

ILLUMINATION



LUXEON CoB Core Range Gen 6 and Gen 6 HE



Uniform, high efficacy and easy to design array



LUXEON CoB represents a new breakthrough for arrays. Due to its small Light Emitting Surface (LES) and industry-leading thermal resistance, LUXEON CoB is easy to work with, enabling simplified and less expensive luminaire designs. LUXEON CoBs are hot-tested at 85°C—real world operating conditions—which means additional testing can be minimized. LUXEON CoB LEDs are available in 3-step MacAdam ellipse, ensuring uniform optical performance in a wide range of applications.

FEATURES AND BENEFITS

Highest flux	densities with	industry's	smallest LES
	0.0		0

- 3-step MacAdam ellipse color definition: *Freedom from Binning* for color consistency from luminaire to luminaire
- Up to 4x lower thermal resistance than competition, enabling smaller heatsinks and higher lumens

Supported by a comprehensive optical, mechanical and electrical ecosystem

PRIMARY APPLICATIONS

Spotlights	
Track Lights	
Downlights	
High Bay	
Low Bay	
Floodlights	

More...



LUXEON CoB Core Range product performance at specified test current. T=85°C

	MINIMUM	LUMINOUS FLUX [2] (Im)		TYPICAL LUMINOUS	TEST CURRENT	ENERGY		
(mm)	mm) CCT CRI ^{[2, 3,}	CRI ^[2, 3, 4]	MINIMUM	TYPICAL	EFFICACY (Im/W)	(mA)	EFFICIENCY CLASS [5]	PARTNOMBER
6.5	2700K	90	984	1093	161	200	D	L2C5-279012021060>
6.5	3000K	90	978	1087	160	200	D	L2C5-309012021060>
6.5	3500K	90	994	1105	163	200	D	L2C5-359012021060>
6.5	4000K	90	1007	1119	165	200	D	L2C5-409012021060>
6.5	5000K	90	1012	1124	166	200	D	L2C5-509012021060>
9	2700K	90	1013	1126	166	200	D	L2C5-279012021090>
9	3000K	90	1008	1120	165	200	D	L2C5-309012021090>
9	3500K	90	1024	1138	168	200	D	L2C5-359012021090>
9	4000K	90	1037	1152	170	200	D	L2C5-409012021090>
9	5000K	90	1042	1158	171	200	D	L2C5-509012021090>
9	2700K	90	1466	1628	160	300	D	L2C5-279012031090>
9	3000K	90	1458	1620	159	300	D	L2C5-309012031090>
9	3500K	90	1481	1646	162	300	D	L2C5-359012031090>
9	4000K	90	1500	1667	164	300	D	L2C5-409012031090>
9	5000K	90	1508	1675	165	300	D	L2C5-509012031090>
9	2700K	90	1948	2164	160	400	D	L2C5-279012041090>
9	3000K	90	1937	2152	159	400	D	L2C5-309012041090
9	3500K	90	1968	2187	161	400	D	L2C5-359012041090>
9	4000K	90	1993	2215	163	400	D	L2C5-409012041090>
9	5000K	90	2004	2226	164	400	D	L2C5-509012041090>
13	2700K	90	2857	3174	153	600	D	L2C5-27901205I130>
13	3000K	90	2921	3245	157	600	D	L2C5-30901205I130>
13	3500K	90	3009	3343	162	600	D	L2C5-35901205I130>
13	4000K	90	3083	3426	165	600	D	L2C5-40901205I130>
13	5000K	90	3025	3362	162	600	D	L2C5-50901205I130>
15	2700K	90	4289	4766	155	900	D	L2C5-27901208I150>
15	3000K	90	4485	4983	162	900	D	L2C5-30901208I150>
15	3500K	90	4526	5029	163	900	D	L2C5-35901208I150>
15	4000K	90	4625	5139	167	900	D	L2C5-40901208I150>
15	5000K	90	4552	5057	164	900	D	L2C5-50901208I150>
15	2700K	90	4395	4883	161	900	D	L2C5-27901210I150>
15	3000K	90	4459	4954	164	900	D	L2C5-30901210I150>
15	3500K	90	4538	5042	167	900	D	L2C5-35901210I150>
15	4000K	90	4672	5191	172	900	D	L2C5-40901210 150>
15	5000K	90	4650	5167	171	900	D	L2C5-50901210 150>

Light Emitting Surface (LES) is the inner diameter (phosphor area) inside the dam.
Lumileds maintains a tolerance of ±2 on CRI and ±6.5% on luminous flux measurements.
Typical CRI is approximately 2 points higher than the minimum CRI specified but this is

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4.

Energy efficiency class as specified in Commission Delegated Regulation (EU) 2019/2015. The available range of energy efficiency classes is A-G. Part number ends with "y" designates SDCM available in both 2-step (x=2) and 3-step (x=0) MacAdam. 5. 6.

