



Bridgelux® Vero® SE 29 Array

Product Data Sheet DS123



Introduction

Vero SE



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

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

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

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

Décor Series™ Ultra products provide a high CRI of 97 and 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 designed as a 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™ Entertainment products provide color points developed specifically for the healthcare and entertainment industries. The 5600K cool white color point combined with a CRI of 90 or 97 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.

Features

- Poke-in connectivity
- Efficacy of 159 lm/W typical
- Lumen output performance ranges from 5,368 to 37,173 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_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 arrays in series and parallel reduces customer driver cost
- Improved inventory management and quality control



Product Selection Guide

The following product configurations are available:

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

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical Pulsed Flux ^{4,5,6} $T_c = 25^\circ\text{C}$ (lm)	Minimum Pulsed Flux ^{6,7} $T_c = 25^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-17E10K0-B-74-SE	1750	80	1800	8237	7413	52.0	93.6	88
BXRC-17E10K0-C-74-SE	1750	80	1710	10443	9399	69.4	118.7	88
BXRC-17E10K0-D-74-SE	1750	80	2100	6948	6254	37.6	79.0	88
BXRC-20B10K1-C-73-SE	2000	65	1710	17682	15914	69.4	118.7	149
BXRC-20B10K1-D-73-SE	2000	65	2100	11765	10589	37.6	79.0	149
BXRC-25E10K0-B-74-SE	2500	80	1800	13385	12046	52.0	93.6	143
BXRC-25E10K0-C-74-SE	2500	80	1710	16970	15273	69.4	118.7	143
BXRC-25E10K0-D-74-SE	2500	80	2100	11291	10162	37.6	79.0	143
BXRC-27E10K0-B-7x-SE	2700	80	1800	14321	12889	52.0	93.6	153
BXRC-27E10K0-C-7x-SE	2700	80	1710	18157	16341	69.4	118.7	153
BXRC-27E10K0-D-7x-SE	2700	80	2100	12081	10873	37.6	79.0	153
BXRC-27G10K0-B-7x-SE	2700	90	1800	11887	10698	52.0	93.6	127
BXRC-27G10K0-C-7x-SE	2700	90	1710	15072	13564	69.4	118.7	127
BXRC-27G10K0-D-7x-SE	2700	90	2100	10028	9025	37.6	79.0	127
BXRC-27H10K0-D-74-SE	2700	97	2100	8769	7892	37.6	79.0	111
BXRC-30E10K0-B-7x-SE ¹⁰	3000	80	1800	14882	13394	52.0	93.6	159
BXRC-30E10K0-C-7x-SE ¹⁰	3000	80	1710	18869	16982	69.4	118.7	159
BXRC-30E10K0-D-7x-SE ¹⁰	3000	80	2100	12555	11299	37.6	79.0	159
BXRC-30G10K0-B-7x-SE	3000	90	1800	12449	11204	52.0	93.6	133
BXRC-30G10K0-C-7x-SE	3000	90	1710	15784	14205	69.4	118.7	133
BXRC-30G10K0-D-7x-SE	3000	90	2100	10502	9452	37.6	79.0	133
BXRC-30H10K0-D-7x-SE	3000	97	2100	9317	8386	37.6	79.0	118
BXRC-30A10K1-B-73-SE ^{8,9}	3000	93	1800	11232	10109	52.0	93.6	120
BXRC-30A10K1-C-73-SE ^{8,9}	3000	93	1710	14241	12817	69.4	118.7	120
BXRC-30A10K1-D-73-SE ^{8,9}	3000	93	2100	9475	8528	37.6	79.0	120
BXRC-35E10K0-B-7x-SE ¹⁰	3500	80	1800	15350	13815	52.0	93.6	164
BXRC-35E10K0-C-7x-SE ¹⁰	3500	80	1710	19463	17516	69.4	118.7	164
BXRC-35E10K0-D-7x-SE ¹⁰	3500	80	2100	12949	11654	37.6	79.0	164
BXRC-35G10K0-B-7x-SE	3500	90	1800	12823	11541	52.0	93.6	137
BXRC-35G10K0-C-7x-SE	3500	90	1710	16258	14633	69.4	118.7	137
BXRC-35G10K0-D-7x-SE	3500	90	2100	10818	9736	37.6	79.0	137
BXRC-35A10K1-B-73-SE ^{8,9}	3500	93	1800	12074	10867	52.0	93.6	129
BXRC-35A10K1-C-73-SE ^{8,9}	3500	93	1710	15309	13778	69.4	118.7	129
BXRC-35A10K1-D-73-SE ^{8,9}	3500	93	2100	10186	9167	37.6	79.0	129

