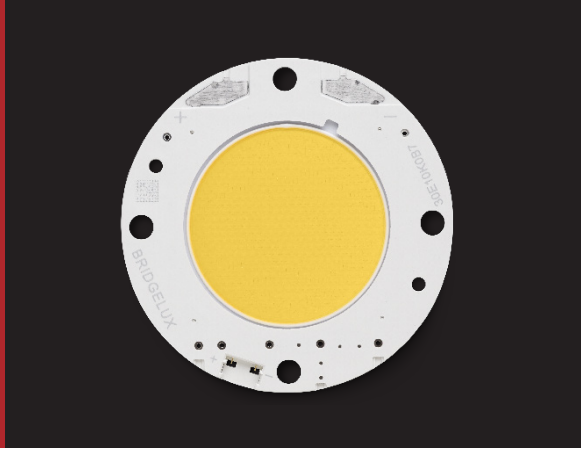
Bridgelux® Gen 8 Vero® 29 Array

Product Data Sheet DS423

Introduction

Vero® Series



The Vero® Series is a revolutionary advancement in chip on board (COB) light source technology and innovation, simplifying the 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.

Features

- On board connector port
- Top side part number markings
- Efficacy of 185 lm/W typical, 3000K 80 CRI
- Reliable operation at up to 3x nominal current, 30% increase in maximum lumens per LES size
- Wide selection of CCT options (2700K-6500K) with minimum 70, 80 and 90 CRI options
- Uniform high-quality illumination
- 2 and 3 SDCM binning options (2700K – 4000K)
- Forward voltage bin codes (backside marking)
- Thermally isolated solder pads
- 10-Year warranty

Benefits

- Solder free installation and field upgradability
- Improved inventory management and quality control
- Enables high efficiency lighting systems and lower operating costs
- Supports the trend toward luminaire miniaturization and delivers enhanced optical control
- Design flexibility for a broad range of lighting applications
- Clean white light without pixelation
- Uniform consistent white light
- Design flexibility for multi-source applications
- Enhanced ease of use and installation
- Design with confidence

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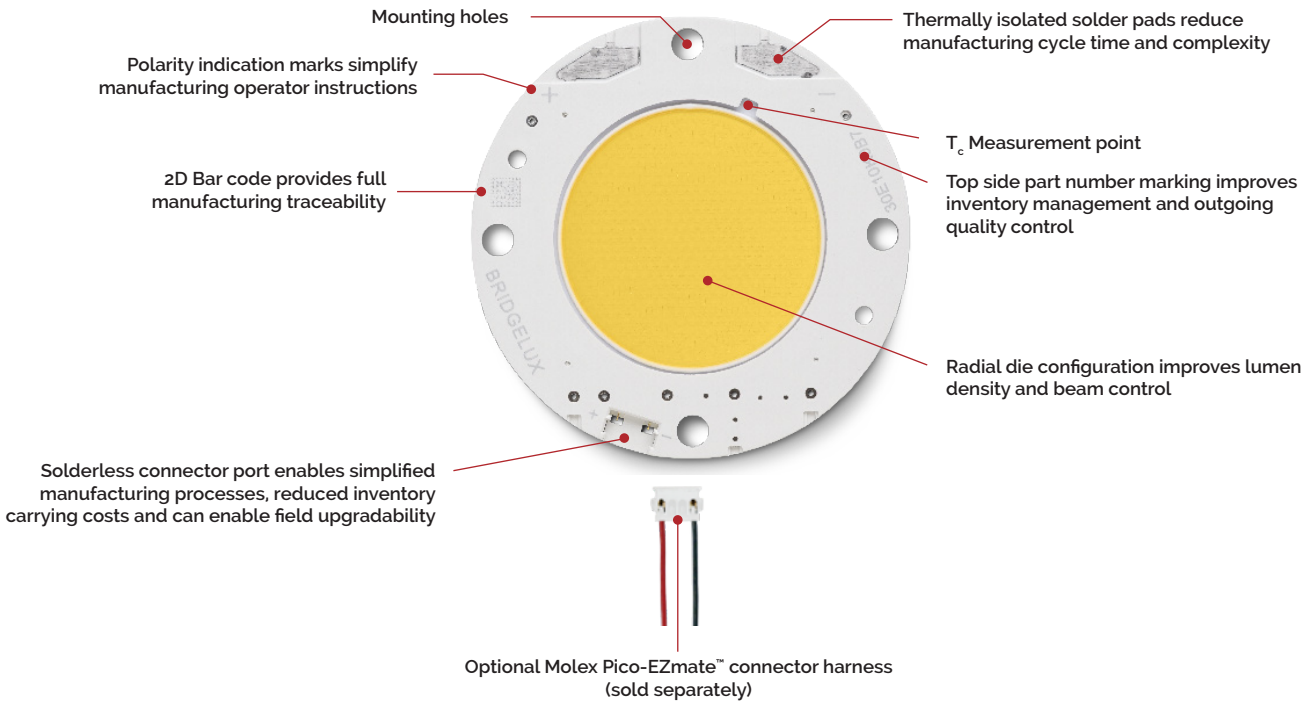
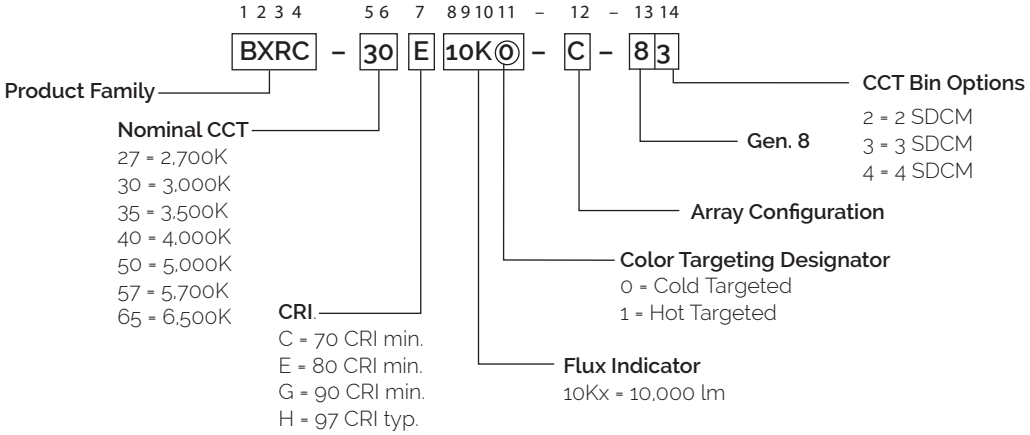
Product Feature Map

Vero 29 is the largest 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˚C)

