



Bridgelux® Gen 7 Vero® 10 Array

Product Data Sheet DS90



Introduction

Vero® Series



Vero® Series is a revolutionary advancement in chip on board (COB) light source technology and innovation. Vero LED light sources simplify luminaire design and manufacturing processes. Vero Chip on Board (COB) LED arrays are available in four LES configurations, engineered to enable new degrees of flexibility and reliability over a broad range of electrical currents. Vero arrays deliver increased lumen density to enable improved beam control and precision lighting with 2 and 3 SDCM color control standard for clean and consistent uniform lighting.

Vero products include an onboard connector port that enables a solder-free electrical interconnect, and simple mounting features for plug-and-play installation.

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

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

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

Features

- Efficacy of 155 lm/W typical
- Lumen output performance ranges from 520 to 4,100 lumens
- Broad range of CCT options from 2700K to 6500K
- CRI options include minimum 65, 70, 80, and 90
- 2 and 3 SDCM color control for 2700K-4000K CCT
- Reliable operation at up to 2X nominal drive current
- Radial die pattern and improved lumen density
- Thermally isolated solder pads
- On-board connector port
- Top side part number markings
- V_f bin code backside marking

Benefits

- 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
- Solderless connectivity enables plug & play installation and field upgradability
- Improved inventory management and quality control



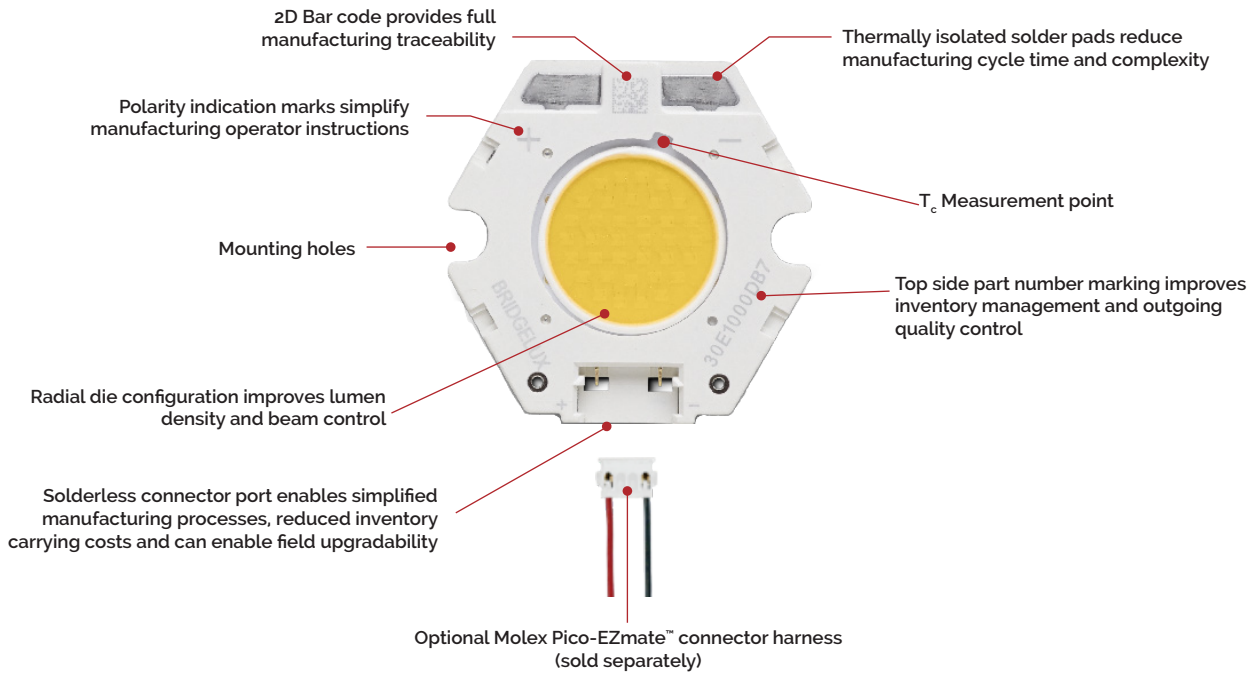
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Product Feature Map

