LUMILEDS

ILLUMINATION

LUXEON CoB Core Range Gen 5

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...

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General Product Information

Product Test Conditions

LUXEON CoB Core Range LEDs are tested and binned with a DC drive current specified below at a junction temperature, T_j, of 85°C:

200mA	–	L2C5-AABB1202H060G
200mA	–	L2C5-AABB1202H090G
300mA	–	L2C5-AABB1203H090G
400mA	–	L2C5-AABB1204H090G
600mA	–	L2C5-AABB1205H130G
900mA	–	L2C5-AABB1208H150G
900mA	–	L2C5-AABB1210H150G
1200mA	–	L2C5-AABB1211H190G
1600mA	–	L2C5-AABB1216H230G
1200mA	–	L2C5-AABB1812H230G
1440mA	–	L2C5-AABB1816H230G

Part Number Nomenclature

Part numbers for LUXEON CoB Core Range follow the convention below:

L 2 C 5 – **A A B B C C C C D E E F G**

Where:

A A	–	designates nominal CCT (27=2700K, 30=3000K, 35=3500K, 40=4000K, 50=5000K, 57=5700K, 65=6500K)
B B	–	designates minimum CRI (70=70CRI, 80=80CRI, 90=90CRI)
C C C C	–	designates product configuration (example: 1202, 1203, 1204, 1205, 1208, 1210, 1211, 1216, 1812, 1816)
D	–	designates options for product specification
E E	–	designates light emitting surface (LES) size (06=6mm, 09=9mm, 13=13mm, 15=15mm, 19=19mm, 23=23mm)
F	–	designates options for product specification
G	–	designates SDCM (2=2-step MacAdam, 0=3-step MacAdam)

Therefore, the following part number is used for a LUXEON Core Range CoB 1208, Gen 5, 3000K 90CRI, 2 SDCM, with a 15mm LES:

L 2 C 5 – **3 0 9 0 1 2 0 8 H 1 5 0 2**

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 including amendments 2015/863/EU & 2017/2102/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.

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	2700K	80	924	1027	151	200	D	L2C5-27801202H060x
6	3000K	80	958	1064	157	200	D	L2C5-30801202H060x
6	3500K	80	991	1101	162	200	D	L2C5-35801202H060x
6	4000K	80	1014	1127	166	200	D	L2C5-40801202H060x
6	5000K	80	1019	1132	167	200	D	L2C5-50801202H060x
6	2700K	90	902	1003	148	200	D	L2C5-27901202H060x
6	3000K	90	914	1016	150	200	D	L2C5-30901202H060x
6	3500K	90	938	1042	154	200	D	L2C5-35901202H060x
6	4000K	90	959	1065	157	200	D	L2C5-40901202H060x
6	5000K	90	983	1092	161	200	D	L2C5-50901202H060x
9	2700K	80	952	1058	156	200	D	L2C5-27801202H090x
9	3000K	80	983	1092	161	200	D	L2C5-30801202H090x
9	3500K	80	1022	1135	167	200	D	L2C5-35801202H090x
9	4000K	80	1049	1166	172	200	D	L2C5-40801202H090x
9	5000K	80	1050	1167	172	200	D	L2C5-50801202H090x
9	2700K	90	929	1033	152	200	D	L2C5-27901202H090x
9	3000K	90	942	1046	154	200	D	L2C5-30901202H090x
9	3500K	90	966	1073	158	200	D	L2C5-35901202H090x
9	4000K	90	988	1097	162	200	D	L2C5-40901202H090x
9	5000K	90	1012	1124	166	200	D	L2C5-50901202H090x
9	2700K	80	1391	1546	152	300	D	L2C5-27801203H090x
9	3000K	80	1446	1607	158	300	D	L2C5-30801203H090x
9	3500K	80	1505	1672	164	300	D	L2C5-35801203H090x
9	4000K	80	1533	1703	167	300	D	L2C5-40801203H090x
9	5000K	80	1538	1709	168	300	D	L2C5-50801203H090x
9	2700K	90	1345	1494	147	300	D	L2C5-27901203H090x
9	3000K	90	1362	1514	149	300	D	L2C5-30901203H090x
9	3500K	90	1397	1553	153	300	D	L2C5-35901203H090x
9	4000K	90	1429	1587	156	300	D	L2C5-40901203H090x
9	5000K	90	1464	1627	160	300	D	L2C5-50901203H090x
9	2700K	80	1858	2064	152	400	D	L2C5-27801204H090x
9	3000K	80	1936	2151	159	400	D	L2C5-30801204H090x
9	3500K	80	2004	2227	164	400	D	L2C5-35801204H090x
9	4000K	80	2049	2277	168	400	D	L2C5-40801204H090x
9	5000K	80	2058	2287	169	400	D	L2C5-50801204H090x
9	2700K	90	1787	1985	146	400	D	L2C5-27901204H090x
9	3000K	90	1811	2012	148	400	D	L2C5-30901204H090x
9	3500K	90	1857	2063	152	400	D	L2C5-35901204H090x
9	4000K	90	1899	2109	156	400	D	L2C5-40901204H090x
9	5000K	90	1945	2162	159	400	D	L2C5-50901204H090x

Table 1 continued on next page:

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, 2=2-SDCM, 0=3SDCM.

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

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				
13	2700K	80	2758	3065	148	600	D	L2C5-27801205H130x
13	3000K	80	2866	3185	154	600	D	L2C5-30801205H130x
13	3500K	80	2924	3249	157	600	D	L2C5-35801205H130x
13	4000K	80	3060	3400	164	600	D	L2C5-40801205H130x
13	5000K	80	3017	3352	162	600	D	L2C5-50801205H130x
13	2700K	90	2621	2912	141	600	E	L2C5-27901205H130x
13	3000K	90	2730	3033	147	600	D	L2C5-30901205H130x
13	3500K	90	2839	3154	152	600	D	L2C5-35901205H130x
13	4000K	90	2936	3263	158	600	D	L2C5-40901205H130x
13	5000K	90	2937	3264	158	600	D	L2C5-50901205H130x
15	2700K	80	4199	4665	152	900	D	L2C5-27801208H150x
15	3000K	80	4374	4860	158	900	D	L2C5-30801208H150x
15	3500K	80	4505	5005	163	900	D	L2C5-35801208H150x
15	4000K	80	4590	5100	166	900	D	L2C5-40801208H150x
15	5000K	80	4568	5075	165	900	D	L2C5-50801208H150x
15	2700K	90	3935	4372	142	900	E	L2C5-27901208H150x
15	3000K	90	4191	4657	151	900	D	L2C5-30901208H150x
15	3500K	90	4270	4744	154	900	D	L2C5-35901208H150x
15	4000K	90	4405	4894	159	900	D	L2C5-40901208H150x
15	5000K	90	4419	4910	160	900	D	L2C5-50901208H150x
15	2700K	80	4118	4575	151	900	D	L2C5-27801210H150x
15	3000K	80	4289	4765	158	900	D	L2C5-30801210H150x
15	3500K	80	4437	4930	163	900	D	L2C5-35801210H150x
15	4000K	80	4536	5040	167	900	D	L2C5-40801210H150x
15	5000K	80	4487	4985	165	900	D	L2C5-50801210H150x
15	2700K	90	4032	4480	148	900	D	L2C5-27901210H150x
15	3000K	90	4167	4630	153	900	D	L2C5-30901210H150x
15	3500K	90	4281	4757	157	900	D	L2C5-35901210H150x
15	4000K	90	4449	4944	163	900	D	L2C5-40901210H150x
15	5000K	90	4515	5016	166	900	D	L2C5-50901210H150x
19	2700K	80	5648	6275	153	1200	D	L2C5-27801211H190x
19	3000K	80	5807	6452	157	1200	D	L2C5-30801211H190x
19	3500K	80	5922	6580	160	1200	D	L2C5-35801211H190x
19	4000K	80	6257	6953	169	1200	D	L2C5-40801211H190x
19	5000K	80	6185	6872	167	1200	D	L2C5-50801211H190x
19	2700K	90	5255	5839	142	1200	E	L2C5-27901211H190x
19	3000K	90	5601	6224	152	1200	D	L2C5-30901211H190x
19	3500K	90	5734	6371	155	1200	D	L2C5-35901211H190x
19	4000K	90	5865	6517	159	1200	D	L2C5-40901211H190x
19	5000K	90	5887	6541	159	1200	D	L2C5-50901211H190x
23	2700K	80	7664	8515	157	1600	D	L2C5-27801216H230x
23	3000K	80	7844	8715	161	1600	D	L2C5-30801216H230x
23	3500K	80	8001	8890	164	1600	D	L2C5-35801216H230x
23	4000K	80	8384	9315	172	1600	D	L2C5-40801216H230x
23	5000K	80	8303	9225	170	1600	D	L2C5-50801216H230x
23	2700K	90	7077	7864	145	1600	E	L2C5-27901216H230x
23	3000K	90	7358	8176	151	1600	D	L2C5-30901216H230x
23	3500K	90	7612	8458	156	1600	D	L2C5-35901216H230x
23	4000K	90	7720	8578	158	1600	D	L2C5-40901216H230x
23	5000K	90	7789	8654	160	1600	D	L2C5-50901216H230x

Table 1 continued on next page:

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, 2=2-SDCM, 0=3SDCM..

