



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 chip-on-boards are very easy to work with and will enable easier and less expensive designs. All emitters within the LUXEON CoB Core Range are available in 3-step and 5-step MacAdam ellipse, ensuring uniform optical performance in general lighting applications. In addition, LUXEON CoB Core Range LEDs are all hot-tested at 85°C — real world operating conditions — which means that luminaire design is simplified and testing can be minimized.

FEATURES AND BENEFITS

Highest flux densities with industry's smallest LES, 6.5mm

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 better 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 product performance at test current and 2x test current, T_j=85°C.

PRODUCT	NOMINAL CCT ⁽¹⁾	MINIMUM CRI ⁽²⁾	LUMINOUS FLUX ⁽³⁾ (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TYPICAL LUMINOUS FLUX (lm)	TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	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
LUXEON CoB 1202	4000K	90	600	700	100	1225	78	200	L2C1-4090120206A00
	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
LUXEON CoB 1203	3500K	90	600	578	96	1225	78	200	LHC1-3590-1202
	4000K	90	650	725	100	1300	81	200	LHC1-4090-1202
	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	1375	1500	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
LUXEON CoB 1204	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
	3000K	70	1725	1950	122	3550	100	450	LHC1-3070-1204
	3500K	70	1725	1950	122	3550	100	450	LHC1-3570-1204
LUXEON CoB 1205	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
LUXEON CoB 1208	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
	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
LUXEON CoB 1210	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 1211	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
LUXEON CoB 1212	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
	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
LUXEON CoB 1213	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
LUXEON CoB 1214	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 $\pm 6.5\%$ on flux measurements.
2. Correlated color temperature is based upon mounted die on highly reflective surface at T_j=25°C.

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