Part Number	Nominal CCT[1] (K)	CRI[2]	Nominal Drive Current[3] (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-27E10K0-B-8x	2700	80	1400	12247	11022	50.2	70.3	174
BXRC-27E10K0-C-8x	2700	80	1300	15099	13589	66.7	86.7	174
BXRC-27E10K0-D-8x	2700	80	1700	10771	9694	36.4	61.9	174
BXRC-27G10K0-B-8x	2700	90	1400	10103	9093	50.2	70.3	144
BXRC-27G10K0-C-8x	2700	90	1300	12457	11211	66.7	86.7	144
BXRC-27G10K0-D-8x	2700	90	1700	8886	7997	36.4	61.9	144
BXRC-27G1KH0-B-8x	2700	90	1400	10540	9486	50.2	70.3	150
BXRC-27G1KH0-C-8x	2700	90	1300	12995	11695	66.7	86.7	150
BXRC-27G1KH0-D-8x	2700	90	1700	9270	8343	36.4	61.9	150
BXRC-27H10K0-B-8x	2700	97	1400	8955	8060	50.2	70.3	127
BXRC-27H10K0-C-8x	2700	97	1300	11041	9937	66.7	86.7	127
BXRC-27H10K0-D-8x	2700	97	1700	7876	7089	36.4	61.9	127
BXRC-30C10K1-B-8x	3000	70	1400	13624	12262	50.2	70.3	194
BXRC-30C10K1-C-8x	3000	70	1300	16798	15118	66.7	86.7	194
BXRC-30C10K1-D-8x	3000	70	1700	11983	10784	36.4	61.9	194
BXRC-30E10K0-B-8x	3000	80	1400	13012	11711	50.2	70.3	185
BXRC-30E10K0-C-8x	3000	80	1300	16043	14439	66.7	86.7	185
BXRC-30E10K0-D-8x	3000	80	1700	11444	10300	36.4	61.9	185
BXRC-30G10K0-B-8x	3000	90	1400	10563	9506	50.2	70.3	150
BXRC-30G10K0-C-8x	3000	90	1300	13023	11721	66.7	86.7	150
BXRC-30G10K0-D-8x	3000	90	1700	9290	8361	36.4	61.9	150
BXRC-30G1KH0-B-8x	3000	90	1400	11060	9954	50.2	70.3	157
BXRC-30G1KH0-C-8x	3000	90	1300	13637	12273	66.7	86.7	157
BXRC-30G1KH0-D-8x	3000	90	1700	9727	8755	36.4	61.9	157
BXRC-30H10K0-B-8x	3000	97	1400	9568	8611	50.2	70.3	136
BXRC-30H10K0-C-8x	3000	97	1300	11796	10617	66.7	86.7	136
BXRC-30H10K0-D-8x	3000	97	1700	8415	7573	36.4	61.9	136
BXRC-35E10K0-B-8x	3500	80	1400	13318	11986	50.2	70.3	190
BXRC-35E10K0-C-8x	3500	80	1300	16420	14778	66.7	86.7	189
BXRC-35E10K0-D-8x	3500	80	1700	11713	10542	36.4	61.9	189
BXRC-35G10K0-B-8x	3500	90	1400	10945	9851	50.2	70.3	156
BXRC-35G10K0-C-8x	3500	90	1300	13495	12145	66.7	86.7	156
BXRC-35G10K0-D-8x	3500	90	1700	9626	8664	36.4	61.9	156
BXRC-40C10K1-B-8x	4000	70	1400	14007	12606	50.2	70.3	199
BXRC-40C10K1-C-8x	4000	70	1300	17270	15543	66.7	86.7	199
BXRC-40C10K1-D-8x	4000	70	1700	12319	11087	36.4	61.9	199

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 minimums for all products. Minimum R9 value for 80 CRI products is 0, the minimum R9 values 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 drive current where T_j (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.

Product Selection Guide

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

Part Number	Nominal CCT[1] (K)	CRI[2]	Nominal Drive Current[3] (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-40E10K0-B-8x	4000	80	1400	13395	12055	50.2	70.3	191
BXRC-40E10K0-C-8x	4000	80	1300	16515	14863	66.7	86.7	190
BXRC-40E10K0-D-8x	4000	80	1700	11781	10603	36.4	61.9	190
BXRC-40G10K0-B-8x	4000	90	1400	11175	10058	50.2	70.3	159
BXRC-40G10K0-C-8x	4000	90	1300	13778	12400	66.7	86.7	159
BXRC-40G10K0-D-8x	4000	90	1700	9828	8846	36.4	61.9	159
BXRC-50C10K1-B-8x	5000	70	1400	14084	12675	50.2	70.3	200
BXRC-50C10K1-C-8x	5000	70	1300	17364	15628	66.7	86.7	200
BXRC-50C10K1-D-8x	5000	70	1700	12386	11148	36.4	61.9	200
BXRC-50E10K1-B-8x	5000	80	1400	13548	12193	50.2	70.3	193
BXRC-50E10K1-C-8x	5000	80	1300	16704	15033	66.7	86.7	193
BXRC-50E10K1-D-8x	5000	80	1700	11915	10724	36.4	61.9	193
BXRC-50G10K1-B-8x	5000	90	1400	11711	10540	50.2	70.3	167
BXRC-50G10K1-C-8x	5000	90	1300	14439	12995	66.7	86.7	167
BXRC-50G10K1-D-8x	5000	90	1700	10300	9270	36.4	61.9	166
BXRC-57C10K1-B-8x	5700	70	1400	13701	12331	50.2	70.3	195
BXRC-57C10K1-C-8x	5700	70	1300	16892	15203	66.7	86.7	195
BXRC-57C10K1-D-8x	5700	70	1700	12050	10845	36.4	61.9	195
BXRC-57E10K1-B-8x	5700	80	1400	13012	11711	50.2	70.3	185
BXRC-57E10K1-C-8x	5700	80	1300	16043	14439	66.7	86.7	185
BXRC-57E10K1-D-8x	5700	80	1700	11444	10300	36.4	61.9	185
BXRC-65C10K1-B-8x	6500	70	1400	13701	12331	50.2	70.3	195
BXRC-65C10K1-C-8x	6500	70	1300	16892	15203	66.7	86.7	195
BXRC-65C10K1-D-8x	6500	70	1700	12050	10845	36.4	61.9	195
BXRC-65E10K1-B-8x	6500	80	1400	13165	11849	50.2	70.3	187
BXRC-65E10K1-C-8x	6500	80	1300	16232	14609	66.7	86.7	187
BXRC-65E10K1-D-8x	6500	80	1700	11579	10421	36.4	61.9	187

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 minimums for all products. Minimum R9 value for 80 CRI products is 0, the minimum R9 values 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 drive current where T_j (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.

Product Selection Guide

Table 2: Selection Guide, Stabilized DC Performance (T_c = 85˚C) [4,5]

Part Number	Nominal CCT[1] (K)	CRI[2]	Nominal Drive Current[3] (mA)	Typical DC Flux[4,5] T_c = 85ºC (lm)	Minimum DC Flux[6] T_c = 85ºC (lm)	Typical V_f (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXRC-27E10K0-B-8x	2700	80	1400	11022	9920	49.2	68.9	160
BXRC-27E10K0-C-8x	2700	80	1300	13589	12230	65.4	85.0	160
BXRC-27E10K0-D-8x	2700	80	1700	9694	8724	35.7	60.7	160
BXRC-27G10K0-B-8x	2700	90	1400	9093	8184	49.2	68.9	132
BXRC-27G10K0-C-8x	2700	90	1300	11211	10090	65.4	85.0	132
BXRC-27G10K0-D-8x	2700	90	1700	7997	7198	35.7	60.7	132
BXRC-27G1KH0-B-8x	2700	90	1400	9486	8537	49.2	68.9	138
BXRC-27G1KH0-C-8x	2700	90	1300	11695	10526	65.4	85.0	138
BXRC-27G1KH0-D-8x	2700	90	1700	8343	7508	35.7	60.7	138
BXRC-27H10K0-B-8x	2700	97	1400	8060	7254	49.2	68.9	117
BXRC-27H10K0-C-8x	2700	97	1300	9937	8944	65.4	85.0	117
BXRC-27H10K0-D-8x	2700	97	1700	7089	6380	35.7	60.7	117
BXRC-30C10K1-B-8x	3000	70	1400	12262	11036	49.2	68.9	178
BXRC-30C10K1-C-8x	3000	70	1300	15118	13606	65.4	85.0	178
BXRC-30C10K1-D-8x	3000	70	1700	10784	9706	35.7	60.7	178
BXRC-30E10K0-B-8x	3000	80	1400	11711	10540	49.2	68.9	170
BXRC-30E10K0-C-8x	3000	80	1300	14439	12995	65.4	85.0	170
BXRC-30E10K0-D-8x	3000	80	1700	10300	9270	35.7	60.7	170
BXRC-30G10K0-B-8x	3000	90	1400	9506	8556	49.2	68.9	138
BXRC-30G10K0-C-8x	3000	90	1300	11721	10549	65.4	85.0	138
BXRC-30G10K0-D-8x	3000	90	1700	8361	7525	35.7	60.7	138
BXRC-30G1KH0-B-8x	3000	90	1400	9954	8959	49.2	68.9	144
BXRC-30G1KH0-C-8x	3000	90	1300	12273	11046	65.4	85.0	144
BXRC-30G1KH0-D-8x	3000	90	1700	8755	7879	35.7	60.7	144
BXRC-30H10K0-B-8x	3000	97	1400	8611	7750	49.2	68.9	125
BXRC-30H10K0-C-8x	3000	97	1300	10617	9555	65.4	85.0	125
BXRC-30H10K0-D-8x	3000	97	1700	7573	6816	35.7	60.7	125
BXRC-35E10K0-B-8x	3500	80	1400	11986	10788	49.2	68.9	174
BXRC-35E10K0-C-8x	3500	80	1300	14778	13301	65.4	85.0	174
BXRC-35E10K0-D-8x	3500	80	1700	10542	9488	35.7	60.7	174
BXRC-35G10K0-B-8x	3500	90	1400	9851	8866	49.2	68.9	143
BXRC-35G10K0-C-8x	3500	90	1300	12145	10931	65.4	85.0	143
BXRC-35G10K0-D-8x	3500	90	1700	8664	7797	35.7	60.7	143
BXRC-40C10K1-B-8x	4000	70	1400	12606	11346	49.2	68.9	183
BXRC-40C10K1-C-8x	4000	70	1300	15543	13989	65.4	85.0	183
BXRC-40C10K1-D-8x	4000	70	1700	11087	9978	35.7	60.7	183

Notes for Table 2:

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 T_j = T_c = 25˚C. CRI values are minimums for all products. Minimum R9 value for 80 CRI products is 0, the minimum R9 values 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.

