



# LUXEON CoB Core Range (Gen 2)

Uniform, high-efficacy and easy-to-design array



The second generation of LUXEON CoB represents a new breakthrough in efficacy for arrays. It has 10% higher efficiency and 10% higher lumen output at the same drive currents compared to existing LUXEON CoB. Due to its small Light Emitting Surface (LES), LUXEON CoB LEDs are easy to work with and enable less expensive designs due to its industry-leading lower thermal resistance. LUXEON CoB are hot-tested at 85°C and 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 heat sinks and higher lumens
- Supported by a comprehensive optical, mechanical and electrical ecosystem

## PRIMARY APPLICATIONS

- Architectural
- Downlights
- High Bay & Low Bay
- Lamps
- Outdoor
- Specialty Lighting
- Spotlights

LUXEON CoB Core Range (Gen 2) product performance at specified test current, T<sub>j</sub>=85°C.

PRODUCT	NOMINAL CCT	MINIMUM CRI <sup>[1, 2, 3]</sup>	LUMINOUS FLUX <sup>[1]</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	LES (mm)	PART NUMBER	
			MINIMUM	TYPICAL					
LUXEON CoB 1202s	2200K	80	660	733	105	200	6.5	L2C2-22801202E0600	
	2700K	80	756	840	120	200	6.5	L2C2-27801202E0600	
	3000K	80	788	875	125	200	6.5	L2C2-30801202E0600	
	3500K	80	828	920	131	200	6.5	L2C2-35801202E0600	
	4000K	80	844	938	134	200	6.5	L2C2-40801202E0600	
	5000K	80	860	956	137	200	6.5	L2C2-50801202E0600	
	5700K	80	828	920	131	200	6.5	L2C2-57801202E0600	
	2200K	90	573	636	91	200	6.5	L2C2-22901202E0600	
	2200K	90 <sup>[4]</sup>	539	599	86	200	6.5	L2C2-22951202E0600	
	2700K	90	661	734	105	200	6.5	L2C2-27901202E0600	
	2700K	90 <sup>[4]</sup>	609	677	97	200	6.5	L2C2-27951202E0600	
	3000K	90	675	750	107	200	6.5	L2C2-30901202E0600	
	3000K	90 <sup>[4]</sup>	637	708	101	200	6.5	L2C2-30951202E0600	
	3500K	90	708	786	112	200	6.5	L2C2-35901202E0600	
	3500K	90 <sup>[4]</sup>	662	735	105	200	6.5	L2C2-35951202E0600	
	4000K	90	720	800	114	200	6.5	L2C2-40901202E0600	
	4000K	90 <sup>[4]</sup>	700	778	111	200	6.5	L2C2-40951202E0600	
	LUXEON CoB 1202	3000K	70	924	1027	147	200	9	L2C2-30701202E0900
		3500K	70	924	1027	147	200	9	L2C2-35701202E0900
		4000K	70	982	1092	152	200	9	L2C2-40701202E0900
5000K		70	982	1092	152	200	9	L2C2-50701202E0900	
5700K		70	941	1045	149	200	9	L2C2-57701202E0900	
2200K		80	658	731	104	200	9	L2C2-22801202E0900	
2700K		80	791	879	126	200	9	L2C2-27801202E0900	
3000K		80	833	925	132	200	9	L2C2-30801202E0900	
3500K		80	866	962	137	200	9	L2C2-35801202E0900	
4000K		80	895	994	142	200	9	L2C2-40801202E0900	
5000K		80	899	999	143	200	9	L2C2-50801202E0900	
5700K		80	859	955	134	200	9	L2C2-57801202E0900	
2200K		90	599	666	95	200	9	L2C2-22901202E0900	
2700K		90	691	768	110	200	9	L2C2-27901202E0900	
3000K		90	716	796	114	200	9	L2C2-30901202E0900	
3500K		90	740	822	118	200	9	L2C2-35901202E0900	
4000K		90	774	860	123	200	9	L2C2-40901202E0900	

Notes:

1. Lumileds maintains a tolerance of ±2 on CRI and ±6.5% on luminous flux measurements.
2. Typical CRI is approximately 2 points higher than the minimum CRI specified, but this is not guaranteed.
3. R9 value of 90CRI products is >5
4. Typical CRI is 97.

LUXEON CoB Core Range (Gen 2) product performance at specified test current, T<sub>j</sub>=85°C (continued).

