

V Series™ and V Series HD Thrive™

Bridgelux Differentiation

- It's in our DNA to solve customer problems
- Broadest portfolio of LED form factors and color points
- Human centric and dynamic lighting technology leader
- IP protected LED innovation



Features

- High fidelity human centric white points engineered to match the spectra of natural light
- Typical 98 CRI with R1-R15 values ranging from 91 to 99 and excellent TM-30 metrics
- High efficiency design architecture
- Affordable solution optimized for health and well being
- Broad product portfolio, SMDs and COBs, ranging from 2700K-6500K

Benefits

- Smooth, full spectra with reduced blue emission and no violet peak
- Natural and vivid color rendering
- Greater energy savings, lower utility and environmental costs
- Accelerated adoption of full spectrum natural lighting
- Enables design flexibility and color consistency

Applications

- Healthcare
- Residential
- Museums
- Office & Education
- Retail & Hospitality
- Architectural



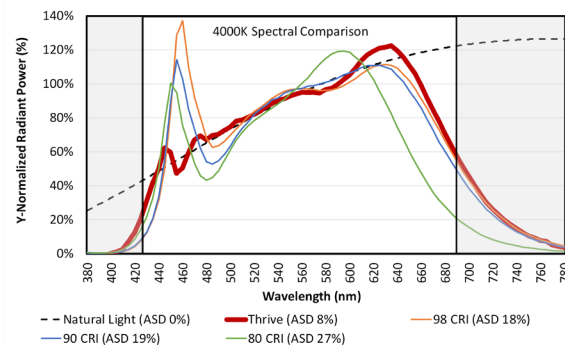
Spectral Matching to Natural Light

Humans have evolved and thrived for millions of years under the sun's natural daylight. Bridgelux Thrive is engineered to provide the closest match to natural light using proprietary chip, phosphor and packaging technology.

To quantify spectral matching, Bridgelux has defined a new term; Average Spectral Difference (ASD). ASD is calculated by measuring the absolute difference between the LED spectrum and a natural light source spectrum at discrete wavelengths. These values are then averaged across different wavelength ranges and reported as a percentage.

Bridgelux Thrive has an ASD between 8% and 10% for all color points across the typical LED wavelength range of 425-690nm, including a very close spectral match with an ASD as small as 2% for some color points in the blue/cyan range where most LED light sources suffer.

Standard 80, 90 and 98 CRI light sources have an ASD that is 100% to 300% larger than Thrive over the same wavelength range and up to 20 times greater in the cyan wavelength range.



V8 Thrive Pulsed Measurement Data, T_c=25°C

Part Number	Nominal CCT (K)	CRI (typical)	Nominal Drive Current (mA)	Typical V _r (V)	Typical Pulsed Flux (lm)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-27S0801-D-7x	2700	98	350	17.2	630	6.0	105
BXRE-30S0801-D-7x	3000				677		112
BXRE-35S0801-D-7x	3500				728		121
BXRE-40S0801-D-7x	4000				740		123
BXRE-50S0801-D-7x	5000				777		129
BXRE-57S0801-D-7x	5700				789		131
BXRE-65S0801-D-7x	6500				771		128
BXRE-27S0801-E-7x	2700	98	175	34.4	630	6.0	105
BXRE-30S0801-E-7x	3000				677		112
BXRE-35S0801-E-7x	3500				728		121
BXRE-40S0801-E-7x	4000				740		123
BXRE-50S0801-E-7x	5000				777		129
BXRE-57S0801-E-7x	5700				789		131
BXRE-65S0801-E-7x	6500				771		128

V10 Thrive Pulsed Measurement Data, T_c=25°C

Part Number	Nominal CCT (K)	CRI (typical)	Nominal Drive Current (mA)	Typical V _r (V)	Typical Pulsed Flux (lm)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-27S1001-B-7x	2700	98	270	34.4	1003	9.3	108
BXRE-30S1001-B-7x	3000				1077		116
BXRE-35S1001-B-7x	3500				1124		121
BXRE-40S1001-B-7x	4000				1142		123
BXRE-50S1001-B-7x	5000				1198		129
BXRE-57S1001-B-7x	5700				1226		132
BXRE-65S1001-B-7x	6500				1207		130
BXRE-27S1001-C-7x	2700	98	360	34.4	1337	12.4	108
BXRE-30S1001-C-7x	3000				1437		116
BXRE-35S1001-C-7x	3500				1498		121
BXRE-40S1001-C-7x	4000				1523		123
BXRE-50S1001-C-7x	5000				1598		129
BXRE-57S1001-C-7x	5700				1635		132
BXRE-65S1001-C-7x	6500				1610		130