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

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				
23	3000K	70	9720	10800	177	1200	C	L2C5-30701812H2300
23	4000K	70	10080	11200	183	1200	C	L2C5-40701812H2300
23	5000K	70	9990	11100	182	1200	C	L2C5-50701812H2300
23	2700K	80	8640	9600	157	1200	D	L2C5-27801812H2300
23	3000K	80	9180	10200	167	1200	D	L2C5-30801812H2300
23	3500K	80	9360	10400	170	1200	D	L2C5-35801812H2300
23	4000K	80	9540	10600	174	1200	C	L2C5-40801812H2300
23	5000K	80	9630	10700	175	1200	C	L2C5-50801812H2300
23	5700K	80	9360	10400	170	1200	D	L2C5-57801812H2300
23	6500K	80	9270	10300	169	1200	D	L2C5-65801812H2300
23	3000K	70	10800	12000	166	1440	D	L2C5-30701816H2300
23	4000K	70	11790	13100	181	1440	C	L2C5-40701816H2300
23	5000K	70	11700	13000	179	1440	C	L2C5-50701816H2300
23	2700K	80	10080	11200	155	1440	D	L2C5-27801816H2300
23	3000K	80	10544	11715	162	1440	D	L2C5-30801816H2300
23	3500K	80	10800	12000	166	1440	D	L2C5-35801816H2300
23	4000K	80	11124	12360	171	1440	D	L2C5-40801816H2300
23	5000K	80	11070	12300	170	1440	D	L2C5-50801816H2300
23	5700K	80	11070	12300	170	1440	D	L2C5-57801816H2300
23	6500K	80	10980	12200	168	1440	D	L2C5-65801816H2300

Notes for Table 1:
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, 2=2-SDCM, 0=3SDCM.

Optical Characteristics

Table 2. Optical characteristics for LUXEON CoB Core Range at specified test current, T_j=85°C.

PART NUMBER	TYPICAL TOTAL INCLUDED ANGLE [1]	TYPICAL VIEWING ANGLE [2]
L2C5-xxxxxxxxxxx0x	135°	115°

Notes for Table 2:
1. Total angle at which 90% of total luminous flux is captured.
2. Viewing angle is the off axis angle from the LED centerline where the luminous intensity is ½ of the peak value.

Electrical and Thermal Characteristics

Table 3. Electrical and thermal characteristics for LUXEON CoB Core Range at specified test current, T_j=85°C.

PART NUMBER	FORWARD VOLTAGE [1] (V_f)			TYPICAL TEMPERATURE COEFFICIENT OF FORWARD VOLTAGE [2] (mV/°C)	TYPICAL THERMAL RESISTANCE—JUNCTION TO CASE [3] (°C/W)
	MINIMUM	TYPICAL	MAXIMUM		
L2C5-xxxx1202H060x	31.2	33.9	36.6	-16	0.78
L2C5-xxxx1202H090x	31.2	33.9	36.6	-16	0.78
L2C5-xxxx1203H090x	31.2	33.9	36.6	-16	0.60
L2C5-xxxx1204H090x	31.2	33.9	36.6	-16	0.43
L2C5-xxxx1205H130x	31.7	34.5	37.3	-16	0.26
L2C5-xxxx1208H150x	31.5	34.2	36.9	-16	0.20
L2C5-xxxx1210H150x	30.9	33.6	36.3	-16	0.18
L2C5-xxxx1211H190x	31.5	34.2	36.9	-16	0.16
L2C5-xxxx1216H230x	31.2	33.9	36.6	-16	0.12
L2C5-xxxx1812H230x	46.8	50.9	55.0	-16	0.10
L2C5-xxxx1816H230x	46.3	50.3	54.3	-16	0.05

Notes for Table 3:
1. Lumileds maintains a tolerance of ±0.06V on forward voltage measurements.
2. Measured between 25°C and 85°C.
3. Thermal resistance is measured between junction and the bottom of the LUXEON CoB substrate.

Absolute Maximum Ratings

Table 4. Absolute maximum ratings for LUXEON CoB Core Range.

PARAMETER	MAXIMUM PERFORMANCE
DC Forward Current [1,2]	2x test current
LED Junction Temperature [1] (DC & Pulse)	125°C
ESD Sensitivity (ANSI/ESDA/JEDEC JS-001-2012)	Class 3B
Operating Case Temperature [1]	-40°C to 105°C
LED Storage Temperature	-40°C to 120°C
Reverse Voltage ($V_{reverse}$)	LUXEON LEDs are not designed to be driven in reverse bias

Notes for Table 4:
1. Proper current derating must be observed to maintain the junction temperature below the maximum allowable junction temperature.
2. Residual periodic variations due to power conversion from alternating current (AC) to direct current (DC), also called "ripple," are acceptable if the following conditions are met:
   – The frequency of the ripple current is 100Hz or higher
   – The average current for each cycle does not exceed the maximum allowable DC forward current
   – The maximum amplitude of the ripple does not exceed 20% of the maximum allowable DC forward current

Characteristic Curves

Spectral Power Distribution Characteristics

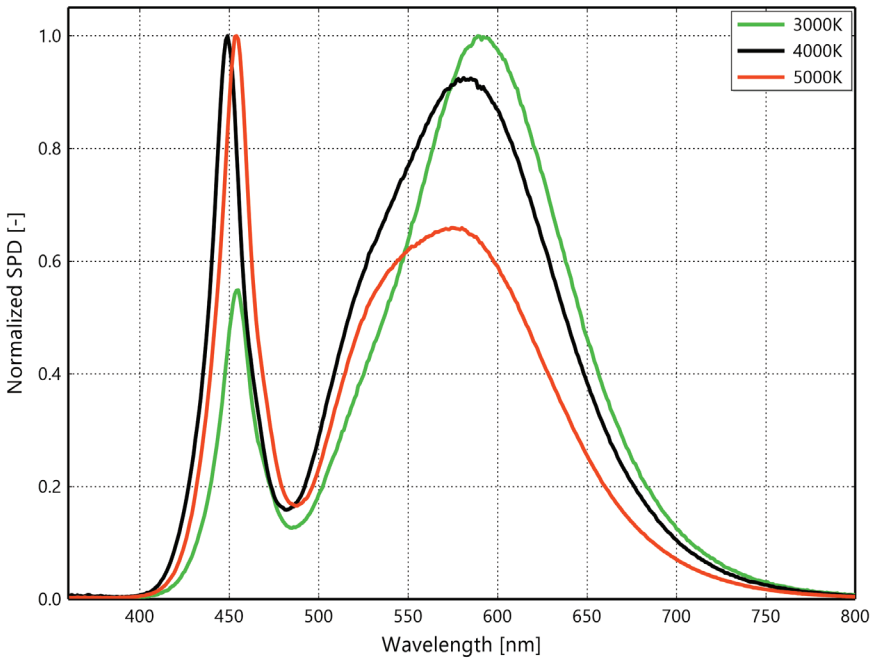


Figure 1a. Typical normalized power vs. wavelength for L2C5-xx70xxxxHxx0x at specified test current, T_j=85°C.

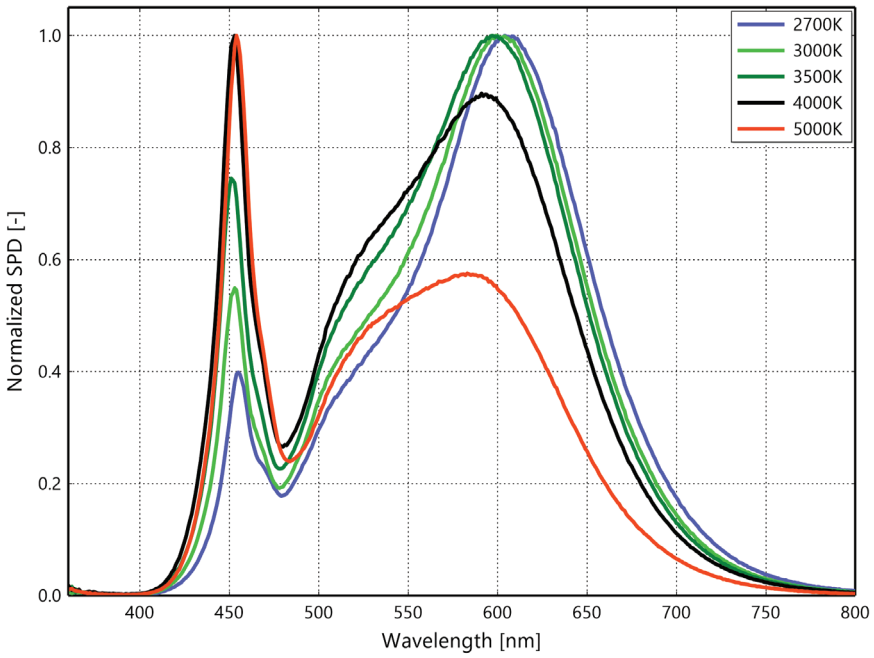


Figure 1b. Typical normalized power vs. wavelength for L2C5-xx80xxxxHxx0x at specified test current, T_j=85°C.

