



# 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
- 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

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LUXEON CoB Core Range product performance at specified test current, T<sub>j</sub>=85°C

LES <sup>[1]</sup> (mm)	NOMINAL CCT	MINIMUM CRI <sup>[2, 3, 4]</sup>	LUMINOUS FLUX <sup>[2]</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	ENERGY EFFICIENCY CLASS <sup>[5]</sup>	PART NUMBER <sup>[6]</sup>
			MINIMUM	TYPICAL				
6.5	2700K	90	984	1093	161	200	D	L2C5-27901202I060x
6.5	3000K	90	978	1087	160	200	D	L2C5-30901202I060x
6.5	3500K	90	994	1105	163	200	D	L2C5-35901202I060x
6.5	4000K	90	1007	1119	165	200	D	L2C5-40901202I060x
6.5	5000K	90	1012	1124	166	200	D	L2C5-50901202I060x
9	2700K	90	1013	1126	166	200	D	L2C5-27901202I090x
9	3000K	90	1008	1120	165	200	D	L2C5-30901202I090x
9	3500K	90	1024	1138	168	200	D	L2C5-35901202I090x
9	4000K	90	1037	1152	170	200	D	L2C5-40901202I090x
9	5000K	90	1042	1158	171	200	D	L2C5-50901202I090x
9	2700K	90	1466	1628	160	300	D	L2C5-27901203I090x
9	3000K	90	1458	1620	159	300	D	L2C5-30901203I090x
9	3500K	90	1481	1646	162	300	D	L2C5-35901203I090x
9	4000K	90	1500	1667	164	300	D	L2C5-40901203I090x
9	5000K	90	1508	1675	165	300	D	L2C5-50901203I090x
9	2700K	90	1948	2164	160	400	D	L2C5-27901204I090x
9	3000K	90	1937	2152	159	400	D	L2C5-30901204I090x
9	3500K	90	1968	2187	161	400	D	L2C5-35901204I090x
9	4000K	90	1993	2215	163	400	D	L2C5-40901204I090x
9	5000K	90	2004	2226	164	400	D	L2C5-50901204I090x
13	2700K	90	2857	3174	153	600	D	L2C5-27901205I130x
13	3000K	90	2921	3245	157	600	D	L2C5-30901205I130x
13	3500K	90	3009	3343	162	600	D	L2C5-35901205I130x
13	4000K	90	3083	3426	165	600	D	L2C5-40901205I130x
13	5000K	90	3025	3362	162	600	D	L2C5-50901205I130x
15	2700K	90	4289	4766	155	900	D	L2C5-27901208I150x
15	3000K	90	4485	4983	162	900	D	L2C5-30901208I150x
15	3500K	90	4526	5029	163	900	D	L2C5-35901208I150x
15	4000K	90	4625	5139	167	900	D	L2C5-40901208I150x
15	5000K	90	4552	5057	164	900	D	L2C5-50901208I150x
15	2700K	90	4395	4883	161	900	D	L2C5-27901210I150x
15	3000K	90	4459	4954	164	900	D	L2C5-30901210I150x
15	3500K	90	4538	5042	167	900	D	L2C5-35901210I150x
15	4000K	90	4672	5191	172	900	D	L2C5-40901210I150x
15	5000K	90	4650	5167	171	900	D	L2C5-50901210I150x

Notes:

1. Light Emitting Surface (LES) is the inner diameter (phosphor area) inside the dam.
2. Lumileds maintains a tolerance of ±2 on CRI and ±6.5% on luminous flux measurements.
3. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
4. R9 value of 90CRI products is >50.
5. Energy efficiency class as specified in Commission Delegated Regulation (EU) 2019/2015. The available range of energy efficiency classes is A-G.
6. 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 PW at specified test current, T<sub>j</sub>=85°C