Notes for Table 1:

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

Product Selection Guide

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

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical Pulsed Flux ^{4,5,6} $T_c = 25^\circ\text{C}$ (lm)	Minimum Pulsed Flux ^{6,7} $T_c = 25^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-40E10K0-B-7x-SE ¹⁰	4000	80	1800	15444	13900	52.0	93.6	165
BXRC-40E10K0-C-7x-SE ¹⁰	4000	80	1710	19581	17623	69.4	118.7	165
BXRC-40E10K0-D-7x-SE ¹⁰	4000	80	2100	13028	11726	37.6	79.0	165
BXRC-40G10K0-B-7x-SE	4000	90	1800	13291	11962	52.0	93.6	142
BXRC-40G10K0-C-7x-SE	4000	90	1710	16852	15167	69.4	118.7	142
BXRC-40G10K0-D-7x-SE	4000	90	2100	11212	10091	37.6	79.0	142
BXRC-40H10K0-D-7x-SE	4000	97	2100	9633	8670	37.6	79.0	122
BXRC-40A10K1-B-73-SE ^{8,9}	4000	93	1800	12917	11625	52.0	93.6	138
BXRC-40A10K1-C-73-SE ^{8,9}	4000	93	1710	16377	14739	69.4	118.7	138
BXRC-40A10K1-D-73-SE ^{8,9}	4000	93	2100	10896	9807	37.6	79.0	138
BXRC-50C10K1-B-7x-SE ¹⁰	5000	70	1800	17035	15332	52.0	93.6	182
BXRC-50C10K1-C-7x-SE ¹⁰	5000	70	1710	21599	19439	69.4	118.7	182
BXRC-50C10K1-D-7x-SE ¹⁰	5000	70	2100	14371	12934	37.6	79.0	182
BXRC-50E10K1-B-7x-SE ¹⁰	5000	80	1800	16006	14405	52.0	93.6	171
BXRC-50E10K1-C-7x-SE ¹⁰	5000	80	1710	20293	18264	69.4	118.7	171
BXRC-50E10K1-D-7x-SE ¹⁰	5000	80	2100	13502	12152	37.6	79.0	171
BXRC-50G10K1-B-7x-SE	5000	90	1800	13572	12215	52.0	93.6	145
BXRC-50G10K1-C-7x-SE	5000	90	1710	17208	15487	69.4	118.7	145
BXRC-50G10K1-D-7x-SE	5000	90	2100	11449	10304	37.6	79.0	145
BXRC-56G10K1-B-74-SE	5600	90	1800	14227	12804	52.0	93.6	152
BXRC-56G10K1-C-74-SE	5600	90	1710	18038	16235	69.4	118.7	152
BXRC-56G10Kx-D-74-SE	5600	90	2100	12002	10802	37.6	79.0	152
BXRC-56H10K0-D-74-SE	5600	97	2100	10423	9380	37.6	79.0	132
BXRC-57C10K1-B-7x-SE ¹⁰	5700	70	1800	16474	14826	52.0	93.6	176
BXRC-57C10K1-C-7x-SE ¹⁰	5700	70	1710	20887	18798	69.4	118.7	176
BXRC-57C10K1-D-7x-SE ¹⁰	5700	70	2100	13897	12507	37.6	79.0	176
BXRC-57E10K1-B-7x-SE ¹⁰	5700	80	1800	15818	14237	52.0	93.6	169
BXRC-57E10K1-C-7x-SE ¹⁰	5700	80	1710	20056	18050	69.4	118.7	169
BXRC-57E10K1-D-7x-SE ¹⁰	5700	80	2100	13344	12010	37.6	79.0	169
BXRC-65C10K1-B-7x-SE ¹⁰	6500	70	1800	16754	15079	52.0	93.6	179
BXRC-65C10K1-C-7x-SE ¹⁰	6500	70	1710	21243	19118	69.4	118.7	179
BXRC-65C10K1-D-7x-SE ¹⁰	6500	70	2100	14134	12720	37.6	79.0	179

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- 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.
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