Product Selection Guide

Table 2: Selection Guide, Stabilized DC Performance (T_c = 85˚C) [4,5] (continued)

Part Number	Nominal CCT[1] (K)	CRI[2]	Nominal Drive Current[3] (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-40E10K0-B-8x	4000	80	1400	12055	10850	49.2	68.9	175
BXRC-40E10K0-C-8x	4000	80	1300	14863	13377	65.4	85.0	175
BXRC-40E10K0-D-8x	4000	80	1700	10603	9542	35.7	60.7	175
BXRC-40G10K0-B-8x	4000	90	1400	10058	9052	49.2	68.9	146
BXRC-40G10K0-C-8x	4000	90	1300	12400	11160	65.4	85.0	146
BXRC-40G10K0-D-8x	4000	90	1700	8846	7961	35.7	60.7	146
BXRC-50C10K1-B-8x	5000	70	1400	12675	11408	49.2	68.9	184
BXRC-50C10K1-C-8x	5000	70	1300	15628	14065	65.4	85.0	184
BXRC-50C10K1-D-8x	5000	70	1700	11148	10033	35.7	60.7	184
BXRC-50E10K1-B-8x	5000	80	1400	12193	10974	49.2	68.9	177
BXRC-50E10K1-C-8x	5000	80	1300	15033	13530	65.4	85.0	177
BXRC-50E10K1-D-8x	5000	80	1700	10724	9651	35.7	60.7	177
BXRC-50G10K1-B-8x	5000	90	1400	10540	9486	49.2	68.9	153
BXRC-50G10K1-C-8x	5000	90	1300	12995	11695	65.4	85.0	153
BXRC-50G10K1-D-8x	5000	90	1700	9270	8343	35.7	60.7	153
BXRC-57C10K1-B-8x	5700	70	1400	12331	11098	49.2	68.9	179
BXRC-57C10K1-C-8x	5700	70	1300	15203	13683	65.4	85.0	179
BXRC-57C10K1-D-8x	5700	70	1700	10845	9760	35.7	60.7	179
BXRC-57E10K1-B-8x	5700	80	1400	11711	10540	49.2	68.9	170
BXRC-57E10K1-C-8x	5700	80	1300	14439	12995	65.4	85.0	170
BXRC-57E10K1-D-8x	5700	80	1700	10300	9270	35.7	60.7	170
BXRC-65C10K1-B-8x	6500	70	1400	12331	11098	49.2	68.9	179
BXRC-65C10K1-C-8x	6500	70	1300	15203	13683	65.4	85.0	179
BXRC-65C10K1-D-8x	6500	70	1700	10845	9760	35.7	60.7	179
BXRC-65E10K1-B-8x	6500	80	1400	11849	10664	49.2	68.9	172
BXRC-65E10K1-C-8x	6500	80	1300	14609	13148	65.4	85.0	172
BXRC-65E10K1-D-8x	6500	80	1700	10421	9379	35.7	60.7	172

Notes for Table 2:

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 T_j = T_c = 25˚C. CRI values are minimums for all products. Minimum R9 value for 80 CRI products is 0, the minimum R9 values 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.

Performance at Commonly Used Drive Currents

Vero LED arrays are tested to the specifications shown using the nominal drive currents in Table 1. Vero 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 3.

Table 3: Product Performance at Commonly Used Drive Currents

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-27E10K0-B-8x	80	700	48.5	34.0	6175	5558	182
		1050	49.4	51.9	9223	8301	178
		1400	**50.2**	**70.3**	**12247**	**11022**	**174**
		1800	51.2	92.1	15496	13946	168
		2800	53.3	149.1	23309	20978	156
		4750	56.6	268.8	36738	33064	137
BXRC-27E10K0-C-8x	80	650	64.4	41.9	7614	6852	182
		975	65.6	64.0	11372	10235	178
		1300	**66.7**	**86.7**	**15099**	**13589**	**174**
		1710	68.0	116.4	19521	17569	168
		2600	70.7	183.9	28739	25865	156
		4750	75.8	360.1	48070	43263	134
BXRC-27E10K0-D-8x	80	850	35.1	29.9	5431	4888	182
		1275	35.8	45.6	8112	7301	178
		1700	**36.4**	**61.9**	**10771**	**9694**	**174**
		2100	36.9	77.6	13122	11810	169
		3400	38.6	131.1	20500	18450	156
		5500	40.7	224.1	31080	27972	139
BXRC-27G10K0-B-8x	90	700	48.5	34.0	5095	4585	150
		1050	49.4	51.9	7609	6848	147
		1400	**50.2**	**70.3**	**10103**	**9093**	**144**
		1800	51.2	92.1	12784	11506	139
		2800	53.3	149.1	19230	17307	129
		4750	56.6	268.8	30308	27278	113
BXRC-27G10K0-C-8x	90	650	64.4	41.9	6281	5653	150
		975	65.6	64.0	9382	8444	147
		1300	**66.7**	**86.7**	**12457**	**11211**	**144**
		1710	68.0	116.4	16105	14494	138
		2600	70.7	183.9	23709	21338	129
		4750	75.8	360.1	39658	35692	110
BXRC-27G10K0-D-8x	90	850	35.1	29.9	4481	4033	150
		1275	35.8	45.6	6692	6023	147
		1700	**36.4**	**61.9**	**8886**	**7997**	**144**
		2100	36.9	77.6	10826	9743	140
		3400	38.6	131.1	16913	15221	129
		5500	40.7	224.1	25641	23077	114

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-27G1KH0-B-8x	90	700	48.5	34.0	5315	4783	156
		1050	49.4	51.9	7938	7144	153
		1400	**50.2**	**70.3**	**10540**	**9486**	**150**
		1800	51.2	92.1	13336	12002	145
		2800	53.3	149.1	20060	18054	135
		4750	56.6	268.8	31617	28456	118
BXRC-27G1KH0-C-8x	90	650	64.4	41.9	6553	5897	156
		975	65.6	64.0	9787	8808	153
		1300	**66.7**	**86.7**	**12995**	**11695**	**150**
		1710	68.0	116.4	16800	15120	144
		2600	70.7	183.9	24733	22260	135
		4750	75.8	360.1	41370	37233	115
BXRC-27G1KH0-D-8x	90	850	35.1	29.9	4674	4207	156
		1275	35.8	45.6	6981	6283	153
		1700	**36.4**	**61.9**	**9270**	**8343**	**150**
		2100	36.9	77.6	11294	10164	146
		3400	38.6	131.1	17643	15879	135
		5500	40.7	224.1	26748	24073	119
BXRC-27H10K0-B-8x	97 typ.	700	48.5	34.0	4516	4064	133
		1050	49.4	51.9	6745	6070	130
		1400	**50.2**	**70.3**	**8955**	**8060**	**127**
		1800	51.2	92.1	11331	10198	123
		2800	53.3	149.1	17045	15340	114
		4750	56.6	268.8	26864	24178	100
BXRC-27H10K0-C-8x	97 typ.	650	64.4	41.9	5568	5011	133
		975	65.6	64.0	8316	7484	130
		1300	**66.7**	**86.7**	**11041**	**9937**	**127**
		1710	68.0	116.4	14275	12847	123
		2600	70.7	183.9	21015	18914	114
		4750	75.8	360.1	35151	31636	98
BXRC-27H10K0-D-8x	97 typ.	850	35.1	29.9	3972	3574	133
		1275	35.8	45.6	5932	5339	130
		1700	**36.4**	**61.9**	**7876**	**7089**	**127**
		2100	36.9	77.6	9596	8636	124
		3400	38.6	131.1	14991	13492	114
		5500	40.7	224.1	22727	20454	101

