



# LUXEON CoB Core Range

High-efficacy LED with a small light emitting surface and greater uniformity of light



LUXEON CoB Core Range consists of high uniformity LEDs with industry-leading small Light Emitting Surfaces (LES). LUXEON CoB arrays are easy to work with, enabling less expensive designs. All emitters within the LUXEON CoB Core Range are available in 3-step MacAdam ellipse, ensuring uniform optical performance in general lighting applications. In addition, LUXEON CoB Core Range LEDs are hot-tested at 85°C—real world operating conditions—which means luminaire design is simplified and testing can be minimized.

## FEATURES AND BENEFITS

Highest flux densities with industry's smallest LES

R9 between 80 and 90 for vibrant reds

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 product performance at test current and 2x test current, T<sub>j</sub>=85°C.

PRODUCT	NOMINAL CCT	MINIMUM CRI <sup>[1, 2]</sup>	LUMINOUS FLUX <sup>[1, 3]</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TYPICAL LUMINOUS FLUX (lm)	TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT	PART NUMBER
			MINIMUM	TYPICAL					
			TEST CURRENT						
LUXEON CoB 1202s	2200K	80	550	625	88	110	70	200	L2C1-2280120206A00
	2700K	80	645	725	101	1275	81	200	L2C1-2780120206A00
	3000K	80	700	775	109	1375	87	200	L2C1-3080120206A00
	3500K	80	700	775	109	1375	87	200	L2C1-3580120206A00
	4000K	80	700	800	113	1425	90	200	L2C1-4080120206A00
	5000K	80	725	825	116	1450	92	200	L2C1-5080120206A00
	2200K	90	450	525	75	950	60	200	L2C1-2290120206A00
	2700K	90	525	600	85	1075	68	200	L2C1-2790120206A00
	3000K	90	550	625	88	1100	70	200	L2C1-3090120206A00
	3500K	90	575	650	92	1150	73	200	L2C1-3590120206A00
4000K	90	600	700	100	1225	78	200	L2C1-4090120206A00	
LUXEON CoB 1202	2200K	80	575	650	92	1150	73	200	LHC1-2280-1202
	2700K	80	675	750	106	1325	86	200	LHC1-2780-1202
	3000K	80	725	800	115	1450	93	200	LHC1-3080-1202
	3500K	80	750	825	119	1500	97	200	LHC1-3580-1202
	4000K	80	750	850	122	1525	100	200	LHC1-4080-1202
	5000K	80	775	875	124	1550	101	200	LHC1-5080-1202
	2200K	90	475	550	44	1000	63	200	LHC1-2290-1202
	2700K	90	550	625	90	1125	73	200	LHC1-2790-1202
	3000K	90	575	650	93	1175	76	200	LHC1-3090-1202
	3500K	90	600	675	96	1225	78	200	LHC1-3590-1202
4000K	90	650	725	100	1300	81	200	LHC1-4090-1202	
LUXEON CoB 1203	3000K	70	1172	1300	122	2350	100	300	LHC1-3070-1203
	3500K	70	1172	1300	122	2350	100	300	LHC1-3570-1203
	4000K	70	1225	1375	130	2500	105	300	LHC1-4070-1203
	5000K	70	1225	1375	130	2500	105	300	LHC1-5070-1203
	5700K	70	1225	1375	130	2500	105	300	LHC1-5770-1203
	2200K	80	825	950	92	1725	73	300	LHC1-2280-1203
	2700K	80	1025	1125	106	2050	86	300	LHC1-2780-1203
	3000K	80	1100	1225	115	2200	93	300	LHC1-3080-1203
	3500K	80	1150	1275	119	2300	97	300	LHC1-3580-1203
	4000K	80	1175	1300	122	2350	100	300	LHC1-4080-1203
5000K	80	1175	1325	124	2400	101	300	LHC1-5080-1203	
2200K	90	700	825	80	1525	63	300	LHC1-2290-1203	
2700K	90	850	950	90	1725	73	300	LHC1-2790-1203	
3000K	90	900	1000	93	1800	76	300	LHC1-3090-1203	
3500K	90	925	1025	96	1850	78	300	LHC1-3590-1203	
4000K	90	1000	1100	100	1975	81	300	LHC1-4090-1203	
LUXEON CoB 1204	3000K	70	1725	1950	122	3550	100	450	LHC1-3070-1204
	3500K	70	1725	1950	122	3550	100	450	LHC1-3570-1204
	4000K	70	1825	2050	130	3700	105	450	LHC1-4070-1204
	5000K	70	1825	2050	130	3700	105	450	LHC1-5070-1204
	5700K	70	1825	2050	130	3700	105	450	LHC1-5770-1204
	2200K	80	1325	1475	92	2600	73	450	LHC1-2280-1204
	2700K	80	1550	1700	106	3075	86	450	LHC1-2780-1204
	3000K	80	1625	1825	115	3300	93	450	LHC1-3080-1204
	3500K	80	1725	1900	119	3425	97	450	LHC1-3580-1204
	4000K	80	1725	1950	122	3550	100	450	LHC1-4080-1204
5000K	80	1750	1975	124	3550	101	450	LHC1-5080-1204	
2200K	90	1075	1250	78	2225	63	450	LHC1-2290-1204	
2700K	90	1275	1425	90	2575	73	450	LHC1-2790-1204	
3000K	90	1325	1475	93	2675	76	450	LHC1-3090-1204	
3500K	90	1400	1525	96	2775	78	450	LHC1-3590-1204	
4000K	90	1450	1600	100	2900	81	450	LHC1-4090-1204	

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. Maximum luminous flux is 10% above typical luminous flux.

