

SMD 2835 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 g7 CRI with R1-R15 values ranging from 92 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



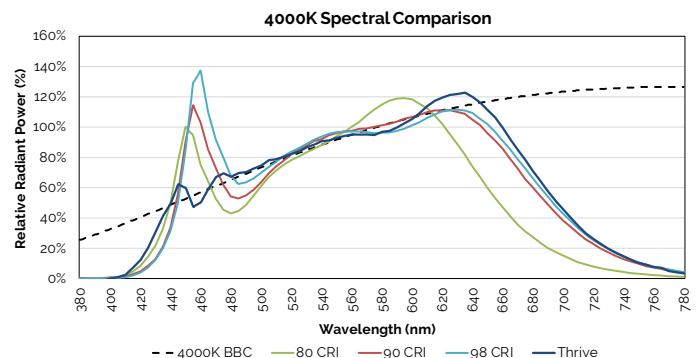
Spectral Matching to Natural Light

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 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.



SMD 2835 0.2W, 3V Thrive Pulsed Measurement Data, $T_{sp}=25^{\circ}\text{C}$

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)
BXEN-27S-11L-3C-00-0-0	2700	97	60	3.1	21	0.2	105
BXEN-30S-11L-3C-00-0-0	3000				22		110
BXEN-35S-11L-3C-00-0-0	3500				22		110
BXEN-40S-11L-3C-00-0-0	4000				24		120
BXEN-50S-11L-3C-00-0-0	5000				25		125
BXEN-57S-11L-3C-00-0-0	5700				25		125
BXEN-65S-11L-3C-00-0-0	6500				25		125

SMD 2835 0.5W, 3V Thrive Pulsed Measurement Data, $T_{sp}=25^{\circ}\text{C}$

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)
BXEN-27S-11M-3C-00-0-0	2700	97	150	3.1	49	0.5	105
BXEN-30S-11M-3C-00-0-0	3000				50		108
BXEN-35S-11M-3C-00-0-0	3500				50		108
BXEN-40S-11M-3C-00-0-0	4000				57		123
BXEN-50S-11M-3C-00-0-0	5000				58		125
BXEN-57S-11M-3C-00-0-0	5700				58		125
BXEN-65S-11M-3C-00-0-0	6500				58		125

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

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	94	102	98	99	95	94	97	99	98	98	93	97	92	92	99	96	98
3000K	94	104	98	99	95	93	97	99	96	97	97	98	92	93	98	96	97
3500K	95	98	98	98	97	98	98	98	98	97	93	97	97	95	98	97	98
4000K	97	101	99	98	96	98	99	98	98	98	95	95	97	94	99	97	99
5000K	96	101	99	98	96	97	98	96	97	97	92	94	97	92	98	98	99
5700K	94	98	98	98	97	95	98	97	96	95	92	97	96	96	98	98	97
6500K	96	100	98	98	98	98	97	96	99	99	96	98	98	91	98	99	97

Values shown for SMD 2835 0.5W products. Slight differences may exist for other product configurations.

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