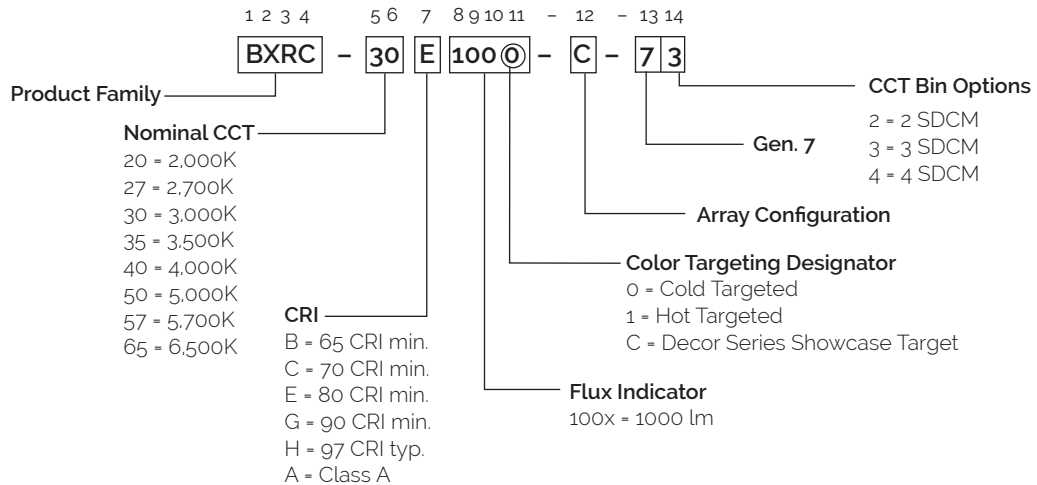
Vero 10 is the smallest form factor in the Vero family of next generation solid state light sources. In addition to delivering the performance and light quality required for many lighting applications, Vero incorporates several

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 Series family of products.



Product Nomenclature

The part number designation for Bridgelux Vero LED arrays is explained as follows:



Product Selection Guide

The following product configurations are available:

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

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical Pulsed Flux ^{4,5,6} $T_c = 25^\circ\text{C}$ (lm)	Minimum Pulsed Flux ^{6,7} $T_c = 25^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-20B1000-B-73	2000	65	270	1365	1201	34.8	9.4	145
BXRC-20B1000-D-73	2000	65	350	1322	1163	26.0	9.1	145
BXRC-27E1000-B-7x	2700	80	270	1394	1226	34.8	9.4	148
BXRC-27E1000-C-7x	2700	80	360	1858	1635	34.8	12.5	148
BXRC-27E1000-D-7x	2700	80	350	1350	1188	26.0	9.1	148
BXRC-27G10H0-B-7x	2700	90	270	1203	1058	34.8	9.4	128
BXRC-27G10H0-C-7x	2700	90	360	1604	1411	34.8	12.5	128
BXRC-27G10H0-D-7x	2700	90	350	1165	1025	26.0	9.1	128
BXRC-27G1000-B-7x	2700	90	270	1161	1022	34.8	9.4	124
BXRC-27G1000-C-7x	2700	90	360	1548	1363	34.8	12.5	124
BXRC-27G1000-D-7x	2700	90	350	1125	990	26.0	9.1	124
BXRC-27H1000-B-7x	2700	97	270	1006	886	34.8	9.4	107
BXRC-27H1000-C-7x	2700	97	360	1342	1181	34.8	12.5	107
BXRC-27H1000-D-7x	2700	97	350	975	858	26.0	9.1	107
BXRC-30C1001-B-74	3000	70	270	1607	1414	34.8	9.4	171
BXRC-30C1001-C-74	3000	70	360	2142	1885	34.8	12.5	171
BXRC-30C1001-D-74	3000	70	350	1556	1369	26.0	9.1	171
BXRC-30E1000-B-7x	3000	80	270	1452	1277	34.8	9.4	155
BXRC-30E1000-C-7x	3000	80	360	1936	1703	34.8	12.5	155
BXRC-30E1000-D-7x	3000	80	350	1406	1237	26.0	9.1	155
BXRC-30G10H0-B-7x	3000	90	270	1268	1116	34.8	9.4	135
BXRC-30G10H0-C-7x	3000	90	360	1691	1488	34.8	12.5	135
BXRC-30G10H0-D-7x	3000	90	350	1229	1081	26.0	9.1	135
BXRC-30G1000-B-7x	3000	90	270	1210	1065	34.8	9.4	129
BXRC-30G1000-C-7x	3000	90	360	1613	1419	34.8	12.5	129
BXRC-30G1000-D-7x	3000	90	350	1172	1031	26.0	9.1	129
BXRC-30G100C-B-73	3000	90	270	1123	988	34.8	9.4	119
BXRC-30G100C-D-73	3000	90	350	1087	957	26.0	9.1	119
BXRC-30H1000-B-7x	3000	97	270	1084	954	34.8	9.4	115
BXRC-30H1000-C-7x	3000	97	360	1445	1272	34.8	12.5	115
BXRC-30H1000-D-7x	3000	97	350	1050	924	26.0	9.1	115
BXRC-30A1001-B-73 ^{8,9}	3000	93	270	1090	959	34.8	9.4	116