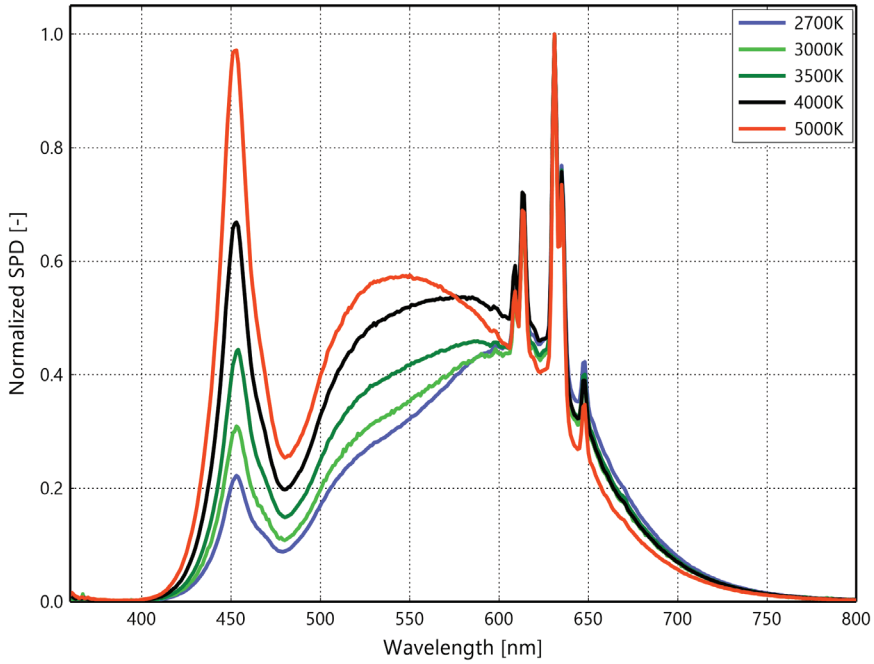


Figure 1c. Typical normalized power vs. wavelength for L2C5-xx90xxxxHxx0x at specified test current, T_j=85°C.

Light Output Characteristics

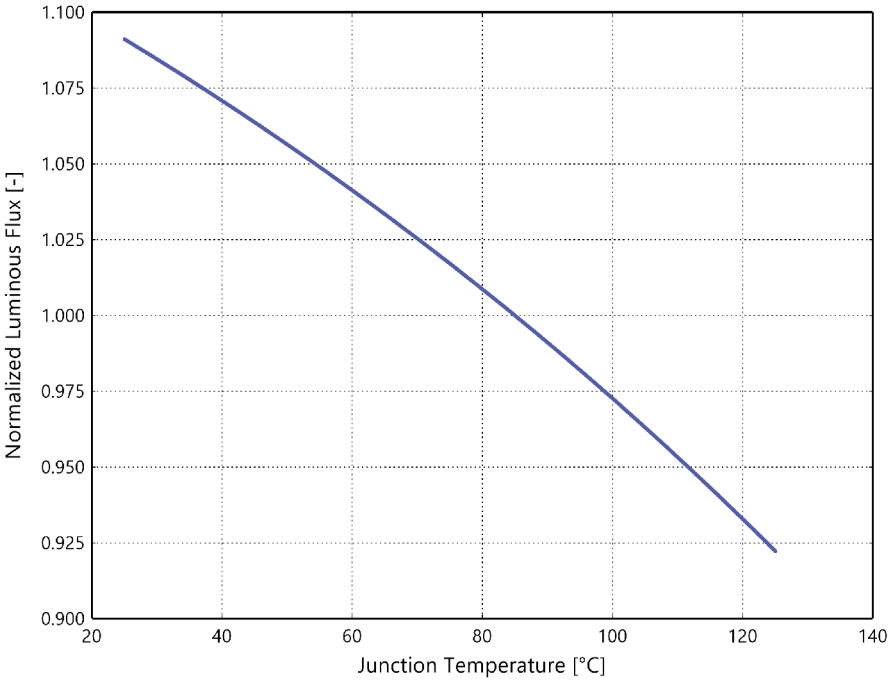


Figure 2. Typical normalized light output vs. junction temperature for L2C5-xxxxxxxxxxx0x at specified test current.

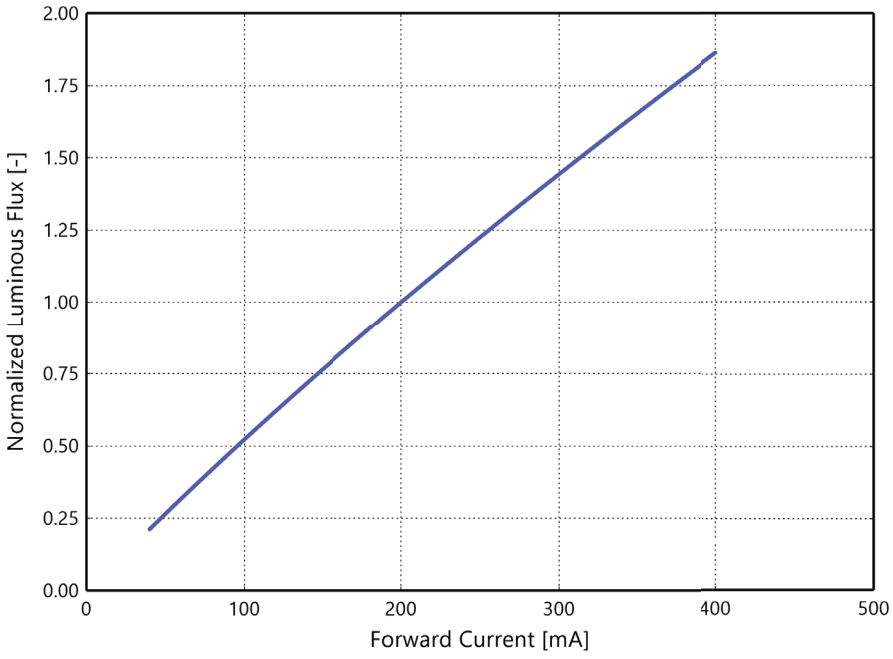


Figure 3a. Typical normalized light output vs. forward current for L2C5-xxxx1202x060x at T_j=85°C.

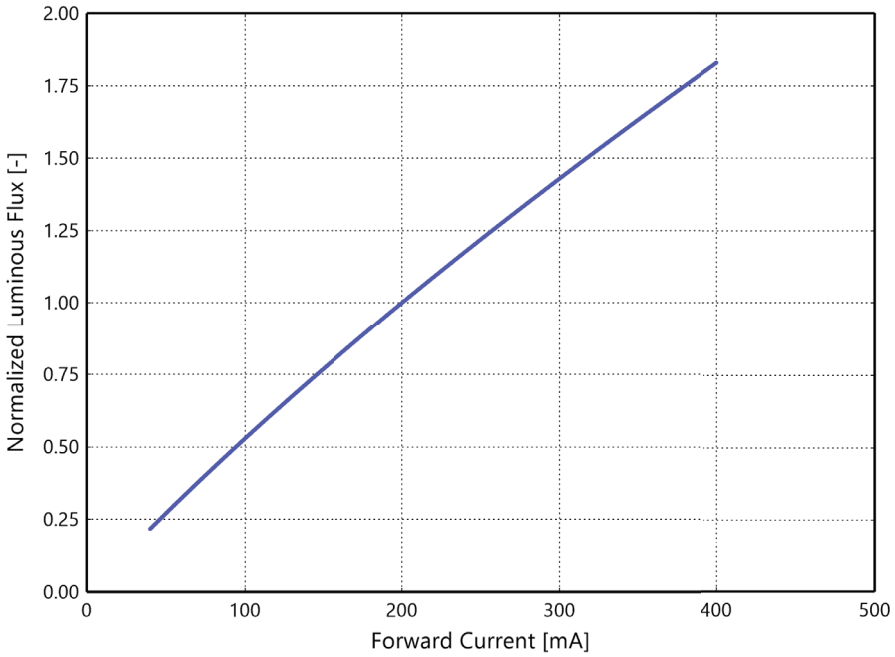


Figure 3b. Typical normalized light output vs. forward current for L2C5-xxxx1202x090x at T_j=85°C.

