 4899 35.0 31.5 5443 173 1350 36.7 49.5 8096 7133 164 1800 38.0 68.4 10418 9056 152 585 189 33.4 19.5 3698 3499 780 34.0 26.5 4846 4490 183 BXRC-50C4001-C-74-SE 70 1170 41.0 7077 6370 173 35.0 64.5 1755 36.8 10181 8961 158 38.1 89.3 13060 2340 11256 146 525 27.7 14.6 2819 2617 194 700 28.2 19.8 3666 3360 186 BXRC-50C4001-D-74-SE 70 1050 30.5 4763 29.0 5292 174 6684 30.4 158 1575 47.9 7559 8368 66.2 2100 9623 31.5 145 450 33.3 15.0 2747 2468 183 600 33.9 20.4 3604 3232 177 BXRC-50E4001-B-74-SE 80 900 35.0 31.5 5117 4605 162 1350 36.7 7610 6705 49.5 154 1800 38.0 68.4 9793 8512 143

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.

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)
		585	33.4	19.5	3476	3290	178
		780	34.0	26.5	4555	4221	172
BXRC-50E4001-C-74-SE	80	1170	35.0	41.0	6653	5987	162
		1755	36.8	64.5	Flux² DC Flux³ T_=25°C (lm) T_=85°C (lm) 3476 3290 4555 4221 6653 5987 9570 8424 12276 10581 2650 2460 3446 3158 4975 4477 7106 6283 9046 7866 2338 2101 3067 2751 4354 3919 6476 5706 8334 7245 2958 2800 3877 3592 5662 5096 8145 7169 10448 9005 2255 2093 2033 2688 4234 3810 6047 5348 7698 6694 2448 2199 3211 2880 4559 4103 6781 5974 7585 3097	8424	148
		2340	38.1	89.3	12276	10581	138
		525	27.7	14.6	2650	2460	182
		700	28.2	19.8	3446	3158	174
BXRC-50E4001-D-74-SE	80	1050	29.0	30.5	4975	DC Flux³ 3290 421 5987 8424 10581 2460 3158 4477 6283 7866 2101 2751 3919 5706 7245 2800 3592 5096 7169 9005 2093 2688 3810 5348 6694 2199 2880 4103 5974 7585 2931 3761 5335 7506 9428 2192 2814 3989 5599 7009 2534 3318	163
		1575	30.4	47.9	7106	6283	148
		2100	31.5	66.2	9046	7866	137
		450	33.3	15.0	2338	2101	156
		600	33.9	20.4	3067	2751	151
BXRC-50G4001-B-74-SE	90	900	35.0	31.5	-	3919	138
		1350	36.7	49.5	6476	5706	131
		1800	38.0	68.4	8334	7245	122
		585	33.4	19.5	2958	2800	152
		780	34.0	26.5	3877	3592	146
BXRC-50G4001-C-74-SE	90	1170	35.0	41.0	5662	x² DC Flux³ 5°C T = 85°C (lm) 76 3290 55 4221 53 5987 70 8424 76 10581 50 2460 46 3158 75 4477 96 6283 46 7866 88 2101 57 2751 54 3919 76 5706 34 7245 58 2800 77 3592 52 5096 15 7169 48 9005 55 2093 33 2688 34 3810 47 5348 98 6694 18 2199 11 2880 59 4103 31 5974 25 7585 37 2931	138