V13C Thrive Pulsed Measurement Data, T_c=25°C

Part Number	Nominal CCT (K)	CRI (typical)	Nominal Drive Current (mA)	Typical V _r (V)	Typical Pulsed Flux (lm)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-27S2001-C-7x	2700	98	630	34.4	2330	21.7	108
BXRE-30S2001-C-7x	3000				2520		116
BXRE-35S2001-C-7x	3500				2612		121
BXRE-40S2001-C-7x	4000				2661		123
BXRE-50S2001-C-7x	5000				2774		129
BXRE-57S2001-C-7x	5700				2810		130
BXRE-65S2001-C-7x	6500				2782		128

V18C Thrive Pulsed Measurement Data, T_c=25°C

Part Number	Nominal CCT (K)	CRI (typical)	Nominal Drive Current (mA)	Typical V _r (V)	Typical Pulsed Flux (lm)	Typical Power (W)	Typical Efficacy (lm/W)
BXRE-27S4001-C-7x	2700	98	1170	34.4	4347	40.2	108
BXRE-30S4001-C-7x	3000				4669		116
BXRE-35S4001-C-7x	3500				4890		121
BXRE-40S4001-C-7x	4000				4969		123
BXRE-50S4001-C-7x	5000				5232		130
BXRE-57S4001-C-7x	5700				5312		132
BXRE-65S4001-C-7x	6500				5205		129

V4HD Thrive Pulsed Measurement Data, $T_c=25^\circ\text{C}$

Part Number	Nominal CCT (K)	CRI (typical)	Nominal Drive Current (mA)	Typical V_f (V)	Typical Pulsed Flux (lm)	Typical Power (W)	Typical Efficacy (lm/W)
BXRH-27S0601-A-7X	2700	98	175	36.4	525	6.4	82
BXRH-30S0601-A-7X	3000				563		88
BXRH-35S0601-A-7X	3500				580		91
BXRH-40S0601-A-7X	4000				605		95
BXRH-50S0601-A-7X	5000				637		100
BXRH-57S0601-A-7X	5700				637		100
BXRH-65S0601-A-7X	6500				650		102

V6HD Thrive Pulsed Measurement Data, $T_c=25^\circ\text{C}$

Part Number	Nominal CCT (K)	CRI (typical)	Nominal Drive Current (mA)	Typical V_f (V)	Typical Pulsed Flux (lm)	Typical Power (W)	Typical Efficacy (lm/W)
BXRH-27S1001-B-7X	2700	98	350	36.4	1150	12.7	90
BXRH-30S1001-B-7X	3000				1223		96
BXRH-35S1001-B-7X	3500				1271		100
BXRH-40S1001-B-7X	4000				1338		105
BXRH-50S1001-B-7X	5000				1401		110
BXRH-57S1001-B-7X	5700				1407		110
BXRH-65S1001-B-7X	6500				1420		111
BXRH-27S1001-G-7X	2700				98		700
BXRH-30S1001-G-7X	3000	1223	96				
BXRH-35S1001-G-7X	3500	1271	100				
BXRH-40S1001-G-7X	4000	1338	105				
BXRH-50S1001-G-7X	5000	1401	110				
BXRH-57S1001-G-7X	5700	1407	110				
BXRH-65S1001-G-7X	6500	1420	111				

Typical ASD, CRI R Values and TM-30 Metrics, $T_c=85^\circ\text{C}$

Nominal CCT	ASD	R_f	R_g	R_1	R_2	R_3	R_4	R_5	R_6	R_7	R_8	R_9	R_{10}	R_{11}	R_{12}	R_{13}	R_{14}	R_{15}
2700K	10%	97	100	97	99	94	94	97	98	97	98	99	97	91	98	98	95	98
3000K	9%	98	101	98	99	93	94	97	98	96	96	97	96	92	95	98	95	97
3500K	8%	97	100	98	98	97	98	98	98	98	97	93	97	97	95	98	97	98
4000K	8%	96	99	99	99	97	99	99	99	99	98	94	97	99	96	99	98	98
5000K	9%	96	99	98	99	98	98	98	98	99	98	95	98	98	98	98	98	97
5700K	9%	96	99	98	98	97	95	98	97	96	95	92	97	96	96	98	98	97
6500K	8%	96	99	98	98	97	96	98	98	96	96	93	97	96	97	98	98	97

Values shown for V10 array products. Slight differences may exist for other product configurations.

Typical Color Spectrum, $T_c=85^\circ\text{C}$