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

PRODUCT	NOMINAL CCT	MINIMUM CRI <sup>[1, 2]</sup>	LUMINOUS FLUX <sup>[1, 3]</sup> (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TYPICAL LUMINOUS FLUX (lm)	TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT	PART NUMBER
			MINIMUM	TYPICAL					
			TEST CURRENT						
LUXEON CoB 1205	3000K	70	2325	2600	122	4700	100	600	LHC1-3070-1205
	3500K	70	2325	2600	122	4700	100	600	LHC1-3570-1205
	4000K	70	2450	2750	130	5000	105	600	LHC1-4070-1205
	5000K	70	2450	2750	130	5000	105	600	LHC1-5070-1205
	5700K	70	2450	2750	130	5000	105	600	LHC1-5770-1205
	2200K	80	1700	1950	92	3475	73	600	LHC1-2280-1205
	2700K	80	2000	2250	106	4100	86	600	LHC1-2780-1205
	3000K	80	2200	2450	115	4400	93	600	LHC1-3080-1205
	3500K	80	2250	2550	119	4625	97	600	LHC1-3580-1205
	4000K	80	2325	2600	122	4700	100	600	LHC1-4080-1205
	5000K	80	2350	2650	124	4825	101	600	LHC1-5080-1205
	2200K	90	1400	1600	79	2975	63	600	LHC1-2290-1205
	2700K	90	1700	1900	90	3450	73	600	LHC1-2790-1205
	3000K	90	1800	2000	93	3600	76	600	LHC1-3090-1205
	3500K	90	1850	2075	96	3700	78	600	LHC1-3590-1205
4000K	90	1925	2150	100	3825	81	600	LHC1-4090-1205	
LUXEON CoB 1208	3000K	70	3500	3900	122	7100	100	900	LHC1-3070-1208
	3500K	70	3500	3900	122	7100	100	900	LHC1-3570-1208
	4000K	70	3650	4100	130	7400	105	900	LHC1-4070-1208
	5000K	70	3700	4100	130	7400	105	900	LHC1-5070-1208
	5700K	70	3700	4100	130	7400	105	900	LHC1-5770-1208
	2200K	80	2600	2925	92	5200	73	900	LHC1-2280-1208
	2700K	80	3050	3400	106	6150	86	900	LHC1-2780-1208
	3000K	80	3275	3650	115	6600	93	900	LHC1-3080-1208
	3500K	80	3400	3800	119	6850	97	900	LHC1-3580-1208
	4000K	80	3500	3900	122	7100	100	900	LHC1-4080-1208
	5000K	80	3500	3950	124	7125	101	900	LHC1-5080-1208
	2200K	90	2125	2450	79	4450	63	900	LHC1-2290-1208
	2700K	90	2550	2850	90	5150	73	900	LHC1-2790-1208
	3000K	90	2650	2950	93	5350	76	900	LHC1-3090-1208
	3500K	90	2775	3075	96	5525	78	900	LHC1-3590-1208
4000K	90	2900	3200	100	5750	81	900	LHC1-4090-1208	
LUXEON CoB 1211	3000K	70	4775	5200	122	9350	100	1200	LHC1-3070-1211
	3500K	70	4775	5200	122	9350	100	1200	LHC1-3570-1211
	4000K	70	5050	5600	130	10050	105	1200	LHC1-4070-1211
	5000K	70	5050	5600	130	10050	105	1200	LHC1-5070-1211
	5700K	70	5050	5600	130	10050	105	1200	LHC1-5770-1211
	2200K	80	3550	3975	92	7075	75	1200	LHC1-2280-1211
	2700K	80	4150	4600	106	8300	86	1200	LHC1-2780-1211
	3000K	80	4500	5000	115	9000	93	1200	LHC1-3080-1211
	3500K	80	4675	5200	119	9350	97	1200	LHC1-3580-1211
	4000K	80	4775	5200	122	9350	100	1200	LHC1-4080-1211
	5000K	80	4850	5300	124	9550	101	1200	LHC1-5080-1211
	2200K	90	2925	3425	80	6075	64	1200	LHC1-2290-1211
	2700K	90	3500	3875	90	6975	73	1200	LHC1-2790-1211
	3000K	90	3650	4000	93	7175	76	1200	LHC1-3090-1211
	3500K	90	3775	4200	96	7560	78	1200	LHC1-3590-1211
4000K	90	4050	4400	100	7900	81	1200	LHC1-4090-1211	

Notes:

1. Lumileds maintains a tolerance of ±2 on CRI and ±6.5% on luminous flux measurements.
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