		1755	36.8	64.5	8145		126
		2340	38.1	89.3	10448	9005	117
		525	27.7	14.6	2255	2093	155
		700	28.2	19.8	2933	2688	148
BXRC-50G4001-D-74-SE	90	1050	29.0	30.5	4234	338 2101 367 2751 354 3919 476 5706 334 7245 358 2800 377 3592 362 5096 145 7169 448 9005 255 2093 333 2688 234 3810 247 5348 598 6694 448 2199 211 2880 559 4103 781 5974 725 7585 297 2931 259 3761 328 5335	139
		1575	30.4	35.0 41.0 6653 5987 36.8 64.5 9570 8424 38.1 89.3 12276 10581 27.7 14.6 2650 2460 28.2 19.8 3446 3158 29.0 30.5 4975 4477 30.4 47.9 7106 6283 31.5 66.2 9046 7866 33.3 15.0 2338 2101 33.9 20.4 3067 2751 35.0 31.5 4354 3919 36.7 49.5 6476 5706 38.0 68.4 8334 7245 33.4 19.5 2958 2800 34.0 26.5 3877 3592 35.0 41.0 5662 5096 36.8 64.5 8145 7169 38.1 89.3 10448 9005 27.7 14.6 2255 2093	5348	126	
		2100	31.5	66.2	7698	6694	116
		450	33.3	15.0	2448	2199	163
		600	33.9	20.4	3211	2880	158
BXRC-56G4000-B-74-SE	90	900	35.0	31.5	4559	4103	145
		1350		49.5	6781	5974	137
		1800	38.0	68.4	8725	7585	127
		585	33.4	19.5	3097	2931	159
		780	34.0	26.5	4059	3761	153
BXRC-56G4000-C-74-SE	90	1170	35.0	41.0	5928	5335	145
		1755	36.8	64.5	8528	7506	132
		2340	38.1	89.3	10939	9428	123
		525	27.7		2361	2192	162
		700	28.2	19.8	3070	2814	155
BXRC-56G4000-D-74-SE	90	1050	29.0	30.5	4433	3989	146
		1575	30.4	15.0 2338 2101 20.4 3067 2751 31.5 4354 3919 49.5 6476 5706 68.4 8334 7245 19.5 2958 2800 26.5 3877 3592 41.0 5662 5096 64.5 8145 7169 89.3 10448 9005 14.6 2255 2093 19.8 2933 2688 30.5 4234 3810 47.9 6047 5348 66.2 7698 6694 15.0 2448 2199 20.4 3211 2880 31.5 4559 4103 49.5 6781 5974 68.4 8725 7585 19.5 3097 2931 26.5 4059 3761 41.0 5928 5335 64.5 8528 7506		132	
		2100	31.5	66.2	8060	7009	122
		450	33.3	15.0	2820	2534	188
		600	33.9	20.4	3699	3318	182
BXRC-57C4001-B-74-SE	70	900	35.0	31.5	5252	DC Flux³ T_ = 85°C (lm) 3290 4221 5987 8424 10581 2460 3158 4477 6283 7866 2101 2751 3919 5706 7245 2800 3592 5096 7169 9005 2093 2688 3810 5348 6694 2199 2880 4103 5974 7585 2931 3761 5335 7506 9428 2192 2814 3989 5599 7009 2534 3318 4727 6883	167
		1350	36.7	49.5	7811		158
		1800	38.0	68.4	10052	8738	147

