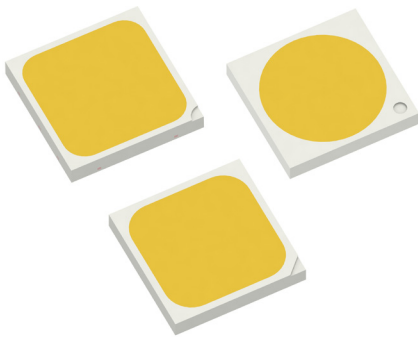




LUXEON SunPlus 5050

High efficacy and superior robustness in a high power package, enabling cost-effective system design



LUXEON SunPlus 5050 is a high power robust LEDs using an industry-standard 5050 surface mount package with a small Light Emitting Surface (LES). LUXEON SunPlus 5050 delivers top-rated $\mu\text{mol}/\text{J}$ and PPF ($\mu\text{mol}/\text{s}$) performance and long lifetime with CCTs ranging from 2200K to 6500K and CRIs of 70, 80, and 90. It offers hot-color targeting to ensure that the LEDs are within color target at application conditions of 85°C.

FEATURES AND BENEFITS

Top-rated $\mu\text{mol}/\text{J}$ and PPF ($\mu\text{mol}/\text{s}$) performance

Extremely reliable package design affirms long lifetime in harsh environments

PRIMARY APPLICATIONS

Horticulture

LUXEON SunPlus 5050 product performance at rated current, $T_j=25^{\circ}\text{C}$.

PART	NOMINAL CCT ^[1]	MINIMUM CRI ^[2, 3]	PPF (umol/s) ^[2, 3, 4]		PPF/W TYPICAL (umol/J)	PART NUMBER
			MINIMUM	TYPICAL		
LUXEON 5050 Round LES 24V	2200K	70	7.50	8.41	2.15	L150-2270502400000
	2700K	70	7.28	8.57	2.19	L150-2770502400000
	3000K	70	7.66	8.72	2.23	L150-3070502400000
	3500K	70	8.30	8.87	2.27	L150-3570502400000
	4000K	70	7.10	9.06	2.32	L150-4070502400000
	5000K	70	8.01	9.01	2.31	L150-5070502400000
	5700K	70	8.02	9.00	2.31	L150-5770502400000
	6500K	70	8.04	9.02	2.31	L150-6570502400000
	2200K	80	6.94	8.01	2.05	L150-2280502400000
	2700K	80	7.20	8.44	2.16	L150-2780502400000
	3000K	80	7.16	8.62	2.21	L150-3080502400000
	3500K	80	5.40	8.63	2.21	L150-3580502400000
	4000K	80	7.95	8.75	2.24	L150-4080502400000
	5000K	80	7.74	8.81	2.26	L150-5080502400000
	5700K	80	7.75	8.74	2.24	L150-5780502400000
	6500K	80	8.00	8.75	2.24	L150-6580502400000
	2700K	90	6.77	7.59	1.94	L150-2790502400000
	3000K	90	6.97	7.75	1.98	L150-3090502400000
	3500K	90	7.23	7.90	2.02	L150-3590502400000
	4000K	90	7.58	8.17	2.09	L150-4090502400000
	5000K	90	7.67	8.13	2.08	L150-5090502400000
5700K	90	7.49	8.08	2.07	L150-5790502400000	
LUXEON 5050 Round LES 6V	2200K	70	7.50	8.41	2.15	L150-2270500600000
	2700K	70	7.28	8.57	2.19	L150-2770500600000
	3000K	70	7.66	8.72	2.23	L150-3070500600000
	3500K	70	8.30	8.87	2.27	L150-3570500600000
	4000K	70	7.10	9.06	2.32	L150-4070500600000
	5000K	70	8.01	9.01	2.31	L150-5070500600000
	5700K	70	8.02	9.00	2.31	L150-5770500600000
	6500K	70	8.04	9.02	2.31	L150-6570500600000
	2200K	80	6.94	8.01	2.05	L150-2280500600000
	2700K	80	7.20	8.44	2.16	L150-2780500600000
	3000K	80	7.16	8.62	2.21	L150-3080500600000
	3500K	80	5.40	8.63	2.21	L150-3580500600000
	4000K	80	7.95	8.75	2.24	L150-4080500600000
	5000K	80	7.74	8.81	2.26	L150-5080500600000
	5700K	80	7.75	8.74	2.24	L150-5780500600000
	6500K	80	8.00	8.75	2.24	L150-6580500600000
	2700K	90	6.77	7.59	1.94	L150-2790500600000
	3000K	90	6.97	7.75	1.98	L150-3090500600000
	3500K	90	7.23	7.90	2.02	L150-3590500600000
	4000K	90	7.58	8.17	2.09	L150-4090500600000
	5000K	90	7.67	8.13	2.08	L150-5090500600000
5700K	90	7.49	8.08	2.07	L150-5790500600000	

Table continued on next page:

1. Correlated color temperature is not targeted at $T_j=85^{\circ}\text{C}$.
2. CRI and PPF are specified at $T_j=25^{\circ}$. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
3. Lumileds maintains a tolerance of ± 2 on CRI and $\pm 7.5\%$ on PPF.
4. PPF data is calculated from luminous flux measurements.