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Product performance of LUXEON CoB Core Range PW at specified test current, Tj=85°C

LES [1]		MINIMUM	UM LUMINOUS FLUX ^[2] (Im)		TYPICAL	TEST	ENERGY EFFICIENCY CLASS ^[5]	PART NUMBER [6]
(mm)		MINIMUM	TYPICAL	LUMINOUS EFFICACY (lm/W)	CURRENT (mA)			
6.5	3000K	90	961	1068	158	200	D	L2C5-30901202I06P>
6.5	3500K	90	971	1078	159	200	D	L2C5-35901202I06P>
6.5	4000K	90	978	1086	160	200	D	L2C5-40901202I06P>
9	3000K	90	985	1095	161	200	D	L2C5-30901202l09P>
9	3500K	90	997	1108	163	200	D	L2C5-35901202l09P
9	4000K	90	1007	1118	165	200	D	L2C5-40901202l09P
9	3000K	90	1453	1614	159	300	D	L2C5-30901203I09P
9	3500K	90	1458	1620	159	300	D	L2C5-35901203I09P
9	4000K	90	1459	1622	159	300	D	L2C5-40901203I09P
9	3000K	90	1894	2104	155	400	D	L2C5-30901204I09P
9	3500K	90	1917	2130	157	400	D	L2C5-35901204I09P
9	4000K	90	1935	2150	159	400	D	L2C5-40901204I09P
13	3000K	90	2863	3182	154	600	D	L2C5-30901205I13P
13	3500K	90	2916	3240	157	600	D	L2C5-35901205I13P
13	4000K	90	2967	3296	159	600	D	L2C5-40901205I13P
15	3000K	90	4325	4805	156	900	D	L2C5-30901208I15P
15	3500K	90	4344	4826	157	900	D	L2C5-35901208I15P
15	4000K	90	4508	5009	163	900	D	L2C5-40901208I15P
15	3000K	90	4369	4854	161	900	D	L2C5-30901210I15P
15	3500K	90	4460	4955	164	900	D	L2C5-35901210I15P
15	4000K	90	4500	5000	165	900	D	L2C5-40901210I15P

Notes:

1. Light Emitting Surface (LES) is the inner diameter (phosphor area) inside the dam.

2

Lumiled maintains a tolerance of ± 2 on CRI and $\pm 6.5\%$ on luminous flux measurements. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed. R9 value of 90CRI products is >50. 3.

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Energy efficiency class as specified in Commission Delegated Regulation (EU) 2019/2015. The available range of energy efficiency classes is A-G.
Part number ends with "x" designates SDCM available in both 2-step (x=2) and 3-step (x=0) MacAdam.

Product performance of LUXEON CoB Core Range G6 HE at specified test current, T_i=50°C

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	MINIMUM	LUMINOUS FLUX ^[2] (lm)		TYPICAL LUMINOUS	TEST CURRENT	ENERGY EFFICIENCY	PART NUMBER [6]	
(mm)	(mm) CCT CF	CRI ^[2, 3, 4]	MINIMUM	TYPICAL	EFFICACY (Im/W)		CLASS [5]	PART NOWDER
16.2	2700K	90	1710	1900	195	300	С	L2C5-27901208J150x
16.2	3000K	90	1762	1958	201	300	В	L2C5-30901208J150x
16.2	3500K	90	1787	1985	204	300	В	L2C5-35901208J150x
16.2	4000K	90	1809	2010	206	300	В	L2C5-40901208J150x
16.2	5000K	90	1809	2010	206	300	В	L2C5-50901208J150x
16.2	2700K	90	1710	1900	197	300	С	L2C5-27901210J150x
16.2	3000K	90	1762	1958	203	300	В	L2C5-30901210J150x
16.2	3500K	90	1787	1985	205	300	В	L2C5-35901210J150x
16.2	4000K	90	1809	2010	208	300	В	L2C5-40901210J150x
16.2	5000K	90	1809	2010	208	300	В	L2C5-50901210J150x

Notes

Light Emitting Surface (LES) is the inner diameter (phosphor area) inside the dam.
Lumileds maintains a tolerance of ±2 on CRI and ±6.5% on luminous flux measurements.

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Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed. R9 value of 90CRI products is >50. Energy efficiency class as specified in Commission Delegated Regulation (EU) 2019/2015. The available range of energy efficiency classes is A-G. Part number ends with "x" designates SDCM available in both 2-step (x=2) and 3-step (x=0) MacAdam. 5.

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Product performance of LUXEON CoB Core Range G6 HE PW at specified test current, T_i=50°C

LES [1]		MINIMUM	LUMINOUS FLUX [2] (lm)		TYPICAL	TEST	ENERGY	
(mm)		CRI ^[2, 3, 4]	MINIMUM	TYPICAL	LUMINOUS EFFICACY (lm/W)	CURRENT (mA)	EFFICIENCY CLASS [5]	PART NUMBER ^[6]
16.2	3000K	90	1753	1948	200	300	В	L2C5-30901208J15Px
16.2	3500K	90	1764	1960	201	300	В	L2C5-35901208J15Px
16.2	4000K	90	1787	1985	204	300	В	L2C5-40901208J15Px
16.2	3000K	90	1753	1948	202	300	В	L2C5-30901210J15Px
16.2	3500K	90	1764	1960	203	300	В	L2C5-35901210J15Px
16.2	4000K	90	1787	1985	205	300	В	L2C5-40901210J15Px

Notes: 1. Light Emitting Surface (LES) is the inner diameter (phosphor area) inside the dam.

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