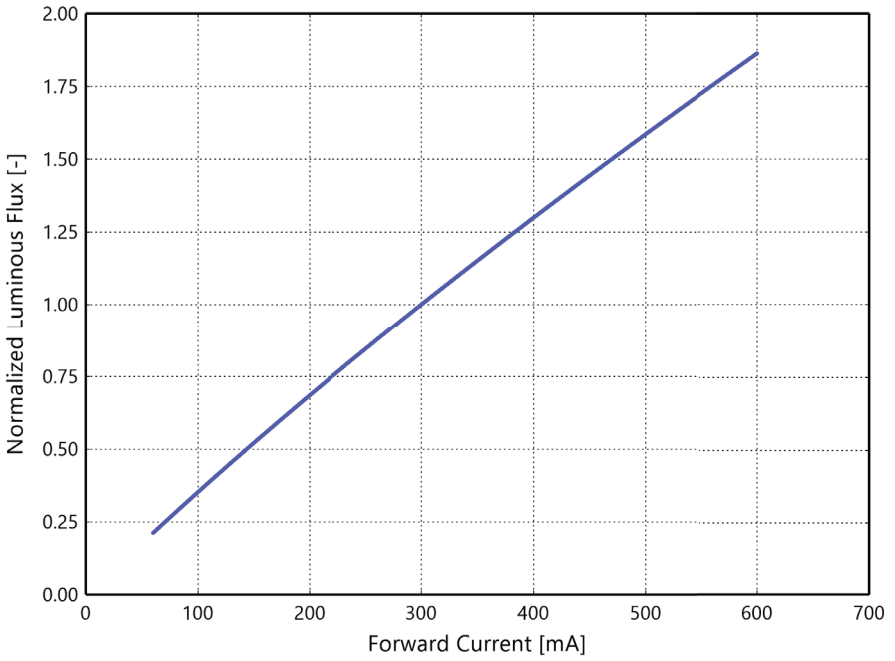


Figure 3c. Typical normalized light output vs. forward current for L2C5-xxxx1203x090x at T_j=85°C.

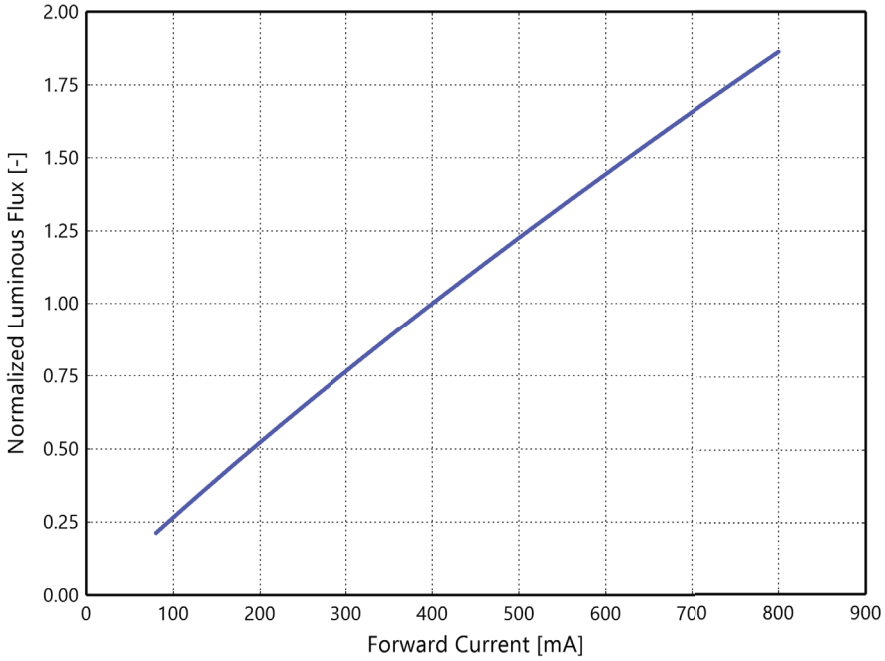


Figure 3d. Typical normalized light output vs. forward current for L2C5-xxxx1204x090x at T_j=85°C.

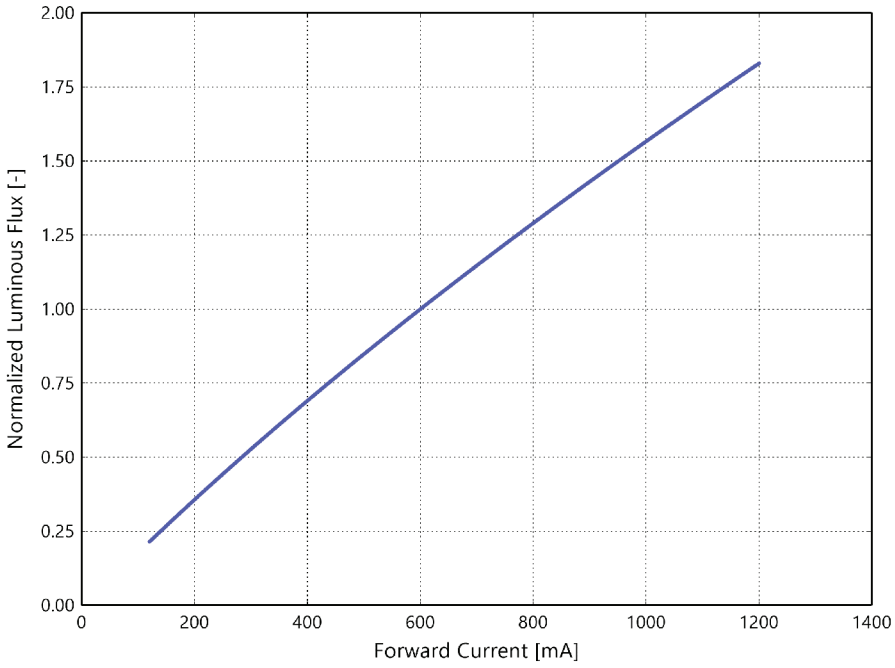


Figure 3e. Typical normalized light output vs. forward current for L2C5-xxxx1205xxx0x at T_j=85°C.

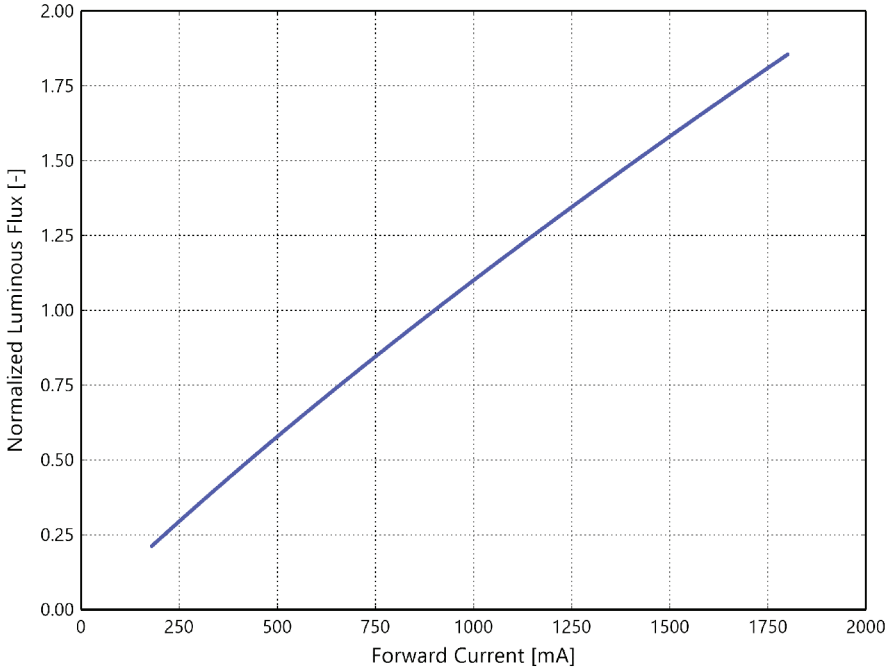


Figure 3f. Typical normalized light output vs. forward current for L2C5-xxxx1208xxx0x at T_j=85°C.