PRODUCT	NOMINAL CCT	MINIMUM CRI <sup>[1, 2, 3]</sup>	LUMINOUS FLUX <sup>[1]</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	LES (mm)	PART NUMBER	
			MINIMUM	TYPICAL					
LUXEON CoB 1203	3000K	70	1332	1499	143	300	9	L2C2-30701203E0900	
	3500K	70	1332	1499	143	300	9	L2C2-35701203E0900	
	4000K	70	1416	1593	148	300	9	L2C2-40701203E0900	
	5000K	70	1416	1593	148	300	9	L2C2-50701203E0900	
	5700K	70	1356	1526	145	300	9	L2C2-57701203E0900	
	2200K	80	948	1067	102	300	9	L2C2-22801203E0900	
	2700K	80	1140	1283	122	300	9	L2C2-27801203E0900	
	3000K	80	1200	1350	129	300	9	L2C2-30801203E0900	
	3500K	80	1248	1404	134	300	9	L2C2-35801203E0900	
	4000K	80	1290	1451	138	300	9	L2C2-40801203E0900	
	5000K	80	1296	1458	139	300	9	L2C2-50801203E0900	
	5700K	80	1264	1404	134	300	9	L2C2-57801203E0900	
	2200K	90	864	972	93	300	9	L2C2-22901203E0900	
	2700K	90	996	1121	107	300	9	L2C2-27901203E0900	
	3000K	90	1032	1161	111	300	9	L2C2-30901203E0900	
	3500K	90	1067	1200	114	300	9	L2C2-35901203E0900	
	4000K	90	1116	1256	120	300	9	L2C2-40901203E0900	
	LUXEON CoB 1204	3000K	70	1998	2248	143	450	13	L2C2-30701204E1300
		3500K	70	1998	2248	143	450	13	L2C2-35701204E1300
		4000K	70	2124	2390	148	450	13	L2C2-40701204E1300
5000K		70	2124	2390	148	450	13	L2C2-50701204E1300	
5700K		70	2034	2288	145	450	13	L2C2-57701204E1300	
2200K		80	1422	1600	102	450	13	L2C2-22801204E1300	
2700K		80	1710	1924	122	450	13	L2C2-27801204E1300	
3000K		80	1800	2025	129	450	13	L2C2-30801204E1300	
3500K		80	1872	2106	134	450	13	L2C2-35801204E1300	
4000K		80	1935	2177	138	450	13	L2C2-40801204E1300	
5000K		80	1944	2187	139	450	13	L2C2-50801204E1300	
5700K		80	1971	2190	134	450	13	L2C2-57801204E1300	
2200K		90	1296	1458	93	450	13	L2C2-22901204E1300	
2700K		90	1494	1681	107	450	13	L2C2-27901204E1300	
3000K		90	1548	1742	111	450	13	L2C2-30901204E1300	
3500K		90	1600	1800	114	450	13	L2C2-35901204E1300	
4000K		90	1674	1883	120	450	13	L2C2-40901204E1300	

Notes:

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

LUXEON CoB Core Range (Gen 2) product performance at specified test current, T<sub>j</sub>=85°C (continued).

PRODUCT	NOMINAL CCT	MINIMUM CRI <sup>[1, 2, 3]</sup>	LUMINOUS FLUX <sup>(1)</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	LES (mm)	PART NUMBER	
			MINIMUM	TYPICAL					
LUXEON CoB 1205	3000K	70	2720	2997	143	600	13	L2C2-30701205E1300	
	3500K	70	2720	2997	143	600	13	L2C2-35701205E1300	
	4000K	70	2891	3186	148	600	13	L2C2-40701205E1300	
	5000K	70	2891	3186	148	600	13	L2C2-50701205E1300	
	5700K	70	2769	3051	145	600	13	L2C2-57701205E1300	
	2200K	80	1936	2133	102	600	13	L2C2-22801205E1300	
	2700K	80	2328	2565	122	600	13	L2C2-27801205E1300	
	3000K	80	2450	2700	129	600	13	L2C2-30801205E1300	
	3500K	80	2548	2808	134	600	13	L2C2-35801205E1300	
	4000K	80	2634	2903	138	600	13	L2C2-40801205E1300	
	5000K	80	2646	2916	139	600	13	L2C2-50801205E1300	
	5700K	80	2527	2808	134	600	13	L2C2-57801205E1300	
	2200K	90	1764	1944	93	600	13	L2C2-22901205E1300	
	2700K	90	2034	2241	107	600	13	L2C2-27901205E1300	
	3000K	90	2107	2322	111	600	13	L2C2-30901205E1300	
	3500K	90	2178	2400	114	600	13	L2C2-35901205E1300	
	4000K	90	2279	2511	120	600	13	L2C2-40901205E1300	
	LUXEON CoB 1208	3000K	70	4024	4496	143	900	15	L2C2-30701208E1500
		3500K	70	4024	4496	143	900	15	L2C2-35701208E1500
		4000K	70	4278	4779	148	900	15	L2C2-40701208E1500
5000K		70	4278	4779	148	900	15	L2C2-50701208E1500	
5700K		70	4096	4577	145	900	15	L2C2-57701208E1500	
2200K		80	2864	3200	102	900	15	L2C2-22801208E1500	
2700K		80	3444	3848	122	900	15	L2C2-27801208E1500	
3000K		80	3625	4050	129	900	15	L2C2-30801208E1500	
3500K		80	3770	4212	134	900	15	L2C2-35801208E1500	
4000K		80	3897	4354	138	900	15	L2C2-40801208E1500	
5000K		80	3915	4374	139	900	15	L2C2-50801208E1500	
5700K		80	3791	4212	134	900	15	L2C2-57801208E1500	
2200K		90	2610	2916	93	900	15	L2C2-22901208E1500	
2700K		90	3009	3362	107	900	15	L2C2-27901208E1500	
3000K		90	3118	3483	111	900	15	L2C2-30901208E1500	
3500K		90	3223	3600	114	900	15	L2C2-35901208E1500	
4000K		90	3371	3767	120	900	15	L2C2-40901208E1500	