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.

Typical Typical Typical Typical Typical V, Drive Efficacy Flux² DC Flux³ Power T_c = 25°C CRI Part Number Current¹ T_c = 85°C T_c = 25°C T_c = 25°C T_ = 25°C (V) (mA) (W) (ľm/W) . (lm) (lm) 183 585 33.4 19.5 3568 3377 780 26.5 4676 176 34.0 4333 BXRC-57C4001-C-74-SE 70 6829 167 1170 35.0 41.0 6146 1755 36.8 64.5 9824 8647 152 38.1 12602 10861 2340 89.3 141 525 14.6 2720 2525 187 27.7 19.8 700 28.2 3537 3242 179 BXRC-57C4001-D-74-SE 70 168 1050 29.0 30.5 5107 4596 1575 30.4 47.9 7294 6450 152 66.2 2100 31.5 9285 8074 140 450 33.3 15.0 2794 2511 186 600 3665 3288 180 33.9 20.4 BXRC-57E4001-B-74-SE 80 900 35.0 31.5 5204 4684 165 7740 1350 36.7 49.5 6820 156 1800 38.0 68.4 9961 8659 146 585 3536 181 33.4 19.5 3346 780 26.5 4633 34.0 4294 175 80 6767 BXRC-57E4001-C-74-SE 1170 41.0 6090 165 35.0 8568 1755 36.8 64.5 9735 151 2340 38.1 89.3 12487 10762 140 2696 525 27.7 14.6 2502 185 700 19.8 28.2 3505 3212 177 BXRC-57E4001-D-74-SE 80 166 1050 29.0 30.5 5060 4554 1575 30.4 47.9 7228 6391 151 2100 31.5 66.2 9201 8001 139 450 33.3 15.0 2871 2580 191 600 33.9 20.4 3766 3378 185 BXRC-65C4001-B-74-SE 70 900 5348 4813 170 35.0 31.5 1350 36.7 49.5 7954 7008 161 1800 38.0 68.4 10235 8897 150 585 186 33.4 19.5 3633 3438 780 34.0 26.5 4761 4412 180 BXRC-65C4001-C-74-SE 70 1170 41.0 6953 6258 170 35.0 1755 36.8 64.5 10003 8804 155 38.1 89.3 12831 2340 11059 144 525 27.7 14.6 2770 2571 190 3301 700 28.2 19.8 3602 182 BXRC-65C4001-D-74-SE 70 1050 30.5 29.0 5199 4679 171 30.4 6567 1575 47.9 7427 155 66.2 8221 2100 9454 31.5 143 450 33.3 15.0 2846 2557 190 600 33.9 20.4 3733 3348 183 BXRC-65E4001-B-74-SE 80 900 35.0 31.5 5300 4770 168 1350 36.7 7883 6945 159 49.5 1800 38.0 68.4 10143 8817 148

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 ± 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 T = 25°C (lm/W)
		585	33.4	19.5	3600	3407	184
		780	34.0	26.5	4718	4372	178
BXRC-65E4001-C-74-SE	80	1170	35.0	41.0	6891	6202	168
		1755	36.8	64.5	9913	8725	154
		2340	38.1	89.3	12716	10960	142
		525	27.7	14.6	2745	2548	189
		700	28.2	19.8	3569	3271	181
BXRC-65E4001-D-74-SE	80	1050	29.0	30.5	5153	4638	169
		1575	30.4	47.9	7360	6508	154
		2100	31.5	66.2	9370	8148	142

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 ± 7% tolerance on flux measurements.

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 Selection Voltages ⁷ (V)	
Part Number	Current (mA)	Minimum	Typical	Maximum	Voltage⁴ ∆V _f ∕∆T _c (mV∕°C)	Junction to Case ^{5,6} R _{j-c} (°C/W)	V _r Min. Hot T _c = 105°C (V)	V _r Max. Cold T _c = -40°C (V)
BXRC-xxx400x-B-7x-SE	900	32.4	35.0	37.6	-14.9	0.15	31.2	38.6
	1800	35.2	38.0	40.9	-14.9	0.19	34.0	41.8
BXRC-xxx400x-C-7x-SE	1170	32.4	35.0	37.6	-14.9	0.11	31.2	38.6
	2340	35.3	38.1	41.0	-14.9	0.13	34.1	42.0
	1050	26.8	29.0	31.2	-12.2	0.16	25.8	32.0
BXRC-xxx400x-D-7x-SE	2100	29.2	31.5	33.9	-12.2	0.19	28.2	34.7

Notes for Table 5:

1. Parts are tested in pulsed conditions, T_c = 25°C. Pulse width is 10ms.

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

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

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

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

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

7. V_r 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

Part Number	Drive Current ⁵ (mA)	CCT ^{1.5}						
		2700K/3000K	4000K²	5000K3	6500K⁴			
BXRC-xxx400x-B-7x-SE	900	RG1	RG1	RG1	RG1			
	1350	RG1	RG1	RG1	RG2			
	1800	RG1	RG1	RG2	RG2			
	1170	RG1	RG1	RG1	RG1			
BXRC-xxx400x-C-7x-SE	1755	RG1	RG1	RG2	RG2			
	2340	RG1	RG1	RG2	RG2			
BXRC-xxx400x-D-7x-SE	1050	RG1	RG1	RG1	RG1			
	1575	RG1	RG1	RG1	RG2			
	2100	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 k.