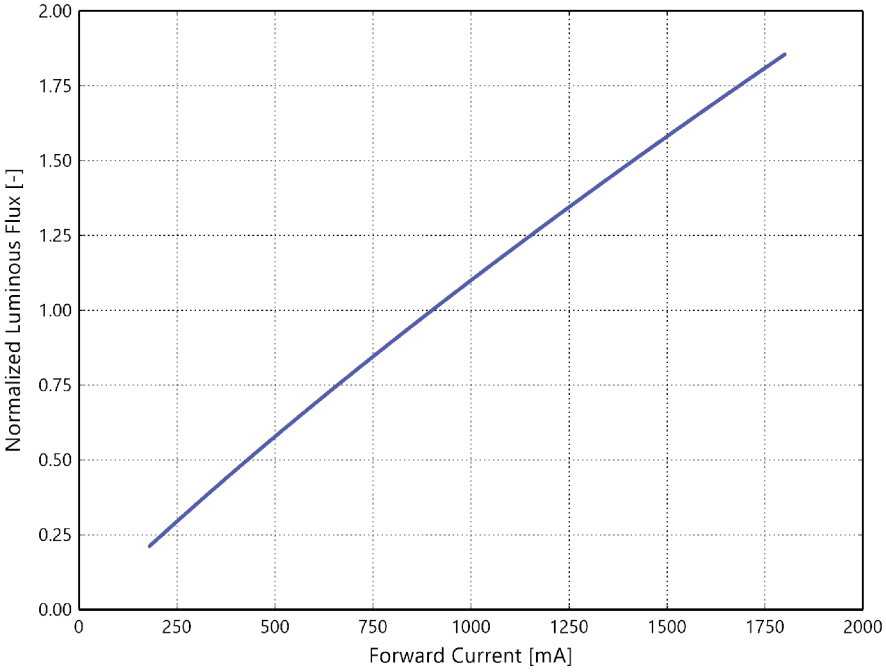


Figure 3g. Typical normalized light output vs. forward current for L2C5-xxxx1210xxx0x at T_j=85°C.

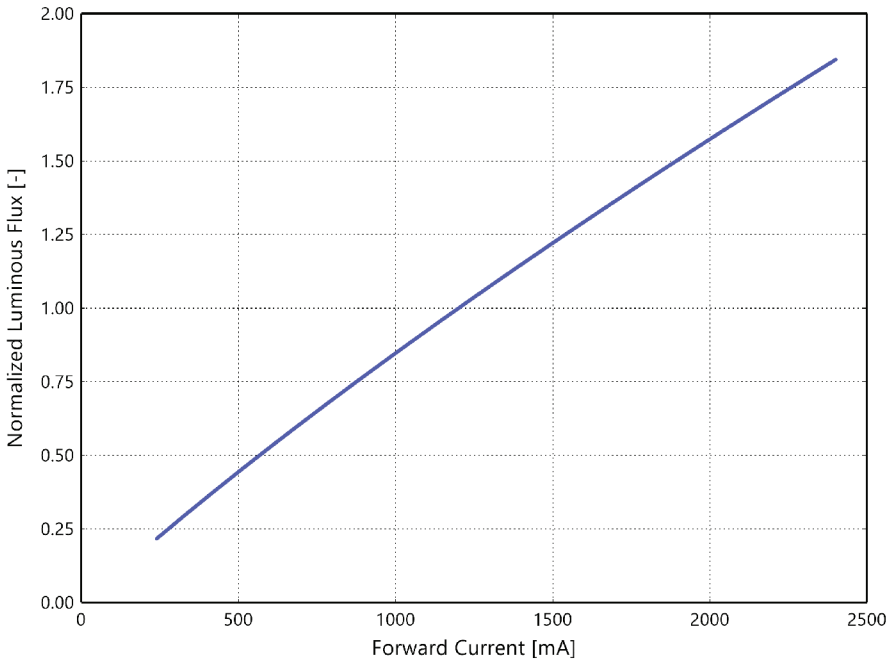


Figure 3h. Typical normalized light output vs. forward current for L2C5-xxxx1211xxx0x at T_j=85°C.

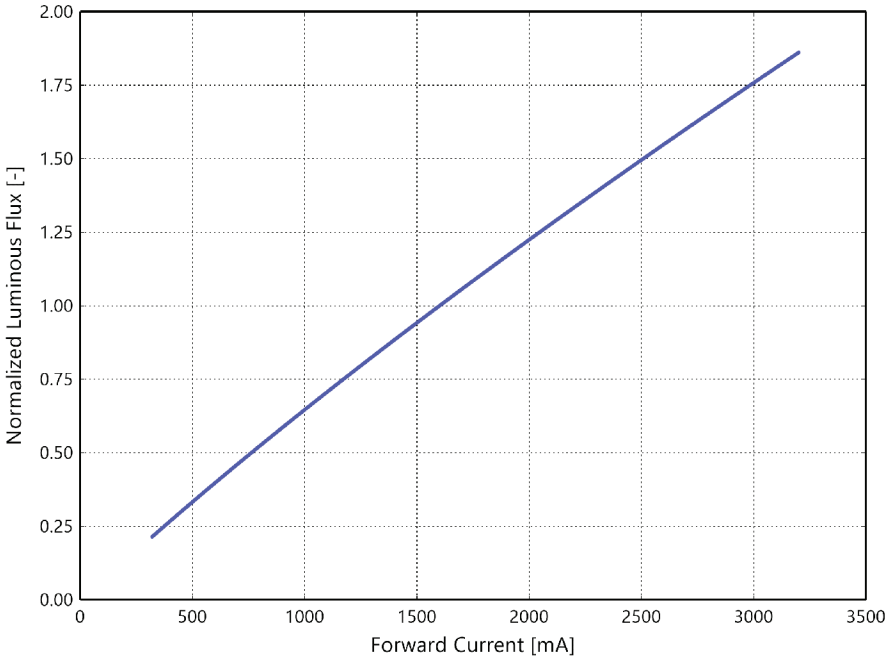


Figure 3i. Typical normalized light output vs. forward current for L2C5-xxxx1216xxx0x at T_j=85°C.

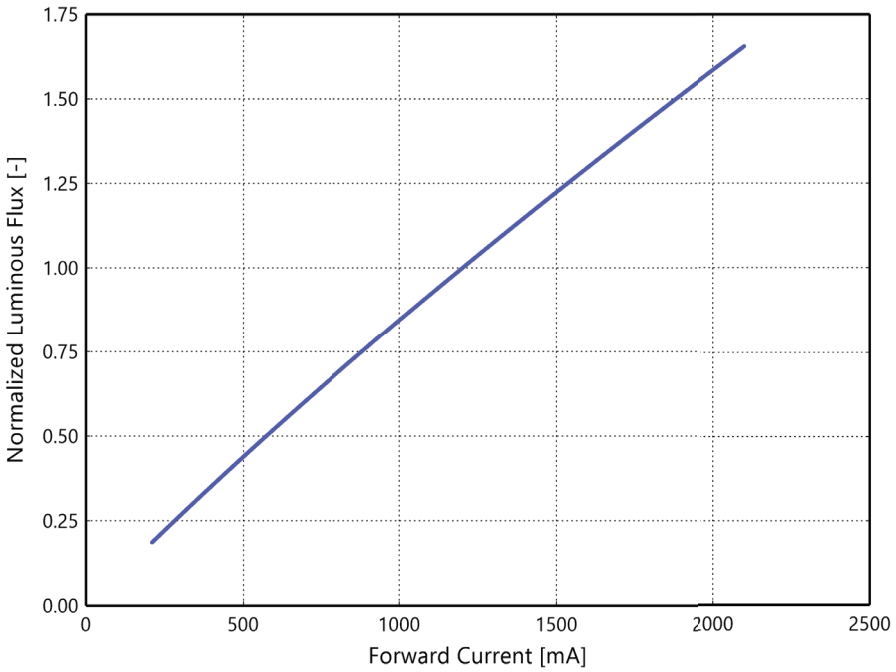


Figure 3j. Typical normalized light output vs. forward current for L2C5-xxxx1812xxx0x at T_j=85°C.

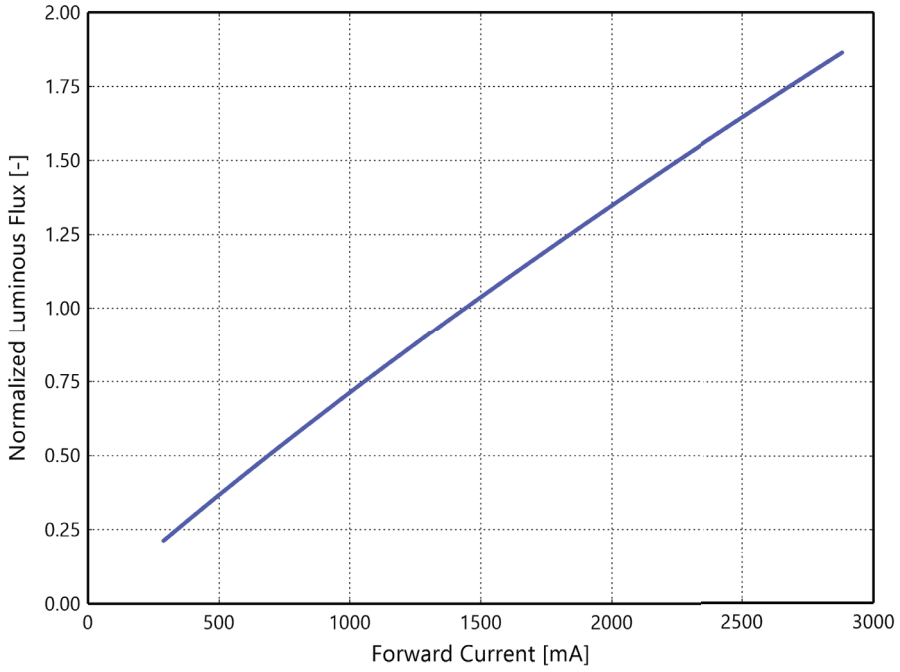


Figure 3k. Typical normalized light output vs. forward current for L2C5-xxxx1816xxx0x at T_j=85°C.

