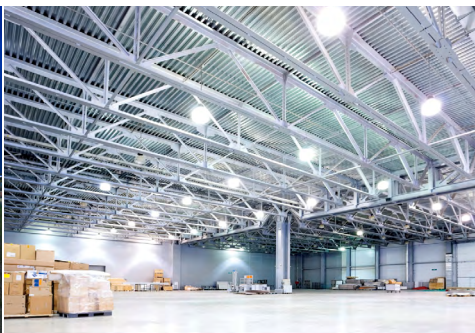
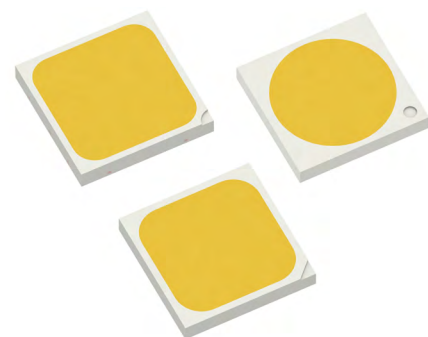




LUXEON 5050

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



LUXEON 5050 is a multi-die, high power package that provides high luminance from a super robust package to enable cost effective and reliable fixture designs. LUXEON 5050 uses an industry standard 5050 surface mount package with a fairly small Light Emitting Surface (LES). LUXEON 5050 product family includes LUXEON 5050 Round LES, LUXEON 5050 Square LES and LUXEON 5050 HE, three product lines. LUXEON 5050 comes in 70CRI, 80CRI and 90CRI with a wide range of CCTs, and offers hot-color targeting to ensure that the LEDs are within color target at application conditions of 85°C.

FEATURES AND BENEFITS

- Superior lm/W enables outstanding efficacy in end application
- Extremely reliable package design affirms long lifetime in harsh environments^[1]
- Robust coating design for enhanced sulfur protection capability (LUXEON 5050 Square LES)^[1]
- Two voltage configurations are compatible with low cost high efficacy drivers
- Low R_{th} enables effective thermal dissipation design for higher efficiency
- Hot-color targeting ensures color is within ANSI bin at 85°C
- 3-step and 5-step MacAdam ellipse binning structure ensures excellent color uniformity

1. Refer to reliability datasheet for more details.

PRIMARY APPLICATIONS

- Street Lights
- High Bay
- Low Bay
- Flood Lights
- Wall Pack
- Landscape Lighting
- Downlights

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

PRODUCT	NOMINAL CCT ^[1]	MINIMUM CRI ^[2, 3]	LUMINOUS FLUX ^[2, 3] (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	LUMINOUS FLUX ^[2, 3] (lm)	TYPICAL LUMINOUS EFFICACY (lm/W)	PART NUMBER
			MINIMUM	TYPICAL		TYPICAL		
			RATED CURRENT ^[4]				50% OF RATED CURRENT ^[4]	
LUXEON 5050 Round LES 24V	2200K	70	515	587	150	309	169	L150-2270502400000
	2700K	70	535	640	164	336	184	L150-2770502400000
	3000K	70	553	667	171	351	192	L150-3070502400000
	3500K	70	600	686	176	361	197	L150-3570502400000
	4000K	70	580	693	178	364	199	L150-4070502400000
	5000K	70	580	693	178	364	199	L150-5070502400000
	5700K	70	570	683	175	359	196	L150-5770502400000
	6500K	70	570	677	173	356	195	L150-6570502400000
	2200K	80	440	500	128	263	144	L150-2280502400000
	2700K	80	500	572	147	301	164	L150-2780502400000
	3000K	80	516	595	152	313	171	L150-3080502400000
	3500K	80	527	605	155	318	174	L150-3580502400000
	4000K	80	539	630	161	331	181	L150-4080502400000
	5000K	80	539	630	161	331	181	L150-5080502400000
	5700K	80	539	617	158	324	177	L150-5780502400000
	6500K	80	539	615	158	323	177	L150-6580502400000
	2700K	90	414	475	122	250	137	L150-2790502400000
	3000K	90	428	490	126	258	141	L150-3090502400000
	3500K	90	445	510	131	268	147	L150-3590502400000
	4000K	90	456	530	136	279	152	L150-4090502400000
	5000K	90	456	530	136	279	152	L150-5090502400000
	5700K	90	456	530	136	279	152	L150-5790502400000
LUXEON 5050 Round LES 6V	2200K	70	515	587	150	309	169	L150-2270500600000
	2700K	70	535	640	164	336	184	L150-2770500600000
	3000K	70	553	667	171	351	192	L150-3070500600000
	3500K	70	600	686	176	361	197	L150-3570500600000
	4000K	70	580	693	178	364	199	L150-4070500600000
	5000K	70	580	693	178	364	199	L150-5070500600000
	5700K	70	570	683	175	359	196	L150-5770500600000
	6500K	70	570	677	173	356	195	L150-6570500600000
	2200K	80	440	500	128	263	144	L150-2280500600000
	2700K	80	500	572	147	301	164	L150-2780500600000
	3000K	80	516	595	152	313	171	L150-3080500600000
	3500K	80	527	605	155	318	174	L150-3580500600000
	4000K	80	539	630	161	331	181	L150-4080500600000
	5000K	80	539	630	161	331	181	L150-5080500600000
	5700K	80	539	617	158	324	177	L150-5780500600000
	6500K	80	539	615	158	323	177	L150-6580500600000
	2700K	90	414	475	122	250	137	L150-2790500600000
	3000K	90	428	490	126	258	141	L150-3090500600000
	3500K	90	445	510	131	268	147	L150-3590500600000
	4000K	90	456	530	136	279	152	L150-4090500600000
	5000K	90	456	530	136	279	152	L150-5090500600000
	5700K	90	456	530	136	279	152	L150-5790500600000