LUXEON SunPlus 5050 product performance at rated current, T_j=25°C, Continued.

PART	NOMINAL CCT ^[1]	MINIMUM CRI ^[2, 3]	PPF (umol/s) ^[2, 3, 4]		PPF/W TYPICAL (umol/J)	PART NUMBER
			MINIMUM	TYPICAL		
LUXEON 5050 Square LES 30V	1800K	70	9.03	9.70	1.99	L150-18705030000S0
	2200K	70	9.03	10.30	2.11	L150-22705030000S0
	2700K	70	9.36	10.60	2.17	L150-27705030000S0
	3000K	70	9.71	10.70	2.19	L150-30705030000S0
	3500K	70	9.53	10.80	2.21	L150-35705030000S0
	4000K	70	9.68	10.90	2.23	L150-40705030000S0
	5000K	70	9.69	11.00	2.25	L150-50705030000S0
	5700K	70	9.98	11.10	2.27	L150-57705030000S0
	6500K	70	9.56	11.00	2.25	L150-65705030000S0
	2200K	80	9.23	9.85	2.02	L150-22805030000S0
	2700K	80	9.29	9.97	2.04	L150-27805030000S0
	3000K	80	9.70	10.24	2.10	L150-30805030000S0
	3500K	80	9.25	10.12	2.07	L150-35805030000S0
	4000K	80	9.87	10.52	2.16	L150-40805030000S0
	5000K	80	9.93	10.66	2.18	L150-50805030000S0
	5700K	80	9.76	10.67	2.19	L150-57805030000S0
	6500K	80	10.26	10.59	2.17	L150-65805030000S0
	2700K	90	9.55	9.82	2.01	L150-27905030000S0
	3000K	90	9.48	10.09	2.07	L150-30905030000S0
	3500K	90	9.48	10.06	2.06	L150-35905030000S0
	4000K	90	9.81	10.16	2.08	L150-40905030000S0
5000K	90	9.88	10.23	2.10	L150-50905030000S0	
5700K	90	9.87	10.28	2.11	L150-57905030000S0	
LUXEON 5050 Square LES 6V	1800K	70	9.03	9.70	1.99	L150-18705006000S0
	2200K	70	9.03	10.30	2.11	L150-22705006000S0
	2700K	70	9.36	10.60	2.17	L150-27705006000S0
	3000K	70	9.71	10.70	2.19	L150-30705006000S0
	3500K	70	9.53	10.80	2.21	L150-35705006000S0
	4000K	70	9.68	10.90	2.23	L150-40705006000S0
	5000K	70	9.69	11.00	2.25	L150-50705006000S0
	5700K	70	9.98	11.10	2.27	L150-57705006000S0
	6500K	70	9.56	11.00	2.25	L150-65705006000S0
	2200K	80	9.23	9.85	2.02	L150-22805006000S0
	2700K	80	9.29	9.97	2.04	L150-27805006000S0
	3000K	80	9.70	10.24	2.10	L150-30805006000S0
	3500K	80	9.25	10.12	2.07	L150-35805006000S0
	4000K	80	9.87	10.52	2.16	L150-40805006000S0
	5000K	80	9.93	10.66	2.18	L150-50805006000S0
	5700K	80	9.76	10.67	2.19	L150-57805006000S0
	6500K	80	10.26	10.59	2.17	L150-65805006000S0
	2700K	90	9.55	9.82	2.01	L150-27905006000S0
	3000K	90	9.48	10.09	2.07	L150-30905006000S0
	3500K	90	9.48	10.06	2.06	L150-35905006000S0
	4000K	90	9.81	10.16	2.08	L150-40905006000S0
5000K	90	9.88	10.23	2.10	L150-50905006000S0	
5700K	90	9.87	10.28	2.11	L150-57905006000S0	

Table continued on next page:

1. Correlated color temperature is not targeted at T_j=85°C.
2. CRI and PPF are specified at T_j=25°. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
3. Lumileds maintains a tolerance of ±2 on CRI and ±7.5% on PPF.
4. PPF data is calculated from luminous flux measurements.