Forward Current Characteristics

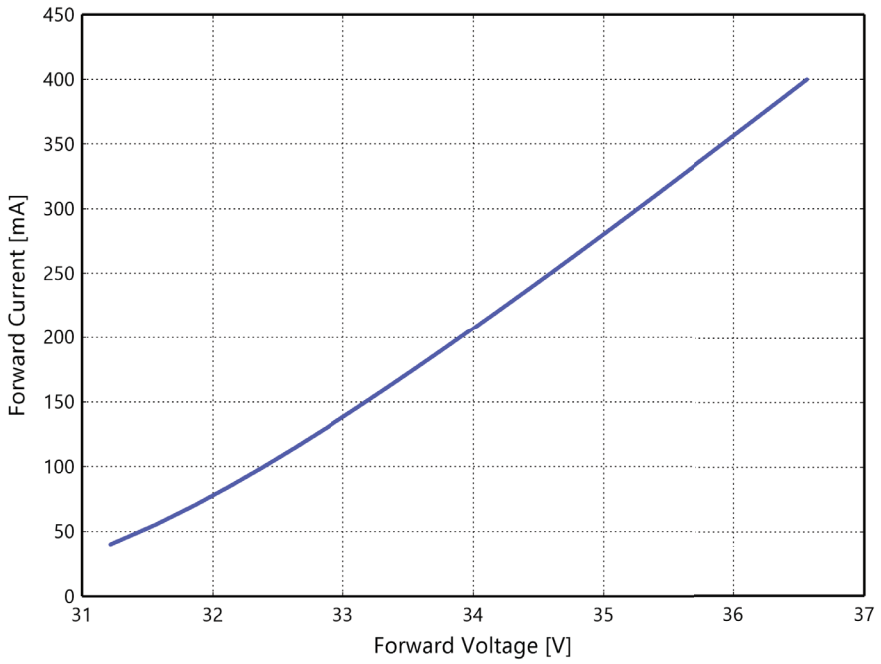


Figure 4a. Typical forward current vs. forward voltage for L2C5-xxxx1202x060x at T_j=85°C.

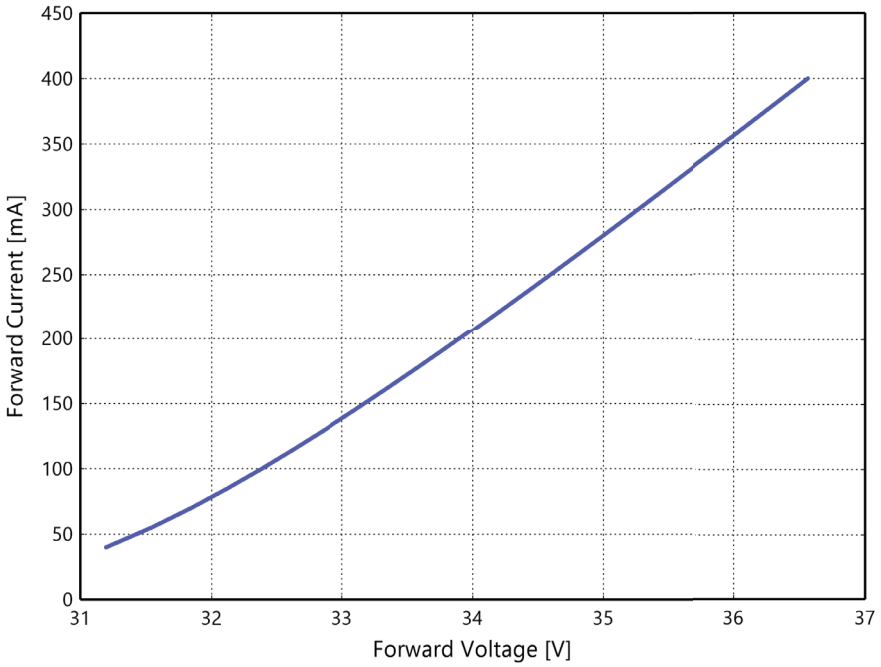


Figure 4b. Typical forward current vs. forward voltage for L2C5-xxxx1202x090x at T_j=85°C.

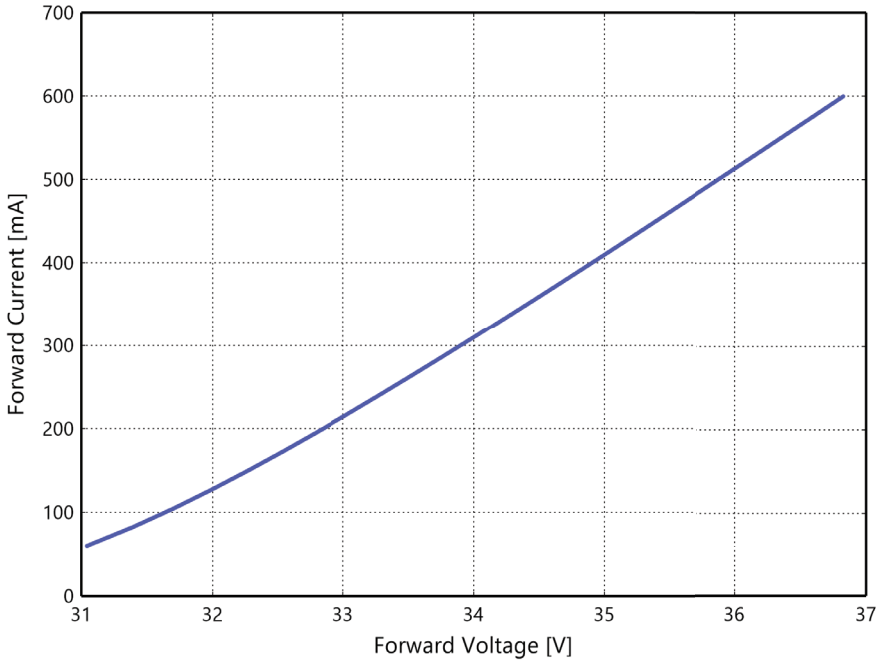


Figure 4c. Typical forward current vs. forward voltage for L2C5-xxxx1203x090x at T_j=85°C.

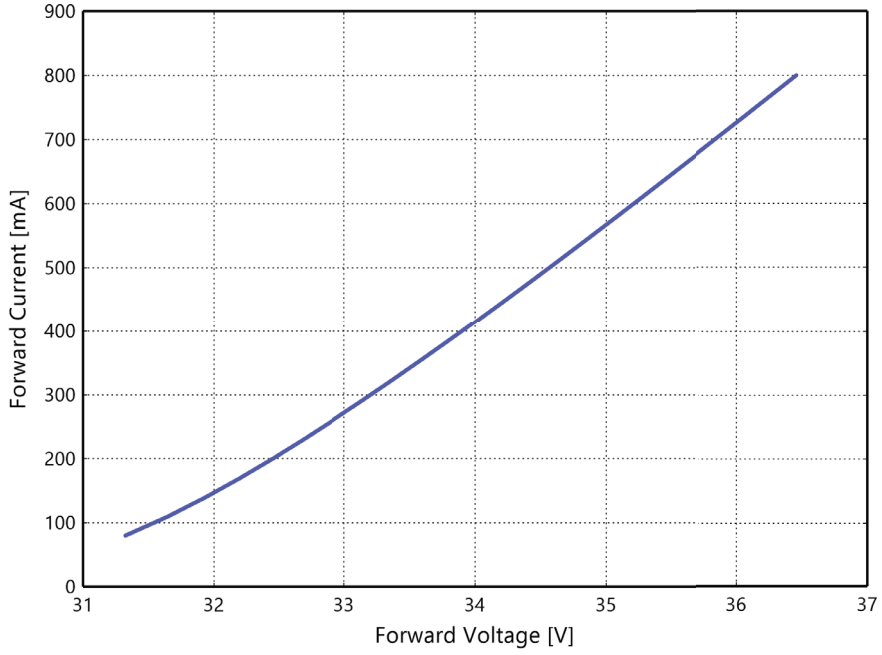


Figure 4d. Typical forward current vs. forward voltage for L2C5-xxxx1204x090x at T_j=85°C.