Notes:

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

LUXEON CoB Core Range (Gen 2) product performance at specified test current, T<sub>j</sub>=85°C (continued).

PRODUCT	NOMINAL CCT	MINIMUM CRI <sup>[1, 2, 3]</sup>	LUMINOUS FLUX <sup>[1]</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	LES (mm)	PART NUMBER	
			MINIMUM	TYPICAL					
LUXEON CoB 1211	3000K	70	5550	5994	143	1200	19	L2C2-30701211E1900	
	3500K	70	5550	5994	143	1200	19	L2C2-35701211E1900	
	4000K	70	5900	6372	148	1200	19	L2C2-40701211E1900	
	5000K	70	5900	6372	148	1200	19	L2C2-50701211E1900	
	5700K	70	5650	6102	145	1200	19	L2C2-57701211E1900	
	2200K	80	3950	4266	102	1200	19	L2C2-22801211E1900	
	2700K	80	4750	5130	122	1200	19	L2C2-27801211E1900	
	3000K	80	5000	5400	129	1200	19	L2C2-30801211E1900	
	3500K	80	5200	5616	134	1200	19	L2C2-35801211E1900	
	4000K	80	5375	5805	138	1200	19	L2C2-40801211E1900	
	5000K	80	5400	5832	139	1200	19	L2C2-50801211E1900	
	5700K	80	5054	5616	134	1200	19	L2C2-57801211E1900	
	2200K	90	3600	3888	93	1200	19	L2C2-22901211E1900	
	2700K	90	4150	4482	107	1200	19	L2C2-27901211E1900	
	3000K	90	4300	4644	111	1200	19	L2C2-30901211E1900	
	3500K	90	4445	4801	114	1200	19	L2C2-35901211E1900	
	4000K	90	4650	5022	120	1200	19	L2C2-40901211E1900	
	LUXEON CoB 1216	3000K	70	7229	8032	143	1600	23	L2C2-30701216E2300
		3500K	70	7229	8032	143	1600	23	L2C2-35701216E2300
		4000K	70	7684	8538	152	1600	23	L2C2-40701216E2300
5000K		70	7684	8538	152	1600	23	L2C2-50701216E2300	
5700K		70	7359	8177	146	1600	23	L2C2-57701216E2300	
2200K		80	5144	5716	102	1600	23	L2C2-22801216E2300	
2700K		80	6187	6874	123	1600	23	L2C2-27801216E2300	
3000K		80	6512	7236	129	1600	23	L2C2-30801216E2300	
3500K		80	6773	7525	134	1600	23	L2C2-35801216E2300	
4000K		80	7002	7780	139	1600	23	L2C2-40801216E2300	
5000K		80	7034	7815	140	1600	23	L2C2-50801216E2300	
5700K		80	6773	7525	134	1600	23	L2C2-57801216E2300	
2200K		90	4689	5210	93	1600	23	L2C2-22901216E2300	
2700K		90	5405	6006	107	1600	23	L2C2-27901216E2300	
3000K		90	5601	6223	111	1600	23	L2C2-30901216E2300	
3500K		90	5790	6433	115	1600	23	L2C2-35901216E2300	
4000K		90	6056	6729	120	1600	23	L2C2-40901216E2300	

Notes:

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

©2016 Lumileds Holding B.V. All rights reserved.  
LUXEON is a registered trademark of the Lumileds Holding B.V. in the United States and other countries.

[lumileds.com](http://lumileds.com)

Lumileds Holding B.V. shall not be liable for any kind of loss of data or any other damages, direct, indirect or consequential, resulting from the use of the provided information and data. Although Lumileds Holding B.V. has attempted to provide the most accurate information and data, the materials and services information and data are provided "as is" and Lumileds Holding B.V. neither warranties, nor guarantees the contents and correctness of the provided information and data. Lumileds Holding B.V. reserves the right to make changes without notice. You as user agree to this disclaimer and user agreement with the download or use of the provided materials, information and data.