LUXEON SunPlus 5050 product performance at rated current, T_j=25°C, Continued.

PART	NOMINAL CCT ^[1]	MINIMUM CRI ^[2, 3]	PPF (umol/s) ^[2, 3, 4]		PPF/W TYPICAL (umol/J)	PART NUMBER
			MINIMUM	TYPICAL		
LUXEON 5050 HE 24V	1800K	70	7.30	8.04	2.08	L150-18705024000H0
	2200K	70	8.06	8.67	2.24	L150-22705024000H0
	2700K	70	8.38	8.94	2.31	L150-27705024000H0
	3000K	70	8.29	9.09	2.35	L150-30705024000H0
	3500K	70	8.21	9.28	2.40	L150-35705024000H0
	4000K	70	8.42	9.37	2.42	L150-40705024000H0
	5000K	70	8.61	9.47	2.45	L150-50705024000H0
	5700K	70	9.00	9.51	2.46	L150-57705024000H0
	6500K	70	8.58	9.62	2.48	L150-65705024000H0
	2200K	80	7.51	8.15	2.10	L150-22805024000H0
	2700K	80	7.84	8.52	2.20	L150-27805024000H0
	3000K	80	7.66	8.73	2.25	L150-30805024000H0
	3500K	80	8.09	8.92	2.30	L150-35805024000H0
	4000K	80	8.18	8.97	2.32	L150-40805024000H0
	5000K	80	8.42	9.01	2.33	L150-50805024000H0
	5700K	80	8.29	9.07	2.34	L150-57805024000H0
	6500K	80	8.58	9.11	2.35	L150-65805024000H0
	2700K	90	7.73	8.20	2.12	L150-27905024000H0
	3000K	90	7.92	8.28	2.14	L150-30905024000H0
	3500K	90	8.11	8.42	2.18	L150-35905024000H0
	4000K	90	8.14	8.58	2.22	L150-40905024000H0
	5000K	90	8.36	8.77	2.26	L150-50905024000H0
	5700K	90	8.31	8.79	2.27	L150-57905024000H0
	1800K	70	7.30	8.00	2.07	L150-1870502400TH0
	2200K	70	8.06	8.63	2.23	L150-2270502400TH0
	2700K	70	8.38	8.90	2.30	L150-2770502400TH0
	3000K	70	8.29	9.04	2.34	L150-3070502400TH0
	3500K	70	8.21	9.23	2.38	L150-3570502400TH0
	4000K	70	8.42	9.32	2.41	L150-4070502400TH0
	5000K	70	8.61	9.42	2.43	L150-5070502400TH0
5700K	70	9.00	9.46	2.44	L150-5770502400TH0	
6500K	70	8.58	9.57	2.47	L150-6570502400TH0	
2200K	80	7.51	8.09	2.09	L150-2280502400TH0	
2700K	80	7.84	8.40	2.17	L150-2780502400TH0	
3000K	80	7.66	8.62	2.23	L150-3080502400TH0	
3500K	80	8.09	8.83	2.28	L150-3580502400TH0	
4000K	80	8.18	8.98	2.32	L150-4080502400TH0	
5000K	80	8.42	9.03	2.33	L150-5080502400TH0	
5700K	80	8.29	9.05	2.34	L150-5780502400TH0	
6500K	80	8.58	9.09	2.35	L150-6580502400TH0	

Table continued on next page:

1. Correlated color temperature is hot targeted at T=85°C.
2. CRI and PPF are specified at T_j =25°. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
3. Lumileds maintains a tolerance of ±2 on CRI and ±7.5% on PPF.
4. PPF data is calculated from luminous flux measurements.

LUXEON SunPlus 5050 product performance at rated current, T_j=25°C, Continued.