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-30C10K1-B-8x	70	700	48.5	34.0	6870	6183	202
		1050	49.4	51.9	10261	9235	198
		1400	**50.2**	**70.3**	**13624**	**12262**	**194**
		1800	51.2	92.1	17239	15515	187
		2800	53.3	149.1	25931	23338	174
		4750	56.6	268.8	40871	36783	152
BXRC-30C10K1-C-8x	70	650	64.4	41.9	8470	7623	202
		975	65.6	64.0	12651	11386	198
		1300	**66.7**	**86.7**	**16798**	**15118**	**194**
		1710	68.0	116.4	21717	19545	187
		2600	70.7	183.9	31972	28775	174
		4750	75.8	360.1	53478	48130	149
BXRC-30C10K1-D-8x	70	850	35.1	29.9	6042	5438	202
		1275	35.8	45.6	9025	8122	198
		1700	**36.4**	**61.9**	**11983**	**10784**	**194**
		2100	36.9	77.6	14599	13139	188
		3400	38.6	131.1	22806	20526	174
		5500	40.7	224.1	34576	31119	154
BXRC-30E10K0-B-8x	80	700	48.5	34.0	6561	5905	193
		1050	49.4	51.9	9800	8820	189
		1400	**50.2**	**70.3**	**13012**	**11711**	**185**
		1800	51.2	92.1	16464	14818	179
		2800	53.3	149.1	24766	22289	166
		4750	56.6	268.8	39034	35130	145
BXRC-30E10K0-C-8x	80	650	64.4	41.9	8090	7281	193
		975	65.6	64.0	12083	10874	189
		1300	**66.7**	**86.7**	**16043**	**14439**	**185**
		1710	68.0	116.4	20741	18667	178
		2600	70.7	183.9	30535	27481	166
		4750	75.8	360.1	51074	45967	142
BXRC-30E10K0-D-8x	80	850	35.1	29.9	5771	5194	193
		1275	35.8	45.6	8619	7757	189
		1700	**36.4**	**61.9**	**11444**	**10300**	**185**
		2100	36.9	77.6	13943	12548	180
		3400	38.6	131.1	21781	19603	166
		5500	40.7	224.1	33022	29720	147
BXRC-30G10K0-B-8x	90	700	48.5	34.0	5326	4794	157
		1050	49.4	51.9	7955	7160	153
		1400	**50.2**	**70.3**	**10563**	**9506**	**150**
		1800	51.2	92.1	13365	12029	145
		2800	53.3	149.1	20104	18094	135
		4750	56.6	268.8	31686	28518	118

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-30G10K0-C-8x	90	650	64.4	41.9	6567	5910	157
		975	65.6	64.0	9808	8827	153
		1300	**66.7**	**86.7**	**13023**	**11721**	**150**
		1710	68.0	116.4	16837	15153	145
		2600	70.7	183.9	24787	22308	135
		4750	75.8	360.1	41460	37314	115
BXRC-30G10K0-D-8x	90	850	35.1	29.9	4684	4216	157
		1275	35.8	45.6	6997	6297	153
		1700	**36.4**	**61.9**	**9290**	**8361**	**150**
		2100	36.9	77.6	11318	10186	146
		3400	38.6	131.1	17681	15913	135
		5500	40.7	224.1	26806	24126	120
BXRC-30G1KH0-B-8x	90	700	48.5	34.0	5577	5019	164
		1050	49.4	51.9	8330	7497	161
		1400	**50.2**	**70.3**	**11060**	**9954**	**157**
		1800	51.2	92.1	13995	12595	152
		2800	53.3	149.1	21051	18946	141
		4750	56.6	268.8	33179	29861	123
BXRC-30G1KH0-C-8x	90	650	64.4	41.9	6876	6189	164
		975	65.6	64.0	10270	9243	161
		1300	**66.7**	**86.7**	**13637**	**12273**	**157**
		1710	68.0	116.4	17630	15867	152
		2600	70.7	183.9	25955	23359	141
		4750	75.8	360.1	43413	39072	121
BXRC-30G1KH0-D-8x	90	850	35.1	29.9	4905	4415	164
		1275	35.8	45.6	7326	6594	161
		1700	**36.4**	**61.9**	**9727**	**8755**	**157**
		2100	36.9	77.6	11851	10666	153
		3400	38.6	131.1	18514	16663	141
		5500	40.7	224.1	28069	25262	125
BXRC-30H10K0-B-8x	97 typ.	700	48.5	34.0	4825	4342	142
		1050	49.4	51.9	7206	6485	139
		1400	**50.2**	**70.3**	**9568**	**8611**	**136**
		1800	51.2	92.1	12106	10895	131
		2800	53.3	149.1	18210	16389	122
		4750	56.6	268.8	28701	25831	107
BXRC-30H10K0-C-8x	97 typ.	650	64.4	41.9	5948	5354	142
		975	65.6	64.0	8884	7996	139
		1300	**66.7**	**86.7**	**11796**	**10617**	**136**
		1710	68.0	116.4	15251	13726	131
		2600	70.7	183.9	22452	20207	122
		4750	75.8	360.1	37554	33799	104

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-30H10K0-D-8x	97 typ.	850	35.1	29.9	4243	3819	142
		1275	35.8	45.6	6337	5704	139
		1700	**36.4**	**61.9**	**8415**	**7573**	**136**
		2100	36.9	77.6	10252	9227	132
		3400	38.6	131.1	16016	14414	122
		5500	40.7	224.1	24281	21853	108
BXRC-35E10K0-B-8x	80	700	48.5	34.0	6716	6044	198
		1050	49.4	51.9	10030	9027	193
		1400	**50.2**	**70.3**	**13318**	**11986**	**189**
		1800	51.2	92.1	16852	15166	183
		2800	53.3	149.1	25349	22814	170
		4750	56.6	268.8	39952	35957	149
BXRC-35E10K0-C-8x	80	650	64.4	41.9	8280	7452	198
		975	65.6	64.0	12367	11130	193
		1300	**66.7**	**86.7**	**16420**	**14778**	**189**
		1710	68.0	116.4	21229	19106	182
		2600	70.7	183.9	31253	28128	170
		4750	75.8	360.1	52276	47048	145
BXRC-35E10K0-D-8x	80	850	35.1	29.9	5906	5316	198
		1275	35.8	45.6	8822	7940	193
		1700	**36.4**	**61.9**	**11713**	**10542**	**189**
		2100	36.9	77.6	14271	12844	184
		3400	38.6	131.1	22294	20065	170
		5500	40.7	224.1	33799	30419	151
BXRC-35G10K0-B-8x	90	700	48.5	34.0	5519	4967	162
		1050	49.4	51.9	8243	7419	159
		1400	**50.2**	**70.3**	**10945**	**9851**	**156**
		1800	51.2	92.1	13849	12464	150
		2800	53.3	149.1	20832	18749	140
		4750	56.6	268.8	32834	29551	122
BXRC-35G10K0-C-8x	90	650	64.4	41.9	6805	6124	162
		975	65.6	64.0	10164	9147	159
		1300	**66.7**	**86.7**	**13495**	**12145**	**156**
		1710	68.0	116.4	17447	15702	150
		2600	70.7	183.9	25685	23117	140
		4750	75.8	360.1	42962	38666	119
BXRC-35G10K0-D-8x	90	850	35.1	29.9	4854	4369	162
		1275	35.8	45.6	7250	6525	159
		1700	**36.4**	**61.9**	**9626**	**8664**	**156**
		2100	36.9	77.6	11728	10555	151
		3400	38.6	131.1	18322	16490	140
		5500	40.7	224.1	27778	25000	124

