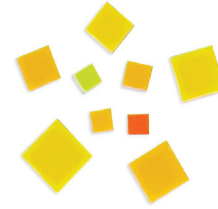


CSP Products

Bridgelux Differentiation

- 15+ years of driving LED industry transformation
- Vertically integrated global supply chain
- Broad product portfolio including CSPs, SMDs, COBs and modules
- Human centric and dynamic lighting technology leader



Features

- “Real” Chip Scale Package; True size
- Surface emitting flip chip; Phosphor layer on top of chip
- High-Power and high lumen density in ultra-compact package
- High thermal conductivity package
- 2, 3, and 5 SDCM binning options



Benefits

- Highly flexible for customized high density clustering
- Small LES customized color spectrum feasible - color mixing before secondary optics, reduce secondary optics size & costs
- Create differentiated products and deliver lower system cost
- Excellent L90 lifetimes across the entire portfolio

Applications

- Narrow beam spot lighting
- Tunable CCT cluster
- Shop lighting
- Studio lighting
- Architectural lighting
- Special spectrum lighting
- Spotlight, Downlight, Linear, Area, Floor/wall,
- High Bay, Low Bay, Street, Tunnel
- Outdoor and Indoor
- Commercial, Residential, Industrial

Product	CCT Range	CRI Options	Drive Current (mA)	Voltage (V)	Power (W)	CRI	3000K		4000K		LES (mm)
							Typical Flux (lm)	Typical Efficacy (lm/W)	Typical Flux (lm)	Typical Efficacy (lm/W)	
CSP 1111	1800K - 6500K	90, 95	50	2.7	0.1	90	20	147	22	162	1.1
			150	2.9	0.4		54	124	59	137	
			350	3.1	1.1		106	98	117	108	
			500	3.3	1.7		138	83	152	92	
CSP 1313	1800K - 6500K	80, 90, 95	50	2.7	0.1	90	21	153	22	162	1.3
			150	2.8	0.4		58	138	62	147	
			350	3.0	1.1		120	114	128	122	
			700	3.3	2.3		204	88	217	94	
CSP 1919	2200K - 6500K	70, 80, 90	50	2.6	0.1	80	25	191	28	208	1.86
			350	2.9	1.0		158	156	172	170	
			500	3.0	1.5		215	143	234	156	
			1200	3.4	4.1		429	106	467	115	
CSP 2323	2200K - 6500K	70, 80, 90, 95	50	2.6	0.1	80	24	186	27	205	2.3
			350	2.9	1.0		161	161	177	178	
			700	3.0	2.1		297	141	327	155	
			1400	3.3	4.7		526	112	580	124	
CSP 2424	2200K - 6500K	70, 80, 90, 95	50	2.6	0.1	80	25	194	29	218	2.35
			350	2.8	1.0		171	172	188	189	
			700	3.0	2.1		315	149	347	164	
			1400	3.3	4.7		558	119	615	132	
CSP 2727	2700K - 6500K	70, 80	350	2.8	1.0	70	186	192	202	209	2.7
			700	2.9	2.0		353	174	385	190	
			1500	3.2	4.7		684	144	746	157	
			2000	3.3	6.7		863	130	941	141	

All measurements are at $T_{sp}=25^{\circ}\text{C}$. Additional electrical configurations and product options are available, please consult your Bridgelux sales representative.