PART	NOMINAL CCT ^[1]	MINIMUM CRI ^[2, 3]	PPF (umol/s) ^[2, 3, 4]		PPF/W TYPICAL (umol/J)	PART NUMBER
			MINIMUM	TYPICAL		
LUXEON 5050 HE 6V	1800K	70	7.30	8.04	2.08	L150-18705006000H0
	2200K	70	8.06	8.67	2.24	L150-22705006000H0
	2700K	70	8.38	8.94	2.31	L150-27705006000H0
	3000K	70	8.29	9.09	2.35	L150-30705006000H0
	3500K	70	8.21	9.28	2.40	L150-35705006000H0
	4000K	70	8.42	9.37	2.42	L150-40705006000H0
	5000K	70	8.61	9.47	2.45	L150-50705006000H0
	5700K	70	9.00	9.51	2.46	L150-57705006000H0
	6500K	70	8.58	9.62	2.48	L150-65705006000H0
	2200K	80	7.51	8.15	2.10	L150-22805006000H0
	2700K	80	7.84	8.52	2.20	L150-27805006000H0
	3000K	80	7.66	8.73	2.25	L150-30805006000H0
	3500K	80	8.09	8.92	2.30	L150-35805006000H0
	4000K	80	8.18	8.97	2.32	L150-40805006000H0
	5000K	80	8.42	9.01	2.33	L150-50805006000H0
	5700K	80	8.29	9.07	2.34	L150-57805006000H0
	6500K	80	8.58	9.11	2.35	L150-65805006000H0
	2700K	90	7.73	8.20	2.12	L150-27905006000H0
	3000K	90	7.92	8.28	2.14	L150-30905006000H0
	3500K	90	8.11	8.42	2.18	L150-35905006000H0
	4000K	90	8.14	8.58	2.22	L150-40905006000H0
	5000K	90	8.36	8.77	2.26	L150-50905006000H0
	5700K	90	8.31	8.79	2.27	L150-57905006000H0
	1800K	70	7.30	8.00	2.07	L150-18705006000TH0
	2200K	70	8.06	8.63	2.23	L150-22705006000TH0
	2700K	70	8.38	8.90	2.30	L150-27705006000TH0
	3000K	70	8.29	9.04	2.34	L150-30705006000TH0
	3500K	70	8.21	9.23	2.38	L150-35705006000TH0
	4000K	70	8.42	9.32	2.41	L150-40705006000TH0
	5000K	70	8.61	9.42	2.43	L150-50705006000TH0
5700K	70	9.00	9.46	2.44	L150-57705006000TH0	
6500K	70	8.58	9.57	2.47	L150-65705006000TH0	
2200K	80	7.51	8.09	2.09	L150-22805006000TH0	
2700K	80	7.84	8.40	2.17	L150-27805006000TH0	
3000K	80	7.66	8.62	2.23	L150-30805006000TH0	
3500K	80	8.09	8.83	2.28	L150-35805006000TH0	
4000K	80	8.18	8.98	2.32	L150-40805006000TH0	
5000K	80	8.42	9.03	2.33	L150-50805006000TH0	
5700K	80	8.29	9.05	2.34	L150-57805006000TH0	
6500K	80	8.58	9.09	2.35	L150-65805006000TH0	

Notes:

1. Correlated color temperature is not targeted at T_j=85°C.
2. CRI and PPF are specified at T_j=25°. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
3. Lumileds maintains a tolerance of ±2 on CRI and ±7.5% on PPF.
4. PPF data is calculated from luminous flux measurements.

LUXEON SunPlus 5050 product performance at rated current, $T_j=25^\circ\text{C}$, Continued.

PART	NOMINAL CCT ^[1]	MINIMUM CRI ^[2, 3]	PPF (umol/s) ^[2, 3, 4]		PPF/W TYPICAL (umol/J)	PART NUMBER
			MINIMUM	TYPICAL		
LUXEON 5050 HE Plus - 6V	1800K	70	8.15	8.41	2.25	L150-1870500600HH0
	2200K	70	8.62	9.07	2.42	L150-2270500600HH0
	2700K	70	8.65	9.26	2.47	L150-2770500600HH0
	3000K	70	8.94	9.31	2.49	L150-3070500600HH0
	3500K	70	8.74	9.36	2.50	L150-3570500600HH0
	4000K	70	9.15	9.61	2.57	L150-4070500600HH0
	5000K	70	9.27	9.68	2.59	L150-5070500600HH0
	5700K	70	9.18	9.62	2.57	L150-5770500600HH0
	6500K	70	9.30	9.81	2.62	L150-6570500600HH0
	2200K	80	7.79	8.36	2.23	L150-2280500600HH0
	2700K	80	8.49	8.93	2.39	L150-2780500600HH0
	3000K	80	8.29	8.98	2.40	L150-3080500600HH0
	3500K	80	8.75	9.12	2.44	L150-3580500600HH0
	4000K	80	8.98	9.36	2.50	L150-4080500600HH0
	5000K	80	9.08	9.37	2.50	L150-5080500600HH0
	5700K	80	8.84	9.39	2.51	L150-5780500600HH0
6500K	80	8.84	9.50	2.54	L150-6580500600HH0	

Notes:

1. Correlated color temperature is not targeted at $T_j=85^\circ\text{C}$.
2. CRI and PPF are specified at $T_j=25^\circ$. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
3. Lumileds maintains a tolerance of ± 2 on CRI and $\pm 7.5\%$ on PPF.
4. PPF data is calculated from luminous flux measurements.