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-40C10K1-B-8x	70	700	48.5	34.0	7063	6357	208
		1050	49.4	51.9	10549	9494	203
		1400	**50.2**	**70.3**	**14007**	**12606**	**199**
		1800	51.2	92.1	17723	15951	192
		2800	53.3	149.1	26660	23994	179
		4750	56.6	268.8	42019	37817	156
BXRC-40C10K1-C-8x	70	650	64.4	41.9	8708	7838	208
		975	65.6	64.0	13007	11706	203
		1300	**66.7**	**86.7**	**17270**	**15543**	**199**
		1710	68.0	116.4	22327	20094	192
		2600	70.7	183.9	32870	29583	179
		4750	75.8	360.1	54980	49482	153
BXRC-40C10K1-D-8x	70	850	35.1	29.9	6212	5591	208
		1275	35.8	45.6	9278	8350	203
		1700	**36.4**	**61.9**	**12319**	**11087**	**199**
		2100	36.9	77.6	15009	13508	193
		3400	38.6	131.1	23447	21102	179
		5500	40.7	224.1	35548	31993	159
BXRC-40E10K0-B-8x	80	700	48.5	34.0	6754	6079	199
		1050	49.4	51.9	10088	9079	194
		1400	**50.2**	**70.3**	**13395**	**12055**	**190**
		1800	51.2	92.1	16948	15254	184
		2800	53.3	149.1	25494	22945	171
		4750	56.6	268.8	40182	36164	150
BXRC-40E10K0-C-8x	80	650	64.4	41.9	8328	7495	199
		975	65.6	64.0	12438	11194	194
		1300	**66.7**	**86.7**	**16515**	**14863**	**190**
		1710	68.0	116.4	21351	19216	183
		2600	70.7	183.9	31433	28290	171
		4750	75.8	360.1	52576	47319	146
BXRC-40E10K0-D-8x	80	850	35.1	29.9	5940	5346	199
		1275	35.8	45.6	8872	7985	194
		1700	**36.4**	**61.9**	**11781**	**10603**	**190**
		2100	36.9	77.6	14353	12917	185
		3400	38.6	131.1	22422	20180	171
		5500	40.7	224.1	33994	30594	152
BXRC-40G10K0-B-8x	90	700	48.5	34.0	5635	5072	166
		1050	49.4	51.9	8416	7575	162
		1400	**50.2**	**70.3**	**11175**	**10058**	**159**
		1800	51.2	92.1	14140	12726	154
		2800	53.3	149.1	21269	19143	143
		4750	56.6	268.8	33523	30171	125

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-40G10K0-C-8x	90	650	64.4	41.9	6948	6253	166
		975	65.6	64.0	10377	9339	162
		1300	**66.7**	**86.7**	**13778**	**12400**	**159**
		1710	68.0	116.4	17813	16032	153
		2600	70.7	183.9	26224	23602	143
		4750	75.8	360.1	43864	39477	122
BXRC-40G10K0-D-8x	90	850	35.1	29.9	4956	4460	166
		1275	35.8	45.6	7402	6662	162
		1700	**36.4**	**61.9**	**9828**	**8846**	**159**
		2100	36.9	77.6	11974	10777	154
		3400	38.6	131.1	18706	16836	143
		5500	40.7	224.1	28360	25524	127
BXRC-50C10K1-B-8x	70	700	48.5	34.0	7102	6392	209
		1050	49.4	51.9	10607	9546	204
		1400	**50.2**	**70.3**	**14084**	**12675**	**200**
		1800	51.2	92.1	17820	16038	194
		2800	53.3	149.1	26805	24125	180
		4750	56.6	268.8	42248	38023	157
BXRC-50C10K1-C-8x	70	650	64.4	41.9	8756	7880	209
		975	65.6	64.0	13078	11770	204
		1300	**66.7**	**86.7**	**17364**	**15628**	**200**
		1710	68.0	116.4	22449	20204	193
		2600	70.7	183.9	33049	29744	180
		4750	75.8	360.1	55280	49752	154
BXRC-50C10K1-D-8x	70	850	35.1	29.9	6246	5621	209
		1275	35.8	45.6	9329	8396	204
		1700	**36.4**	**61.9**	**12386**	**11148**	**200**
		2100	36.9	77.6	15091	13582	195
		3400	38.6	131.1	23575	21218	180
		5500	40.7	224.1	35742	32168	159
BXRC-50E10K1-B-8x	80	700	48.5	34.0	6832	6148	201
		1050	49.4	51.9	10203	9183	197
		1400	**50.2**	**70.3**	**13548**	**12193**	**193**
		1800	51.2	92.1	17142	15428	186
		2800	53.3	149.1	25786	23207	173
		4750	56.6	268.8	40641	36577	151
BXRC-50E10K1-C-8x	80	650	64.4	41.9	8423	7581	201
		975	65.6	64.0	12580	11322	197
		1300	**66.7**	**86.7**	**16704**	**15033**	**193**
		1710	68.0	116.4	21595	19435	186
		2600	70.7	183.9	31792	28613	173
		4750	75.8	360.1	53177	47859	148

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-50E10K1-D-8x	80	850	35.1	29.9	6008	5407	201
		1275	35.8	45.6	8974	8076	197
		1700	**36.4**	**61.9**	**11915**	**10724**	**193**
		2100	36.9	77.6	14517	13065	187
		3400	38.6	131.1	22678	20410	173
		5500	40.7	224.1	34382	30944	153
BXRC-50G10K1-B-8x	90	700	48.5	34.0	5905	5315	174
		1050	49.4	51.9	8820	7938	170
		1400	**50.2**	**70.3**	**11711**	**10540**	**166**
		1800	51.2	92.1	14818	13336	161
		2800	53.3	149.1	22289	20060	149
		4750	56.6	268.8	35130	31617	131
BXRC-50G10K1-C-8x	90	650	64.4	41.9	7281	6553	174
		975	65.6	64.0	10874	9787	170
		1300	**66.7**	**86.7**	**14439**	**12995**	**166**
		1710	68.0	116.4	18667	16800	160
		2600	70.7	183.9	27481	24733	149
		4750	75.8	360.1	45967	41370	128
BXRC-50G10K1-D-8x	90	850	35.1	29.9	5194	4674	174
		1275	35.8	45.6	7757	6981	170
		1700	**36.4**	**61.9**	**10300**	**9270**	**167**
		2100	36.9	77.6	12548	11294	162
		3400	38.6	131.1	19603	17643	149
		5500	40.7	224.1	29720	26748	133
BXRC-57C10K1-B-8x	70	700	48.5	34.0	6909	6218	203
		1050	49.4	51.9	10319	9287	199
		1400	**50.2**	**70.3**	**13701**	**12331**	**195**
		1800	51.2	92.1	17336	15602	188
		2800	53.3	149.1	26077	23469	175
		4750	56.6	268.8	41100	36990	153
BXRC-57C10K1-C-8x	70	650	64.4	41.9	8518	7666	203
		975	65.6	64.0	12722	11450	199
		1300	**66.7**	**86.7**	**16892**	**15203**	**195**
		1710	68.0	116.4	21839	19655	188
		2600	70.7	183.9	32151	28936	175
		4750	75.8	360.1	53778	48400	149
BXRC-57C10K1-D-8x	70	850	35.1	29.9	6076	5469	203
		1275	35.8	45.6	9075	8168	199
		1700	**36.4**	**61.9**	**12050**	**10845**	**195**
		2100	36.9	77.6	14681	13213	189
		3400	38.6	131.1	22935	20641	175
		5500	40.7	224.1	34771	31294	155

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-57E10K1-B-8x	80	700	48.5	34.0	6561	5905	193
		1050	49.4	51.9	9800	8820	189
		1400	**50.2**	**70.3**	**13012**	**11711**	**185**
		1800	51.2	92.1	16464	14818	179
		2800	53.3	149.1	24766	22289	166
		4750	56.6	268.8	39034	35130	145
BXRC-57E10K1-C-8x	80	650	64.4	41.9	8090	7281	193
		975	65.6	64.0	12083	10874	189
		1300	**66.7**	**86.7**	**16043**	**14439**	**185**
		1710	68.0	116.4	20741	18667	178
		2600	70.7	183.9	30535	27481	166
		4750	75.8	360.1	51074	45967	142
BXRC-57E10K1-D-8x	80	850	35.1	29.9	5771	5194	193
		1275	35.8	45.6	8619	7757	189
		1700	**36.4**	**61.9**	**11444**	**10300**	**185**
		2100	36.9	77.6	13943	12548	180
		3400	38.6	131.1	21781	19603	166
		5500	40.7	224.1	33022	29720	147
BXRC-65C10K1-B-8x	70	700	48.5	34.0	6909	6218	203
		1050	49.4	51.9	10319	9287	199
		1400	**50.2**	**70.3**	**13701**	**12331**	**195**
		1800	51.2	92.1	17336	15602	188
		2800	53.3	149.1	26077	23469	175
		4750	56.6	268.8	41100	36990	153
BXRC-65C10K1-C-8x	70	650	64.4	41.9	8518	7666	203
		975	65.6	64.0	12722	11450	199
		1300	**66.7**	**86.7**	**16892**	**15203**	**195**
		1710	68.0	116.4	21839	19655	188
		2600	70.7	183.9	32151	28936	175
		4750	75.8	360.1	53778	48400	149
BXRC-65C10K1-D-8x	70	850	35.1	29.9	6076	5469	203
		1275	35.8	45.6	9075	8168	199
		1700	**36.4**	**61.9**	**12050**	**10845**	**195**
		2100	36.9	77.6	14681	13213	189
		3400	38.6	131.1	22935	20641	175
		5500	40.7	224.1	34771	31294	155
BXRC-65E10K1-B-8x	80	700	48.5	34.0	6639	5975	195
		1050	49.4	51.9	9915	8924	191
		1400	**50.2**	**70.3**	**13165**	**11849**	**187**
		1800	51.2	92.1	16658	14992	181
		2800	53.3	149.1	25057	22551	168
		4750	56.6	268.8	39493	35544	147