3. For products classified as RG2 at 5000K E_{thr} = 1315.8 kx.

4. For products classified as RG2 at 6500K, E_{thr} = 1124.5 kx.

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)	125°C			
Storage Temperature	-40°C to +105°C			
Operating Case Temperature ¹ (T _c)	105°C			
	BXRC-xxx400x-B-7x-SE	BXRC-xxx400x-C-7x-SE	BXRC-xxx400x-D-7x-SE	
Maximum Drive Current ³	1800mA	2340mA	2100mA	
Maximum Peak Pulsed Drive Current⁴	2570mA	3340mA	3000mA	
Maximum Reverse Voltage ⁵	-60V	-60V	-50V	

Notes for Table 7:

1. For IEC 62717 requirement, please consult your Bridgelux sales representative.

2. Refer to Bridgelux Application Note AN121: 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.

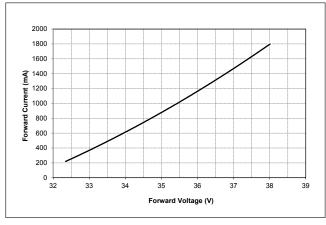
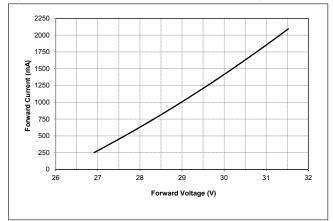
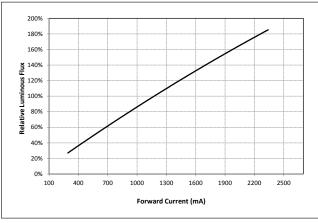


Figure 1: Vero SE 18B Drive Current vs. Voltage

Figure 3: Vero SE 18D Drive Current vs. Voltage







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.

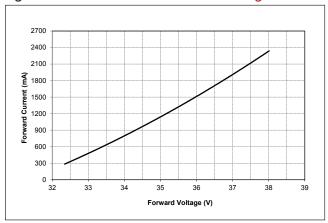


Figure 2: Vero SE 18C Drive Current vs. Voltage



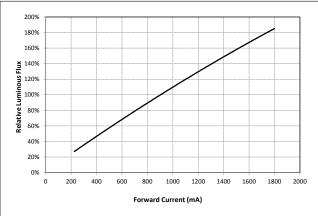
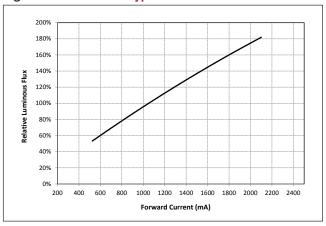


Figure 6: Vero SE 18D Typical Relative Flux vs. Current



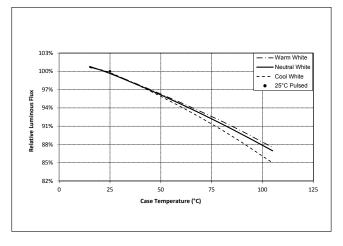


Figure 7: Typical DC Flux vs. Case Temperature

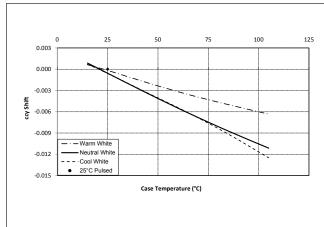
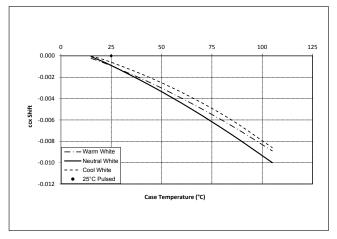


Figure 8: Typical DC ccy Shift vs. Case Temperature

Figure 9: Typical DC ccx Shift vs. Case Temperature



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.