LES <sup>[1]</sup> (mm)	NOMINAL CCT	MINIMUM CRI <sup>[2, 3, 4]</sup>	LUMINOUS FLUX <sup>[2]</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	ENERGY EFFICIENCY CLASS <sup>[5]</sup>	PART NUMBER <sup>[6]</sup>
			MINIMUM	TYPICAL				
6.5	3000K	90	961	1068	158	200	D	L2C5-30901202I06Px
6.5	3500K	90	971	1078	159	200	D	L2C5-35901202I06Px
6.5	4000K	90	978	1086	160	200	D	L2C5-40901202I06Px
9	3000K	90	985	1095	161	200	D	L2C5-30901202I09Px
9	3500K	90	997	1108	163	200	D	L2C5-35901202I09Px
9	4000K	90	1007	1118	165	200	D	L2C5-40901202I09Px
9	3000K	90	1453	1614	159	300	D	L2C5-30901203I09Px
9	3500K	90	1458	1620	159	300	D	L2C5-35901203I09Px
9	4000K	90	1459	1622	159	300	D	L2C5-40901203I09Px
9	3000K	90	1894	2104	155	400	D	L2C5-30901204I09Px
9	3500K	90	1917	2130	157	400	D	L2C5-35901204I09Px
9	4000K	90	1935	2150	159	400	D	L2C5-40901204I09Px
13	3000K	90	2863	3182	154	600	D	L2C5-30901205I13Px
13	3500K	90	2916	3240	157	600	D	L2C5-35901205I13Px
13	4000K	90	2967	3296	159	600	D	L2C5-40901205I13Px
15	3000K	90	4325	4805	156	900	D	L2C5-30901208I15Px
15	3500K	90	4344	4826	157	900	D	L2C5-35901208I15Px
15	4000K	90	4508	5009	163	900	D	L2C5-40901208I15Px
15	3000K	90	4369	4854	161	900	D	L2C5-30901210I15Px
15	3500K	90	4460	4955	164	900	D	L2C5-35901210I15Px
15	4000K	90	4500	5000	165	900	D	L2C5-40901210I15Px

Notes:

1. Light Emitting Surface (LES) is the inner diameter (phosphor area) inside the dam.
2. Lumileds maintains a tolerance of  $\pm 2$  on CRI and  $\pm 6.5\%$  on luminous flux measurements.
3. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
4. R9 value of 90CRI products is  $>50$ .
5. Energy efficiency class as specified in Commission Delegated Regulation (EU) 2019/2015. The available range of energy efficiency classes is A-G.
6. 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<sub>j</sub>=50°C

LES <sup>[1]</sup> (mm)	NOMINAL CCT	MINIMUM CRI <sup>[2, 3, 4]</sup>	LUMINOUS FLUX <sup>[2]</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	ENERGY EFFICIENCY CLASS <sup>[5]</sup>	PART NUMBER <sup>[6]</sup>
			MINIMUM	TYPICAL				
16.2	2700K	90	1710	1900	195	300	C	L2C5-27901208J150x
16.2	3000K	90	1762	1958	201	300	B	L2C5-30901208J150x
16.2	3500K	90	1787	1985	204	300	B	L2C5-35901208J150x
16.2	4000K	90	1809	2010	206	300	B	L2C5-40901208J150x
16.2	5000K	90	1809	2010	206	300	B	L2C5-50901208J150x
16.2	2700K	90	1710	1900	197	300	C	L2C5-27901210J150x
16.2	3000K	90	1762	1958	203	300	B	L2C5-30901210J150x
16.2	3500K	90	1787	1985	205	300	B	L2C5-35901210J150x
16.2	4000K	90	1809	2010	208	300	B	L2C5-40901210J150x
16.2	5000K	90	1809	2010	208	300	B	L2C5-50901210J150x

Notes:

1. Light Emitting Surface (LES) is the inner diameter (phosphor area) inside the dam.
2. Lumileds maintains a tolerance of  $\pm 2$  on CRI and  $\pm 6.5\%$  on luminous flux measurements.
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6. 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 PW at specified test current,  $T_j=50^{\circ}\text{C}$

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

Notes:

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