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Performance at Commonly Used Drive Currents

Table 3: Product Performance at Commonly Used Drive Currents (Continued)

Part Number	CRI	Drive Current[1] (mA)	Typical V_f T_c = 25°C (V)	Typical Power T_c = 25°C (W)	Typical Flux[2] T_c = 25°C (lm)	Typical DC Flux[3] T_c = 85°C (lm)	Typical Efficacy T_c = 25°C (lm/W)
BXRC-65E10K1-C-8x	80	650	64.4	41.9	8185	7366	195
		975	65.6	64.0	12225	11002	191
		1300	**66.7**	**86.7**	**16232**	**14609**	**187**
		1710	68.0	116.4	20985	18886	180
		2600	70.7	183.9	30894	27805	168
		4750	75.8	360.1	51675	46507	144
BXRC-65E10K1-D-8x	80	850	35.1	29.9	5839	5255	195
		1275	35.8	45.6	8720	7848	191
		1700	**36.4**	**61.9**	**11579**	**10421**	**187**
		2100	36.9	77.6	14107	12696	182
		3400	38.6	131.1	22038	19834	168
		5500	40.7	224.1	33411	30070	149

Notes for Table 3:

1. Alternate drive currents in Table 3 are provided for reference only and are not a guarantee of performance.
2. Bridgelux maintains a ± 7% tolerance on flux measurements.
3. Typical stabilized DC performance values are provided as reference only and are not a guarantee of performance.

Electrical Characteristics

Table 4: Electrical Characteristics

Part Number	Drive Current (mA)	Forward Voltage Pulsed, T_c = 25°C (V) [1, 2, 3, 8]			Typical Coefficient of Forward Voltage[4] $\Delta V_f/\Delta T_c$ (mV/°C)	Typical Thermal Resistance Junction to Case[5,6] R_{j-c} (°C/W)	Driver Selection Voltages[7] (V)	
		Minimum	Typical	Maximum			V_f Min. Hot T_c = 105°C (V)	V_f Max. Cold T_c = -40°C (V)
BXRC-xxx10Kx-B-8x	1400	46.4	50.2	54.0	-16.19	0.05	45.1	55.0
	4750	52.4	56.6	60.8	-18.26	0.10	50.9	62.0
BXRC-xxx10Kx-C-8x	1300	61.7	66.7	71.7	-21.51	0.05	60.0	73.1
	4750	70.1	75.8	81.5	-24.45	0.11	68.2	83.1
BXRC-xxx10Kx-D-8x	1700	33.7	36.4	39.1	-11.74	0.06	32.7	39.9
	5500	37.6	40.7	43.8	-13.13	0.11	36.6	44.6

Notes for Table 4:

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_f min hot and max cold values are provided as reference only and are not guaranteed by test. These values are provided to aid in driver design and selection over the operating range of the product.
8. This product has been designed and manufactured per IEC 62031:2018. This product has passed dielectric withstand voltage testing at 1140 V. The working voltage designated for the insulation is 70V d.c. The maximum allowable voltage across the array must be determined in the end product application.

Eye Safety

Table 5: Eye Safety Risk Group (RG) Classifications

Part Number	Drive Current (mA)	CCT[5]			
		2700K/3000K	4000K[2]	5000K[3]	6500K[4]
BXRC-xxx10Kx-B-8x	2145	RG1	RG1	RG1	RG1
	2970	RG1	RG1	RG1	RG2
	3945	RG1	RG1	RG2	RG2
	4750	RG1	RG2	RG2	RG2
BXRC-xxx10Kx-C-8x	1615	RG1	RG1	RG1	RG1
	2235	RG1	RG1	RG1	RG2
	2970	RG1	RG1	RG2	RG2
	4750	RG1	RG2	RG2	RG2
BXRC-xxx10Kx-D-8x	2960	RG1	RG1	RG1	RG1
	4100	RG1	RG1	RG1	RG2
	5500	RG1	RG1	RG2	RG2

Notes for Table 5:

1. Eye safety classification for the use of Bridgelux Vero 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, Ethr= 1980 lx.
3. For products classified as RG2 at 5000K Ethr= 1530 lx.
4. For products classified as RG2 at 6500K, Ethr= 1170 lx.
5. Please contact your Bridgelux sales representative for Ethr values at specific drive currents and CCTs not listed.

Absolute Maximum Ratings

Table 6: 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		
Soldering Temperature[2]	300˚C or lower for a maximum of 6 seconds		
	BXRC-xxx10Kx-B-8x	BXRC-xxx10Kx-C-8x	BXRC-xxx10Kx-D-8x
Maximum Drive Current[3]	4750 mA	4750 mA	5500 mA
Maximum Peak Pulsed Drive Current[4,5]	5320 mA	5320 mA	6160 mA
Maximum Reverse Voltage[6]	-90V	-120V	-65V

Notes for Table 6:

1. For IEC 62717 requirement, please consult your Bridgelux sales representative.
2. Refer to Bridgelux Application Note AN31: Assembly Considerations for Bridgelux Vero LED Arrays.
3. Arrays may be driven at higher currents however lumen maintenance may be reduced and warranty will not apply.
4. Per IEC 62031, LED Modules for General Lighting - Safety Specifications, the maximum allowable current when using the Molex Pico Connector is 3150mA.
5. 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.
6. 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 29B Drive Current vs. Voltage