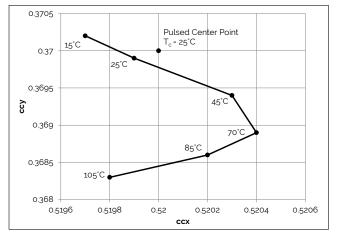


Figure 10: 1750K Color Shift vs. Case Temperature¹



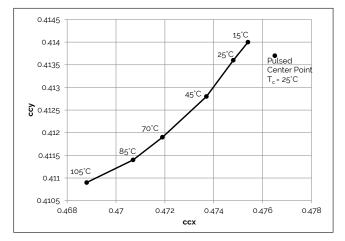
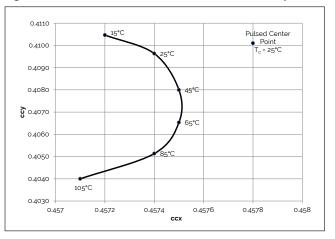


Figure 14: 2700K, 97 CRI Color Shift vs. Case Temperature¹



Notes for Figures 10-15:

- 1. Measurements made under DC test conditions at the nominal drive current.
- 2. Typical color shift is shown with a tolerance of ±0.002.
- 3. Characteristics shown for Decor Series Showcase products, BXRC-30G200C-x-73-SE
- 4. Color shift shown for product hot targeted at $\rm T_c\mathchar`e\mathchar`$

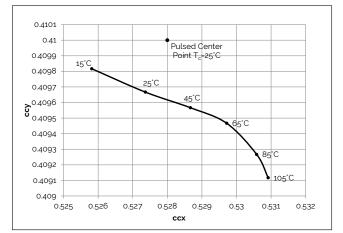


Figure 11: 2000K, 65 CRI Color Shift vs. Case Temperature¹



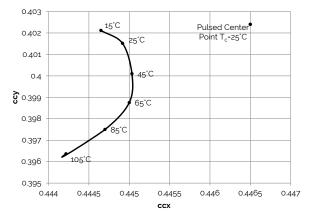
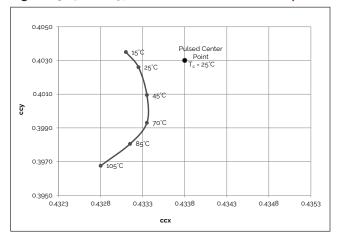


Figure 15: 3000K, 97 CRI Color Shift vs. Case Temperature¹



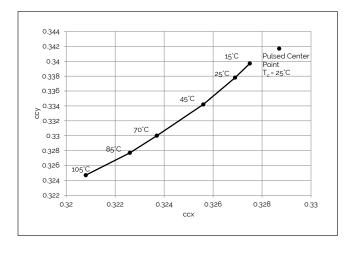


Figure 16: 5600K Color Shift vs. Case Temperature¹

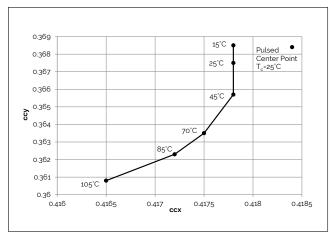
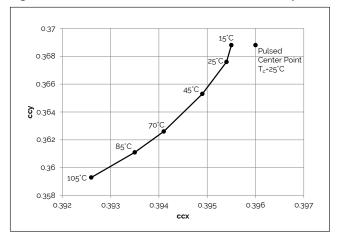


Figure 17: 3000K Class A Color Shift vs. Case Temperature¹

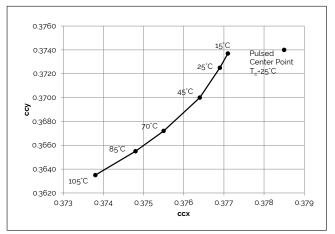
Figure 18: 3500K Class A Color Shift vs. Case Temperature¹



Notes for Figures 16-19:

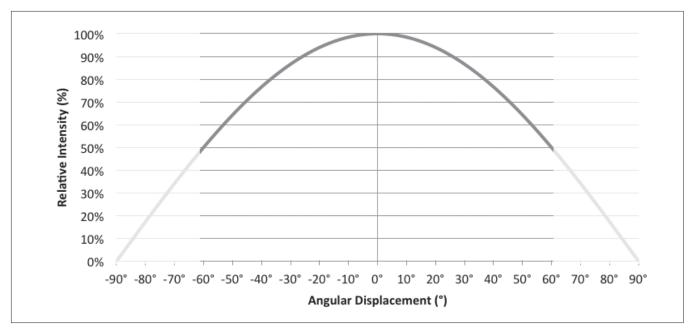
- 1. Measurements made under DC test conditions at the nominal drive current.
- 2. Typical color shift is shown with a tolerance of ± 0.002 .