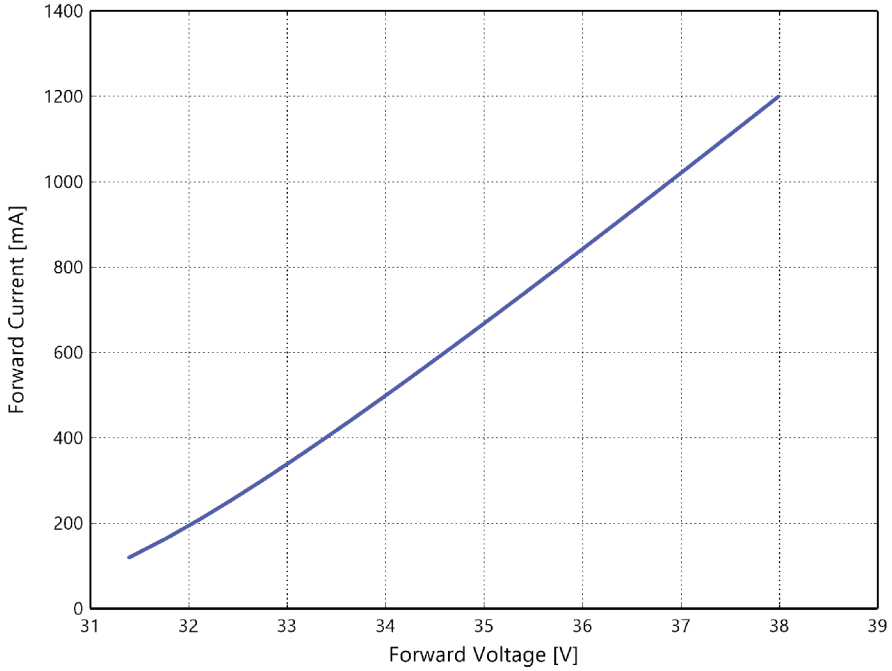


Figure 4e. Typical forward current vs. forward voltage for L2C5-xxxx1205xxx0x at T_j=85°C.

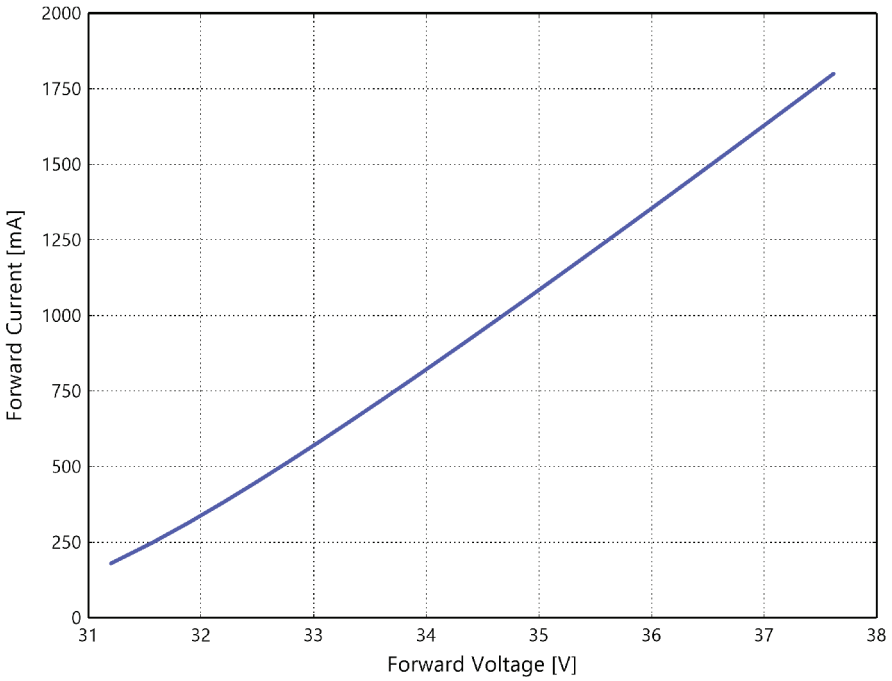


Figure 4f. Typical forward current vs. forward voltage for L2C5-xxxx1208xxx0x at T_j=85°C.

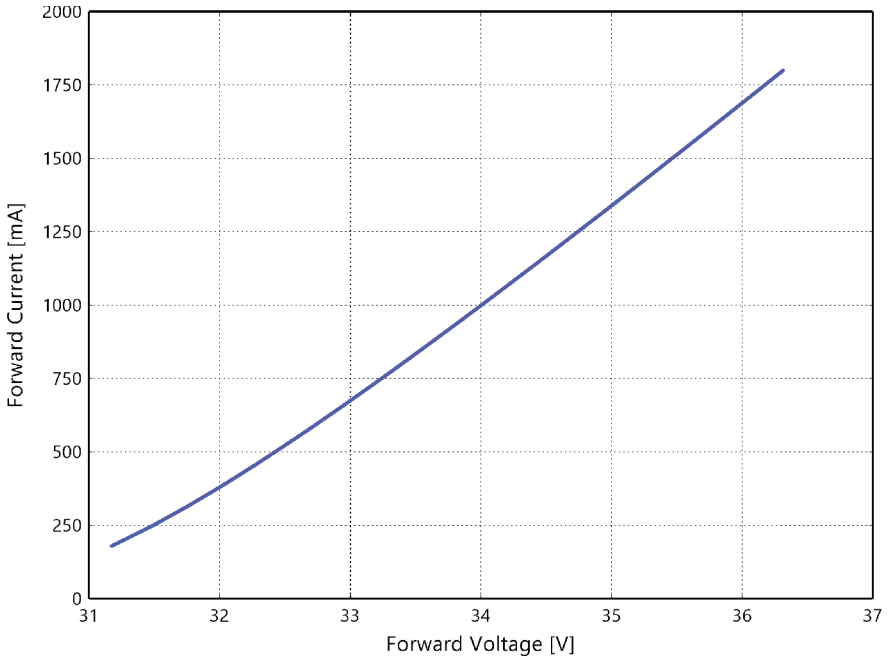


Figure 4g. Typical forward current vs. forward voltage for L2C5-xxxx1210xxx0x at T_j=85°C.

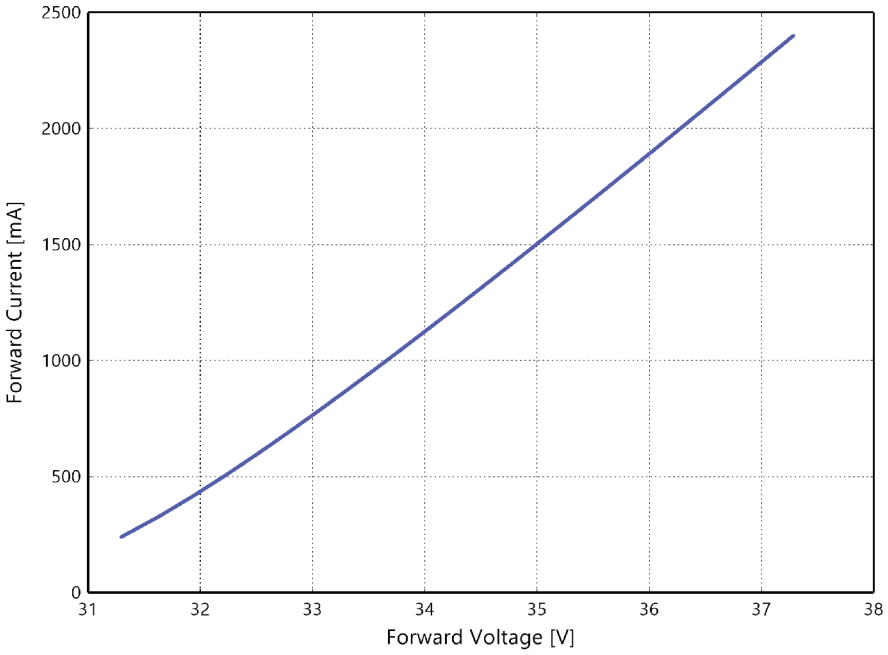


Figure 4h. Typical forward current vs. forward voltage for L2C5-xxxx1211xxx0x at T_j=85°C.