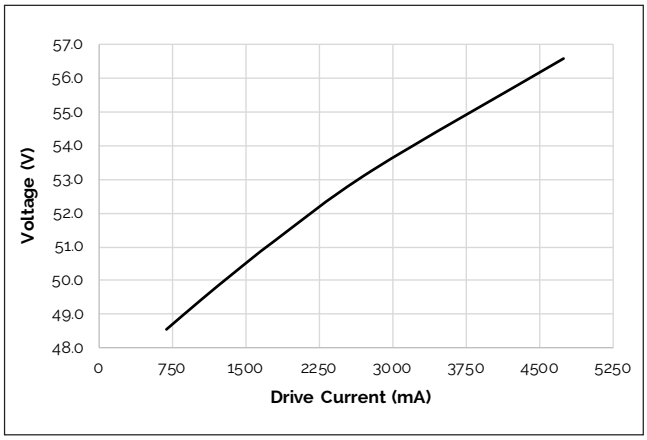


Figure 2: Vero 29C Drive Current vs. Voltage

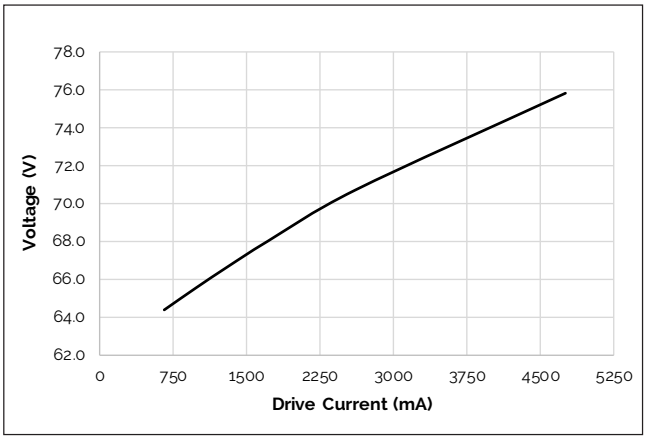


Figure 3: Vero 29D Drive Current vs. Voltage

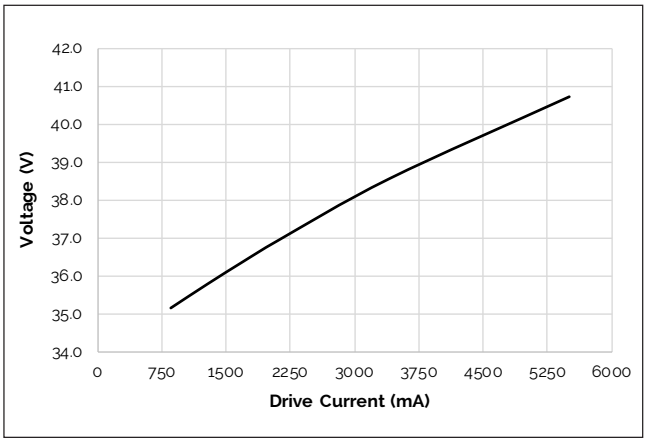


Figure 4: Vero 29B Typical Relative Flux vs. Current

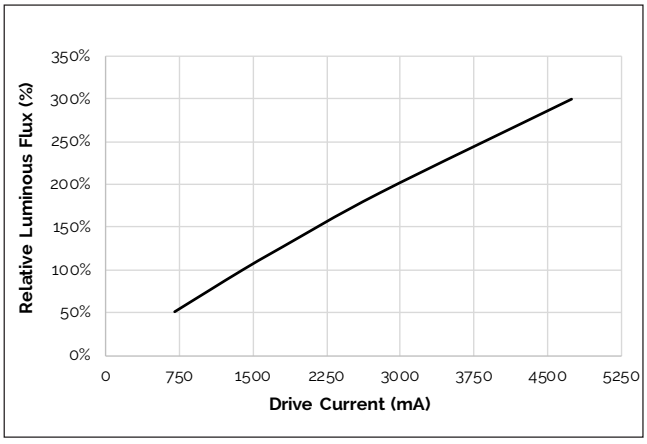


Figure 5: Vero 29C Typical Relative Flux vs. Current

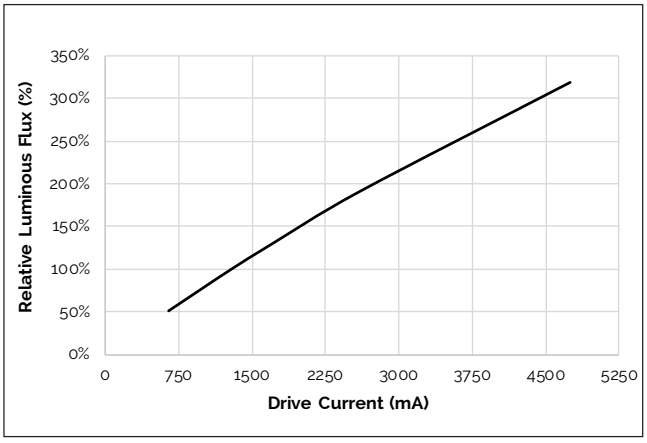
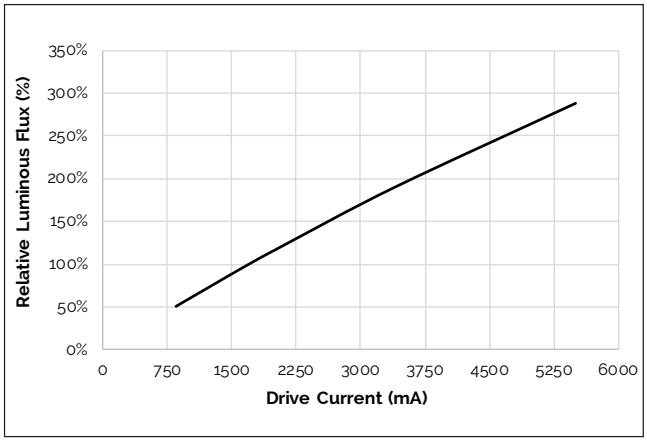


Figure 6: Vero 29D Typical Relative Flux vs. Current



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 Tj (junction temperature) = Tc (case temperature) = 25˚C.

Performance Curves

Figure 7: Typical DC Flux vs. Case Temperature

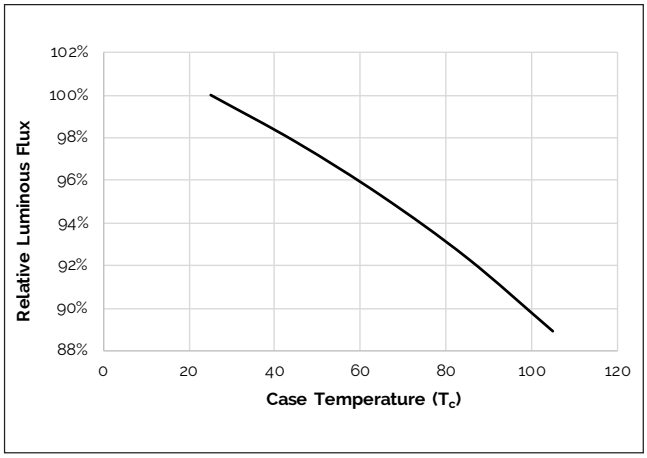


Figure 8: Typical DC ccy Shift vs. Case Temperature

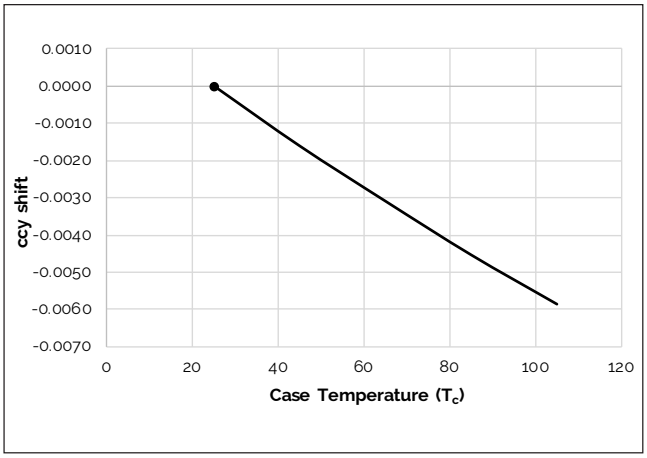


Figure 9: Typical DC ccx Shift vs. Case Temperature

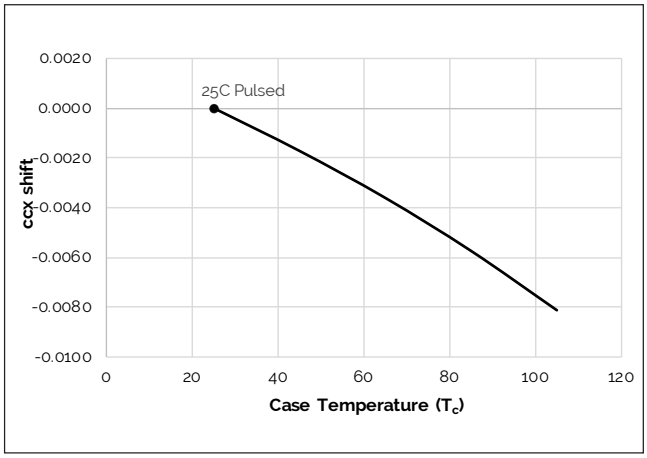
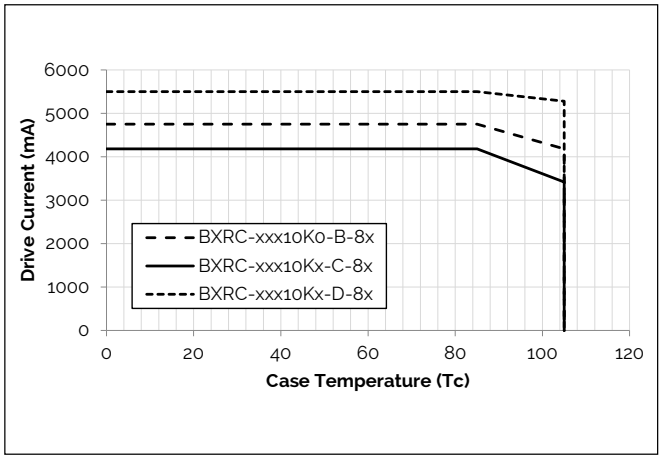


