LUMILEDS

ILLUMINATION

LUXEON CoB Core Range

Uniform, high efficacy and easy to design array

LUXEON CoB represents a new breakthrough for arrays. The efficacies will be >160 lm/W for 70CRI and 80CRI products. 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...

Environmental Compliance

Lumileds LLC is committed to providing environmentally friendly products to the solid-state lighting market. LUXEON CoB Core Range is compliant to the European Union directives on the restriction of hazardous substances in electronic equipment, namely the RoHS Directive 2011/65/EU and REACH Regulation (EC) 1907/2006. Lumileds LLC will not intentionally add the following restricted materials to its products: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).

Performance Characteristics

Product Selection Guide

Table 1. Product performance of LUXEON CoB Core Range at specified test current, T_j=85°C.

PRODUCT	NOMINAL CCT	MINIMUM CRI [1, 2, 3]	LUMINOUS FLUX [1] (lm)		TYPICAL LUMINOUS EFFICACY (lm/W)	TEST CURRENT (mA)	LES [4] (mm)	ENERGY EFFICIENCY CLASS [5]	PART NUMBER
			MINIMUM	TYPICAL					
LUXEON CoB 1202s	2200K	80	675	750	109	200	6	F	L2C5-22801202E0600
	2700K	80	797	886	128	200	6	E	L2C5-27801202E0600
	3000K	80	837	930	135	200	6	E	L2C5-30801202E0600
	3500K	80	854	949	138	200	6	E	L2C5-35801202E0600
	4000K	80	863	959	139	200	6	E	L2C5-40801202E0600
	5000K	80	863	959	139	200	6	E	L2C5-50801202E0600
	5700K	80	869	966	140	200	6	E	L2C5-57801202E0600
	2200K	90	589	654	95	200	6	F	L2C5-22901202E0600
	2700K	90	662	736	107	200	6	F	L2C5-27901202E0600
	3000K	90	689	766	111	200	6	F	L2C5-30901202E0600
	3500K	90	725	805	117	200	6	F	L2C5-35901202E0600
	4000K	90	742	824	119	200	6	E	L2C5-40901202E0600
LUXEON CoB 1202	3000K	70	923	1026	149	200	9	D	L2C5-30701202E0900
	3500K	70	923	1026	149	200	9	D	L2C5-35701202E0900
	4000K	70	968	1075	156	200	9	D	L2C5-40701202E0900
	5000K	70	968	1075	156	200	9	D	L2C5-50701202E0900
	5700K	70	942	1047	152	200	9	D	L2C5-57701202E0900
	2200K	80	703	781	113	200	9	F	L2C5-22801202E0900
	2700K	80	830	922	134	200	9	E	L2C5-27801202E0900
	3000K	80	876	973	141	200	9	E	L2C5-30801202E0900
	3500K	80	893	992	144	200	9	E	L2C5-35801202E0900
	4000K	80	899	999	145	200	9	E	L2C5-40801202E0900
	5000K	80	899	999	145	200	9	E	L2C5-50801202E0900
	2200K	90	625	694	101	200	9	F	L2C5-22901202E0900
	2700K	90	689	766	111	200	9	F	L2C5-27901202E0900
	3000K	90	729	810	117	200	9	F	L2C5-30901202E0900
	3500K	90	752	836	121	200	9	E	L2C5-35901202E0900
	4000K	90	772	858	124	200	9	E	L2C5-40901202E0900

Table 1 continued on next page. 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.
4. Light Emitting Surface (LES) is the inner diameter (phosphor area) inside the dam.
5. Energy efficiency class as specified in Commission Delegated Regulation (EU) 2019/2015. The available range of energy efficiency classes is A-G.
6. Exception: Not available in EU or UK.