Notes for Table 1:

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

Product Selection Guide

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

Part Number	Nominal CCT ¹ (K)	CRI ²	Nominal Drive Current ³ (mA)	Typical Pulsed Flux ^{4,5,6} $T_c = 25^\circ\text{C}$ (lm)	Minimum Pulsed Flux ^{6,7} $T_c = 25^\circ\text{C}$ (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-30A1001-C-73 ^{8,9}	3000	93	360	1453	1279	34.8	12.5	116
BXRC-30A1001-D-73 ^{8,9}	3000	93	350	1056	929	26.0	9.1	116
BXRC-35E1000-B-7x	3500	80	270	1500	1320	34.8	9.4	160
BXRC-35E1000-C-7x	3500	80	360	2000	1760	34.8	12.5	160
BXRC-35E1000-D-7x	3500	80	350	1453	1278	26.0	9.1	160
BXRC-35G1000-B-7x	3500	90	270	1248	1099	34.8	9.4	133
BXRC-35G1000-C-7x	3500	90	360	1665	1465	34.8	12.5	133
BXRC-35G1000-D-7x	3500	90	350	1209	1064	26.0	9.1	133
BXRC-35A1001-B-73 ^{8,9}	3500	93	270	1175	1034	34.8	9.4	125
BXRC-35A1001-C-73 ^{8,9}	3500	93	360	1566	1378	34.8	12.5	125
BXRC-35A1001-D-73 ^{8,9}	3500	93	350	1138	1001	26.0	9.1	125
BXRC-40C1001-B-74	4000	70	270	1635	1439	34.8	9.4	174
BXRC-40C1001-C-74	4000	70	360	2180	1918	34.8	12.5	174
BXRC-40C1001-D-74	4000	70	350	1583	1393	26.0	9.1	174
BXRC-40E1000-B-7x	4000	80	270	1510	1329	34.8	9.4	161
BXRC-40E1000-C-7x	4000	80	360	2013	1771	34.8	12.5	161
BXRC-40E1000-D-7x	4000	80	350	1462	1287	26.0	9.1	161
BXRC-40G1000-B-7x	4000	90	270	1297	1141	34.8	9.4	138
BXRC-40G1000-C-7x	4000	90	360	1729	1522	34.8	12.5	138
BXRC-40G1000-D-7x	4000	90	350	1256	1105	26.0	9.1	138
BXRC-40H1000-B-7x	4000	97	270	1109	976	34.8	9.4	118
BXRC-40H1000-C-7x	4000	97	360	1478	1301	34.8	12.5	118
BXRC-40H1000-D-7x	4000	97	350	1074	945	26.0	9.1	118
BXRC-40A1001-B-73 ^{8,9}	4000	93	270	1250	1100	34.8	9.4	133
BXRC-40A1001-C-73 ^{8,9}	4000	93	360	1666	1466	34.8	12.5	133
BXRC-40A1001-D-73 ^{8,9}	4000	93	350	1210	1065	26.0	9.1	133
BXRC-50C1001-B-7x	5000	70	270	1655	1456	34.8	9.4	176
BXRC-50C1001-C-7x	5000	70	360	2207	1942	34.8	12.5	176
BXRC-50C1001-D-7x	5000	70	350	1603	1410	26.0	9.1	176
BXRC-50E1001-B-7x	5000	80	270	1558	1371	34.8	9.4	166
BXRC-50E1001-C-7x	5000	80	360	2078	1828	34.8	12.5	166
BXRC-50E1001-D-7x	5000	80	350	1509	1328	26.0	9.1	166
BXRC-50G1001-B-7x	5000	90	270	1316	1158	34.8	9.4	140
BXRC-50G1001-C-7x	5000	90	360	1755	1544	34.8	12.5	140
BXRC-50G1001-D-7x	5000	90	350	1275	1122	26.0	9.1	140

Notes for Table 1:

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