Table continued on next page:

1. Correlated color temperature is not targeted at T_j=85°C.
2. Luminous flux and CRI are based upon mounted package on highly reflective surface at T_j=25°C. 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% on luminous flux measurements.
4. Rated current of LUXEON 5050 Round LES/LUXEON 5050 HE: 6V - 640mA, 24V - 160mA. Rated current of LUXEON 5050 Square LES: 6V - 800mA, 30V - 160mA.

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

PRODUCT	NOMINAL CCT ^[1]	MINIMUM CRI ^[2, 3]	LUMINOUS FLUX ^[2, 3] (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	LUMINOUS FLUX ^[2, 3] (lm)	TYPICAL LUMINOUS EFFICACY (lm/W)	PART NUMBER
			MINIMUM	TYPICAL		TYPICAL		
			RATED CURRENT ^[4]				50% OF RATED CURRENT ^[4]	
LUXEON 5050 Square LES 30V	2200K	70	621	695	143	373	163	L150-22705030000S0
	2700K	70	693	775	159	416	181	L150-27705030000S0
	3000K	70	720	803	165	431	188	L150-30705030000S0
	3500K	70	729	815	168	437	191	L150-35705030000S0
	4000K	70	743	835	172	448	195	L150-40705030000S0
	5000K	70	743	833	171	447	195	L150-50705030000S0
	5700K	70	738	823	169	442	193	L150-57705030000S0
	6500K	70	720	803	165	431	188	L150-65705030000S0
	2200K	80	586	630	130	338	147	L150-22805030000S0
	2700K	80	650	695	143	373	163	L150-27805030000S0
	3000K	80	665	730	150	392	171	L150-30805030000S0
	3500K	80	679	735	151	394	172	L150-35805030000S0
	4000K	80	700	768	158	412	180	L150-40805030000S0
	5000K	80	702	768	158	412	180	L150-50805030000S0
	5700K	80	700	768	158	412	180	L150-57805030000S0
	6500K	80	688	740	152	397	173	L150-65805030000S0
	2700K	90	558	600	123	322	140	L150-27905030000S0
	3000K	90	586	630	130	338	147	L150-30905030000S0
	3500K	90	600	640	132	343	150	L150-35905030000S0
	4000K	90	609	655	135	352	153	L150-40905030000S0
	5000K	90	618	665	137	357	156	L150-50905030000S0
	5700K	90	605	650	134	349	152	L150-57905030000S0
LUXEON 5050 Square LES 6V	2200K	70	621	695	143	373	163	L150-22705006000S0
	2700K	70	693	775	159	416	181	L150-27705006000S0
	3000K	70	720	803	165	431	188	L150-30705006000S0
	3500K	70	729	815	168	437	191	L150-35705006000S0
	4000K	70	743	835	172	448	195	L150-40705006000S0
	5000K	70	743	833	171	447	195	L150-50705006000S0
	5700K	70	738	823	169	442	193	L150-57705006000S0
	6500K	70	720	803	165	431	188	L150-65705006000S0
	2200K	80	586	630	130	338	147	L150-22805006000S0
	2700K	80	650	695	143	373	163	L150-27805006000S0
	3000K	80	665	730	150	392	171	L150-30805006000S0
	3500K	80	679	735	151	394	172	L150-35805006000S0
	4000K	80	700	768	158	412	180	L150-40805006000S0
	5000K	80	702	768	158	412	180	L150-50805006000S0
	5700K	80	700	768	158	412	180	L150-57805006000S0
	6500K	80	688	740	152	397	173	L150-65805006000S0
	2700K	90	558	600	123	322	140	L150-27905006000S0
	3000K	90	586	630	130	338	147	L150-30905006000S0
	3500K	90	600	640	132	343	150	L150-35905006000S0
	4000K	90	609	655	135	352	153	L150-40905006000S0
	5000K	90	618	665	137	357	156	L150-50905006000S0
	5700K	90	605	650	134	349	152	L150-57905006000S0