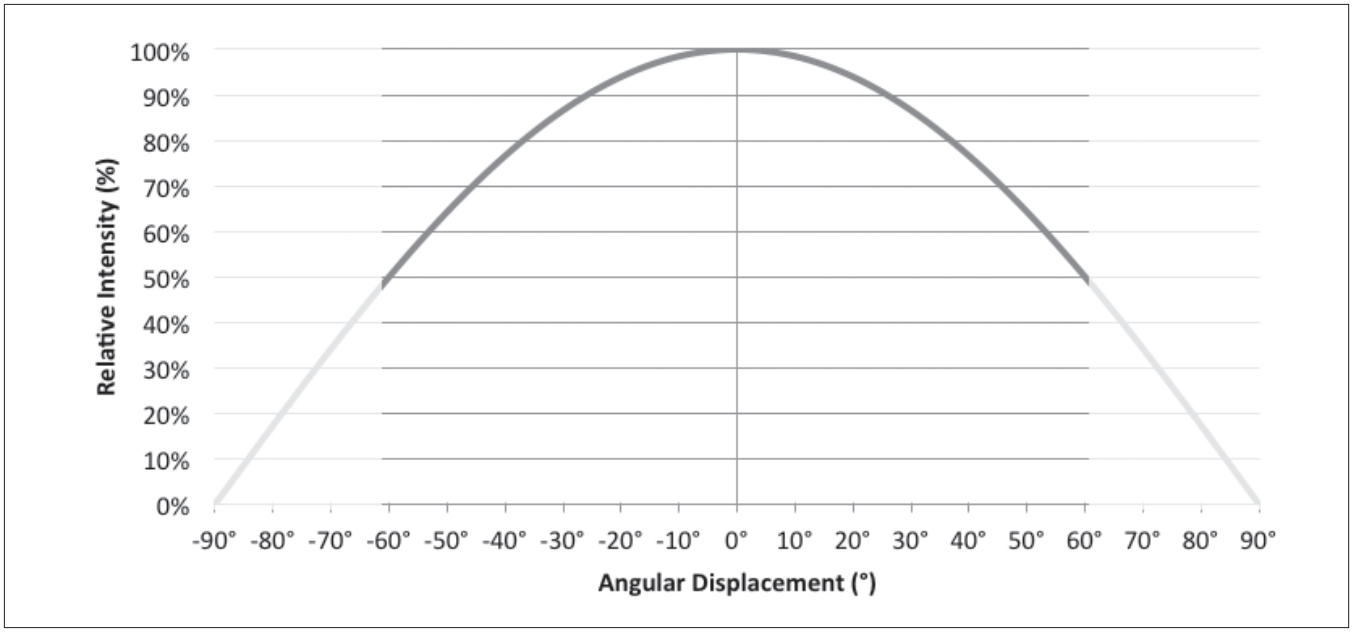
Figure 10: Derating Curve



Note for Figures 7-9:
1. Characteristics shown for Warm White.

Typical Radiation Pattern

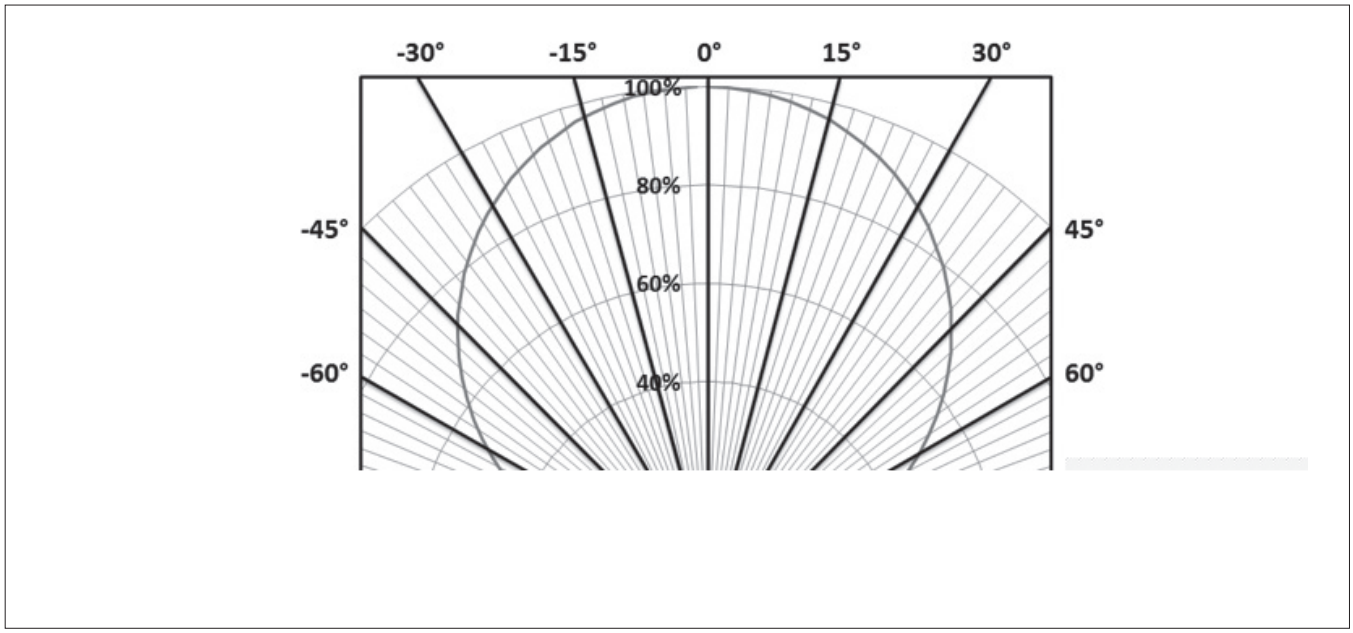
Figure 11: Typical Spatial Radiation Pattern



Notes for Figure 11:

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 12: Typical Polar Radiation Pattern



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.

3D CAD Models

Three dimensional CAD models depicting the product outline of all Bridgelux Vero LED arrays are available in both IGS and STEP formats. Please contact your Bridgelux sales representative for assistance.

LM80

LM80 testing has been completed and the LM80 report is now available. Please contact your Bridgelux sales representative for LM-80 report.

Precautions

CAUTION: CHEMICAL EXPOSURE HAZARD

Exposure to some chemicals commonly used in luminaire manufacturing and assembly can cause damage to the LED array. Please consult Bridgelux Application Note AN31 for additional information.

CAUTION: RISK OF BURN

Do not touch the Vero LED array during operation. Allow the array to cool for a sufficient period of time before handling. The Vero LED array may reach elevated temperatures such that could burn skin when touched.

CAUTION

CONTACT WITH LIGHT EMITTING SURFACE (LES)

Avoid any contact with the LES. Do not touch the LES of the LED array or apply stress to the LES (yellow phosphor resin area). Contact may cause damage to the LED array.

Optics and reflectors must not be mounted in contact with the LES (yellow phosphor resin area). Optical devices may be mounted on the top surface of the plastic housing of the Vero LED array. Use the mechanical features of the LED array housing, edges and/or mounting holes to locate and secure optical devices as needed.

Disclaimers

MINOR PRODUCT CHANGE POLICY

The rigorous qualification testing on products offered by Bridgelux provides performance assurance. Slight cosmetic changes that do not affect form, fit, or function may occur as Bridgelux continues product optimization.

STANDARD TEST CONDITIONS

Unless otherwise stated, array testing is performed at the nominal drive current.

About Bridgelux: Bridging Light and Life™

At Bridgelux, we help companies, industries and people experience the power and possibility of light. Since 2002, we've designed LED solutions that are high performing, energy efficient, cost effective and easy to integrate. Our focus is on light's impact on human behavior, delivering products that create better environments, experiences and returns—both experiential and financial. And our patented technology drives new platforms for commercial and industrial luminaires.

For more information about the company, please visit
bridgelux.com
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WeChat ID: BridgeluxInChina

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