



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

[More...](#)



LUXEON CoB Core Range Gen 6 product performance at specified test current, T_j=85°C

| LES ^[1] (mm) | NOMINAL CCT | MINIMUM CRI ^[2,3,4] | LUMINOUS FLUX ^[2] (lm) | | TYPICAL LUMINOUS EFFICACY (lm/W) | TEST CURRENT (mA) | ENERGY EFFICIENCY CLASS ^[5] | PART NUMBER ^[6] |
|----------------------------|----------------|-----------------------------------|-----------------------------------|---------|--|-------------------------|--|----------------------------|
| | | | 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.

LUXEON CoB Core Range Gen 6 PW product performance at specified test current, T_j=85°C

| LES ^[1] (mm) | NOMINAL CCT | MINIMUM CRI ^[2, 3, 4] | LUMINOUS FLUX ^[2] (lm) | | TYPICAL LUMINOUS EFFICACY (lm/W) | TEST CURRENT (mA) | ENERGY EFFICIENCY CLASS ^[5] | PART NUMBER ^[6] |
|----------------------------|----------------|-------------------------------------|-----------------------------------|---------|--|-------------------------|--|----------------------------|
| | | | 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 ±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.

LUXEON CoB Core Range Gen 6 HE product performance at specified test current, T_j=50°C

| LES ^[1] (mm) | NOMINAL CCT | MINIMUM CRI ^[2, 3, 4] | LUMINOUS FLUX ^[2] (lm) | | TYPICAL LUMINOUS EFFICACY (lm/W) | TEST CURRENT (mA) | ENERGY EFFICIENCY CLASS ^[5] | PART NUMBER ^[6] |
|----------------------------|----------------|-------------------------------------|-----------------------------------|---------|--|-------------------------|--|----------------------------|
| | | | 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 |
| 19.8 | 2700K | 90 | 2362 | 2624 | 196 | 413 | C | L2C5-27901211J190x |
| 19.8 | 3000K | 90 | 2435 | 2705 | 202 | 413 | B | L2C5-30901211J190x |
| 19.8 | 3500K | 90 | 2463 | 2737 | 204 | 413 | B | L2C5-35901211J190x |
| 19.8 | 4000K | 90 | 2496 | 2773 | 207 | 413 | B | L2C5-40901211J190x |
| 19.8 | 5000K | 90 | 2496 | 2773 | 207 | 413 | B | L2C5-50901211J190x |

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.

LUXEON CoB Core Range Gen 6 HE PW product performance at specified test current, T_j=50°C

| LES ^[1] (mm) | NOMINAL CCT | MINIMUM CRI ^[2, 3, 4] | LUMINOUS FLUX ^[2] (lm) | | TYPICAL LUMINOUS EFFICACY (lm/W) | TEST CURRENT (mA) | ENERGY EFFICIENCY CLASS ^[5] | PART NUMBER ^[6] |
|----------------------------|----------------|-------------------------------------|-----------------------------------|---------|--|-------------------------|--|----------------------------|
| | | | 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 |
| 19.8 | 3000K | 90 | 2412 | 2680 | 200 | 413 | B | L2C5-30901211J19Px |
| 19.8 | 3500K | 90 | 2426 | 2695 | 201 | 413 | B | L2C5-35901211J19Px |
| 19.8 | 4000K | 90 | 2436 | 2707 | 202 | 413 | B | L2C5-40901211J19Px |

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.