Table continued on next page:

1. Correlated color temperature is not targeted at T_j=85°C.
2. Luminous flux and CRI are based upon mounted package on highly reflective surface at T_j=25°C. 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% on luminous flux measurements.
4. Rated current of LUXEON 5050 Round LES/LUXEON 5050 HE: 6V - 640mA, 24V - 160mA. Rated current of LUXEON 5050 Square LES: 6V - 800mA, 30V - 160mA.

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

PRODUCT	NOMINAL CCT ^[1]	MINIMUM CRI ^[2, 3]	LUMINOUS FLUX ^[2, 3] (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	LUMINOUS FLUX ^[2, 3] (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	PART NUMBER
			MINIMUM	TYPICAL		TYPICAL			
			RATED CURRENT ^[4]			50% OF RATED CURRENT ^[4]			
LUXEON 5050 HE 24V	1800K	70	455	490	127	261		143	L150-18705024000H0
	2200K	70	544	590	152	314		172	L150-22705024000H0
	2700K	70	602	650	168	346		190	L150-27705024000H0
	3000K	70	623	673	174	358		196	L150-30705024000H0
	3500K	70	632	692	179	369		202	L150-35705024000H0
	4000K	70	651	714	184	380		208	L150-40705024000H0
	5000K	70	651	714	184	380		208	L150-50705024000H0
	5700K	70	640	705	182	375		206	L150-57705024000H0
	6500K	70	637	697	180	371		203	L150-65705024000H0
	2200K	80	474	510	132	272		149	L150-22805024000H0
	2700K	80	539	580	150	309		169	L150-27805024000H0
	3000K	80	563	605	156	322		176	L150-30805024000H0
	3500K	80	586	637	165	339		186	L150-35805024000H0
	4000K	80	597	654	169	348		191	L150-40805024000H0
	5000K	80	597	655	169	349		191	L150-50805024000H0
	5700K	80	595	652	168	347		190	L150-57805024000H0
	6500K	80	586	650	168	346		190	L150-65805024000H0
	2700K	90	465	503	130	268		147	L150-27905024000H0
	3000K	90	485	525	136	280		153	L150-30905024000H0
	3500K	90	502	544	140	290		159	L150-35905024000H0
	4000K	90	512	558	144	297		163	L150-40905024000H0
	5000K	90	512	560	145	298		163	L150-50905024000H0
	5700K	90	512	560	145	298		163	L150-57905024000H0
LUXEON 5050 HE 6V	1800K	70	455	490	127	261		143	L150-18705006000H0
	2200K	70	544	590	152	314		172	L150-22705006000H0
	2700K	70	602	650	168	346		190	L150-27705006000H0
	3000K	70	623	673	174	358		196	L150-30705006000H0
	3500K	70	632	692	179	369		202	L150-35705006000H0
	4000K	70	651	714	184	380		208	L150-40705006000H0
	5000K	70	651	714	184	380		208	L150-50705006000H0
	5700K	70	640	705	182	375		206	L150-57705006000H0
	6500K	70	637	697	180	371		203	L150-65705006000H0
	2200K	80	474	510	132	272		149	L150-22805006000H0
	2700K	80	539	580	150	309		169	L150-27805006000H0
	3000K	80	563	605	156	322		176	L150-30805006000H0
	3500K	80	586	637	165	339		186	L150-35805006000H0
	4000K	80	597	654	169	348		191	L150-40805006000H0
	5000K	80	597	655	169	349		191	L150-50805006000H0
	5700K	80	595	652	168	347		190	L150-57805006000H0
	6500K	80	586	650	168	346		190	L150-65805006000H0
	2700K	90	465	503	130	268		147	L150-27905006000H0
	3000K	90	485	525	136	280		153	L150-30905006000H0
	3500K	90	502	544	140	290		159	L150-35905006000H0
	4000K	90	512	558	144	297		163	L150-40905006000H0
	5000K	90	512	560	145	298		163	L150-50905006000H0
	5700K	90	512	560	145	298		163	L150-57905006000H0

Notes:

1. Correlated color temperature is not targeted at T_j=85°C.
2. Luminous flux and CRI are based upon mounted package on highly reflective surface at T_j=25°C. 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% on luminous flux measurements.
4. Rated current of LUXEON 5050 Round LES/LUXEON 5050 HE: 6V - 640mA, 24V - 160mA. Rated current of LUXEON 5050 Square LES: 6V - 800mA, 30V - 160mA.

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