

Bridgelux® Thrive™

SMD 2835 1W gV and Gen 7 V Series™ V10

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

- Spectrum designed to closely match natural light with reduced blue intensity
- High efficacy human centric spectra (up to 132 lm/W)
- Affordable solution optimized for human well being
- Natural and vivid color rendering
- Broad product platform availability on SMDs and COBs with 2700K-6500K color point options



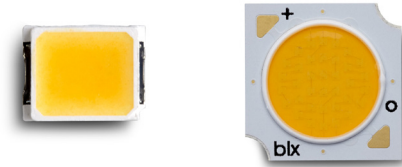
Spectral Matching to Natural Light

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 3% and 7% for all color points across the typical LED wavelength range of 440-650nm, 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 2-6 times larger than Thrive over the same wavelength range and up to 20 times greater in the cyan wavelength range.

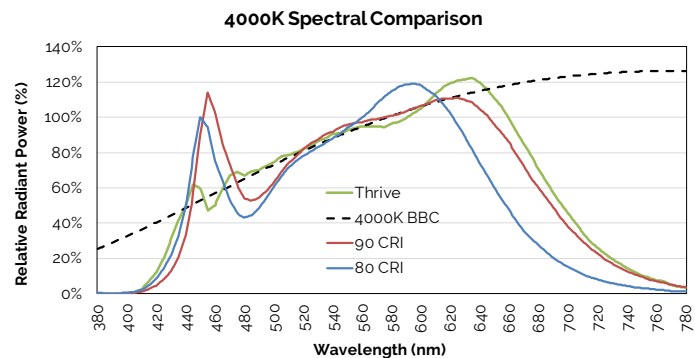


Benefits

- Full, consistent light spectrum with fewer spectral spikes
- Greater energy savings, lower utility and environmental costs
- Accelerates adoption of full spectrum natural lighting
- R₁ to R₁₅ >90, excellent TM30 with R_f and R_g values close to 100
- Enables greater design flexibility and color consistency

Applications

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



SMD 2835 Thrive Pulsed Measurement Data, T_c=25°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)	Typical Photosynthetic Photon Flux (PPF)	Typical Photon Efficiency (μmol/J)
BXEN-27S-13H-gC-00-0-0	2700	97	100	9.1	94	0.9	103	1.64	2.00
BXEN-30S-13H-gC-00-0-0	3000	97	100	9.1	98	0.9	108	1.67	2.03
BXEN-35S-13H-gC-00-0-0	3500	97	100	9.1	98	0.9	108	1.77	2.12
BXEN-40S-13H-gC-00-0-0	4000	97	100	9.1	107	0.9	118	1.74	2.07
BXEN-50S-13H-gC-00-0-0	5000	97	100	9.1	107	0.9	118	1.75	2.07
BXEN-57S-13H-gC-00-0-0	5700	97	100	9.1	107	0.9	118	1.76	2.06
BXEN-65S-13H-gC-00-0-0	6500	97	100	9.1	107	0.9	118	1.76	2.06

V10 Thrive Pulsed Measurement Data, T_c=25°C

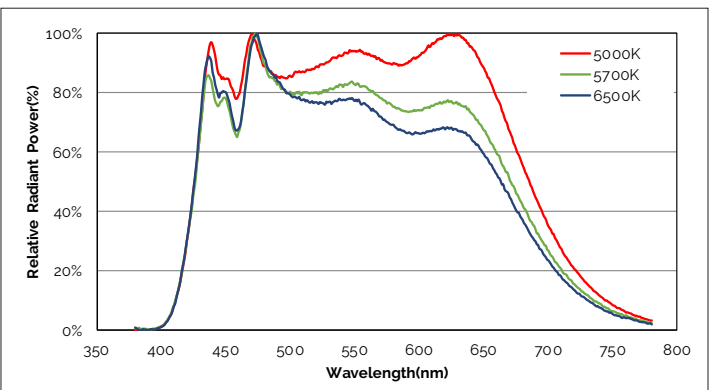
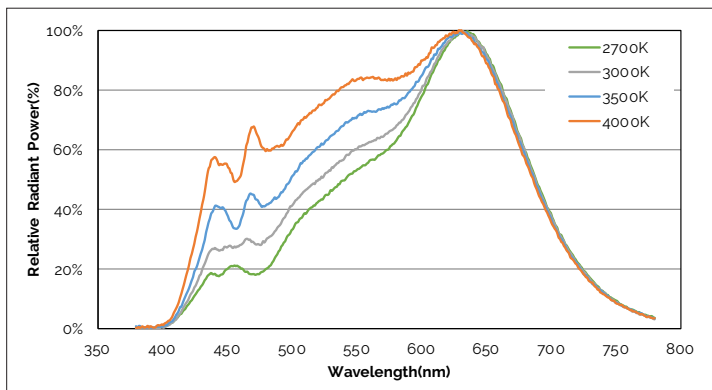
Part Number	Nominal CCT (K)	CRI (typical)	Nominal Drive Current (mA)	Typical V _f (V)	Typical Pulsed Flux (lm)	Typical Power (W)	Typical Efficacy (lm/W)	Typical Photosynthetic Photon Flux (PPF)	Typical Photon Efficiency (μmol/J)
BXRE-27S1001-B-7x	2700	97	270	34.4	1003	9.3	108	17.50	1.90
BXRE-27S1001-C-7x	2700	97	360	34.4	1337	12.4	108	23.33	1.90
BXRE-30S1001-B-7x	3000	97	270	34.4	1077	9.3	116	18.40	1.99
BXRE-30S1001-C-7x	3000	97	360	34.4	1437	12.4	116	24.55	1.99
BXRE-35S1001-B-7x	3500	97	270	34.4	1124	9.3	121	18.60	1.99
BXRE-35S1001-C-7x	3500	97	360	34.4	1498	12.4	121	24.79	1.99
BXRE-40S1001-B-7x	4000	97	270	34.4	1142	9.3	123	18.59	1.97
BXRE-40S1001-C-7x	4000	97	360	34.4	1523	12.4	123	24.79	1.97
BXRE-50S1001-B-7x	5000	97	270	34.4	1198	9.3	129	19.64	2.06
BXRE-50S1001-C-7x	5000	97	360	34.4	1598	12.4	129	26.19	2.06
BXRE-57S1001-B-7x	5700	97	270	34.4	1226	9.3	132	20.16	2.10
BXRE-57S1001-C-7x	5700	97	360	34.4	1635	12.4	132	26.88	2.10
BXRE-65S1001-B-7x	6500	97	270	34.4	1207	9.3	130	19.85	2.07
BXRE-65S1001-C-7x	6500	97	360	34.4	1610	12.4	130	26.47	2.07

Typical CRI R Values and TM-30 Metrics, T_c=85°C

Nominal CCT	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	95	103	97	99	94	94	97	98	97	98	99	97	91	98	98	95	98
3000K	95	104	98	99	93	94	97	98	96	96	97	96	92	95	98	95	97
3500K	95	98	98	98	97	98	98	98	98	97	93	97	97	95	98	97	98
4000K	97	100	99	99	97	99	99	99	99	98	94	97	99	96	99	98	98
5000K	97	100	98	99	98	98	98	98	99	98	95	98	98	98	98	98	97
5700K	94	98	98	98	97	95	98	97	96	95	92	97	96	96	98	98	97
6500K	95	98	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°C



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