Figure 19: 4000K Class A Color Shift vs. Case Temperature¹



Typical Radiation Pattern

Figure 20: Typical Spatial Radiation Pattern

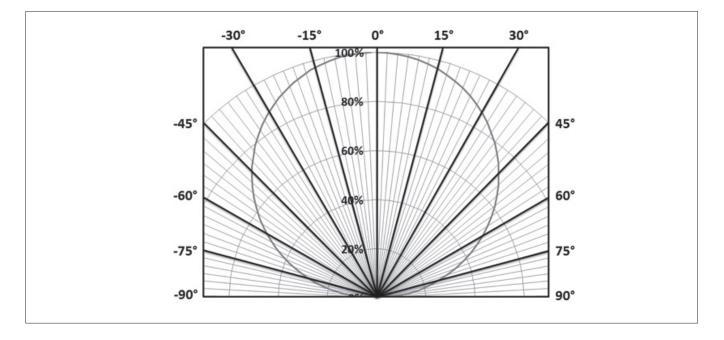


Notes for Figure 20:

1. Typical viewing angle is 120°.

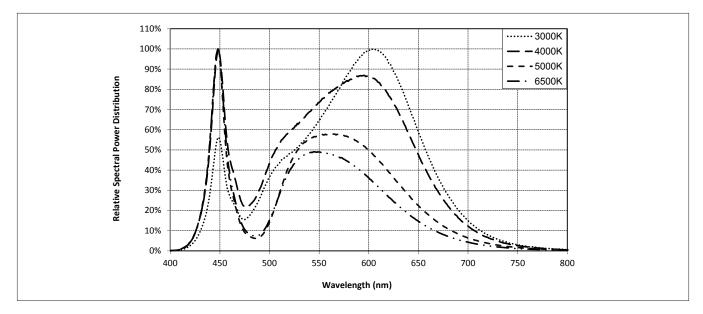
2. The viewing angle is defined as the off axis angle from the centerline where intensity is ½ of the peak value.

Figure 21: Typical Polar Radiation Pattern



Typical Color Spectrum

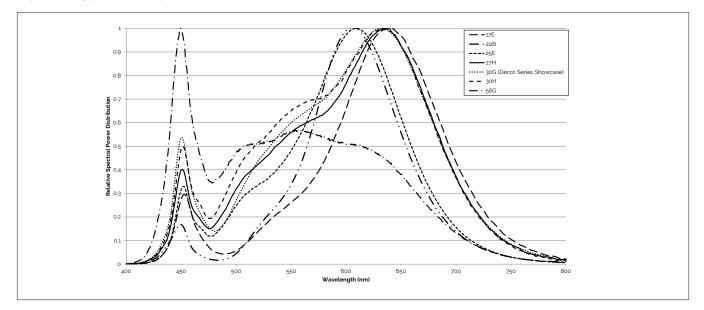
Figure 22: Typical Color Spectrum



Note for Figure 22:

- 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 23: Typical Color Spectrum for Vero SE 18 with Décor Series

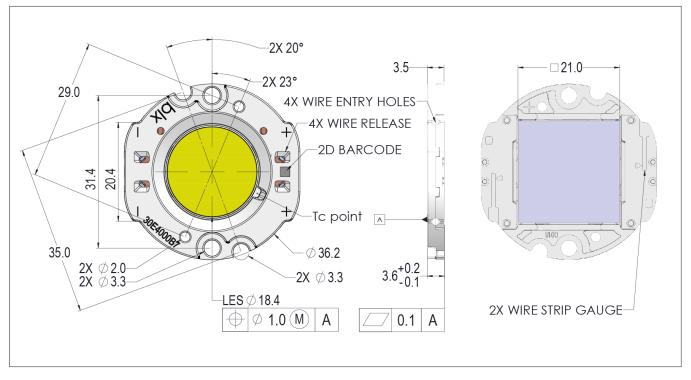


Note for Figure 23:

1. Color spectra measured at nominal current for $T_i = T_c = 25$ °C.

Mechanical Dimensions

Figure 24: Drawing for Vero SE 18 LED Array



Notes for Figure 24:

- 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

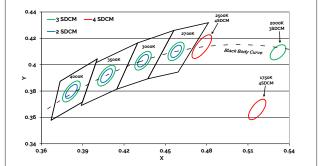


Figure 25: Warm and Neutral White Test Bins in xy Color Space

Note: Pulsed Test Conditions, T_ = 25°C

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

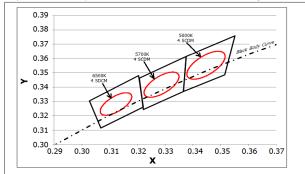
Bin Code	1750K	2000K	2500K	2700K	3000K1	3500K1	4000K1
ANSI Bin (for reference only)	-	-	-	(2580K - 2870K)	(2870K - 3220K)	(3220K - 3710K)	(3710K - 4260K)
73 (3 SDCM)	-	-	-	(2651K - 2794K)	(2968K - 3136K)	(3369K - 3586K)	(3851K - 4130K)
72 (2 SDCM)	-	-	-	(2674K - 2769K)	(2995K - 3107K)	(3404K - 3548K)	(3895K - 4081K)
Center Point (x,y)	(0.5167, 0.336)	(0.5280, 0.4100)	(0.4765, 0.4137)	(0.4578, 0.4101)	(0.4338, 0.403) (0.4465, 0.4024)²	(0.4073, 0.3917)	(0.3818, 0.3797)

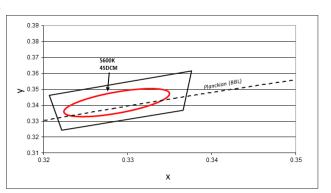
Note for Table 8:

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.

Figure 26: Graph of Cool White Test Bins in xy Color Space





Note: Pulsed Test Conditions, T_c = 25°C

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

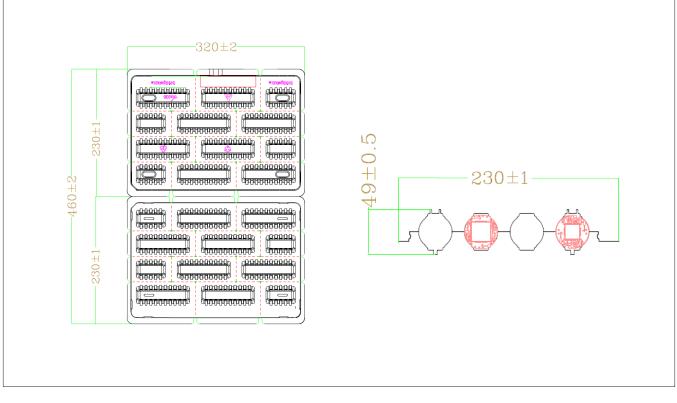
Bin Code	5000K	5600K1	5700K	6500K
ANSI Bin (for reference only)	(4745K - 5311K)	(5310K - 6020K)	(5312K - 6022K)	(6022K - 7042K)
74 (4 SDCM)	(4801K - 5282K)	(5475K - 5830K)	(5829K - 5481K)	(6270K - 6765K)
Center Point (x,y)	(0.3447, 0.3553)	(0.3293, 0.3423)	(0.3287, 0.3417)	(0.3123, 0.3282)

Note for Table 9:

1. Select configurations with a CCT of 5600K are available with center point targets at T_c = 85°C or T_c = 25°C.

Packaging and Labeling

Figure 27: Drawing for Vero SE 18 Packaging Tray



Notes for Figure 27:

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

Packaging and Labeling

Figure 28: Vero SE Series Packaging and Labeling



Notes for Figure 28:

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 29: 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_f Bin Code included to enable greater luminaire design flexibility. Refer to AN92 for bin 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: We Build Light That Transforms

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 WeChat ID: BridgeluxInChina



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