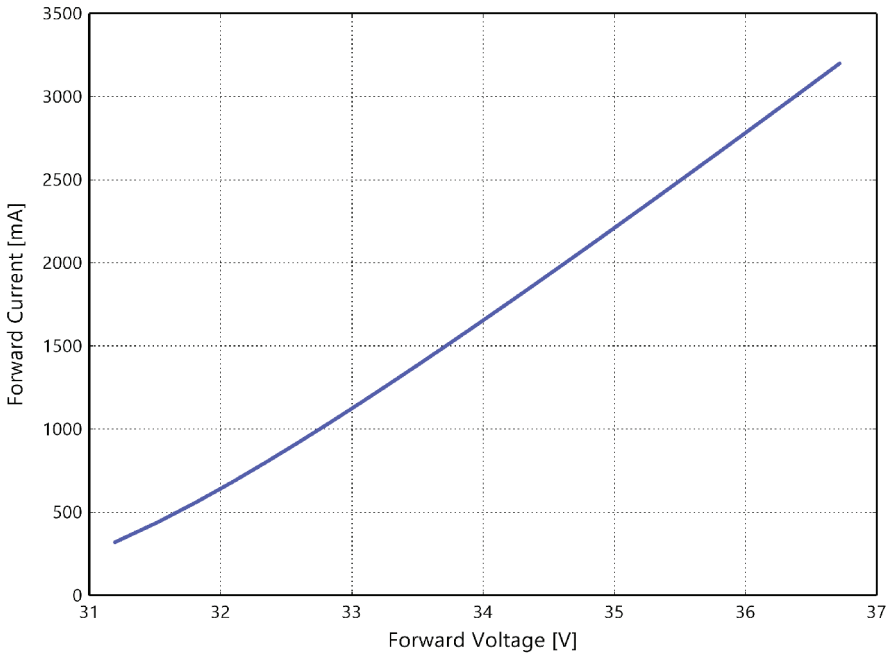


Figure 4i. Typical forward current vs. forward voltage for L2C5-xxxx1216xxx0x at T_j=85°C.

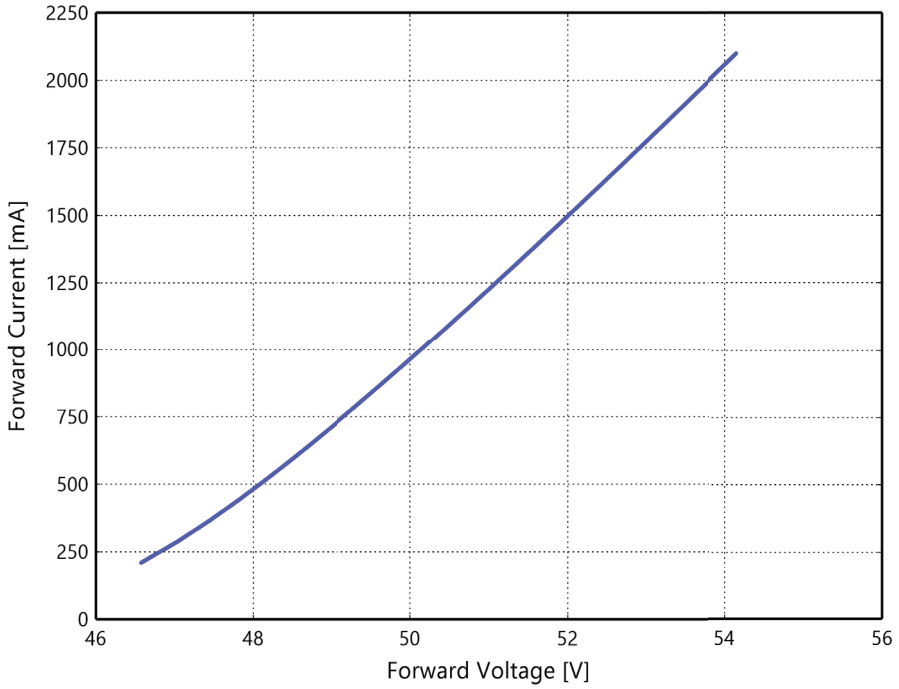


Figure 4j. Typical forward current vs. forward voltage for L2C5-xxxx1812xxx00 at T_j=85°C.

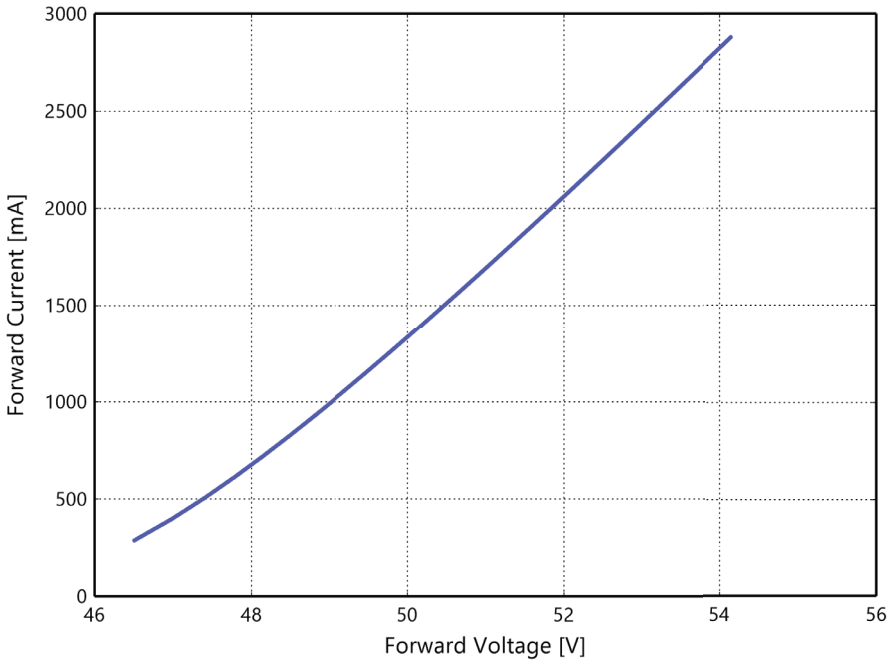


Figure 4k. Typical forward current vs. forward voltage for L2C5-xxxx1816xxx00 at T_j=85°C.

Radiation Pattern Characteristics

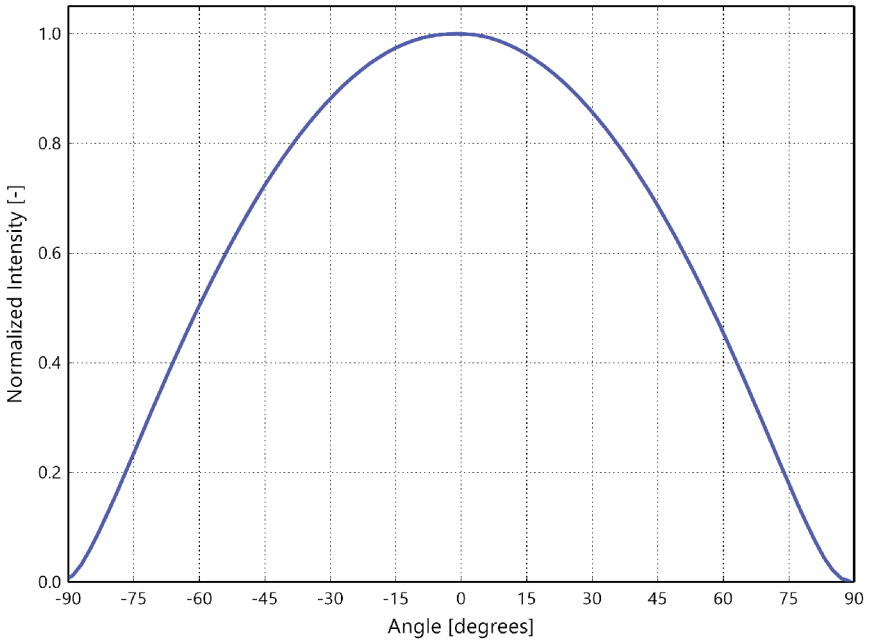


Figure 5. Typical radiation pattern for LUXEON CoB Core Range at specified test current, T_j=85ºC.

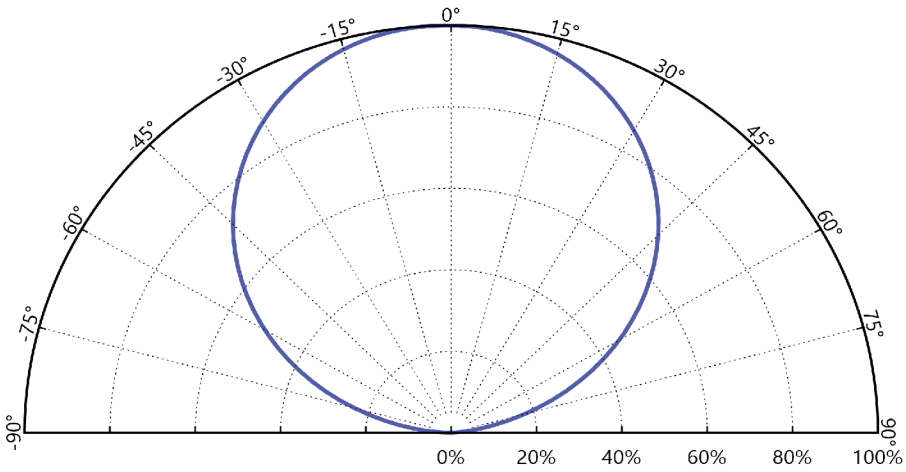


Figure 6. Typical polar radiation pattern for LUXEON CoB Core Range at specified test current, T_j=85ºC.

Color Bin Definitions

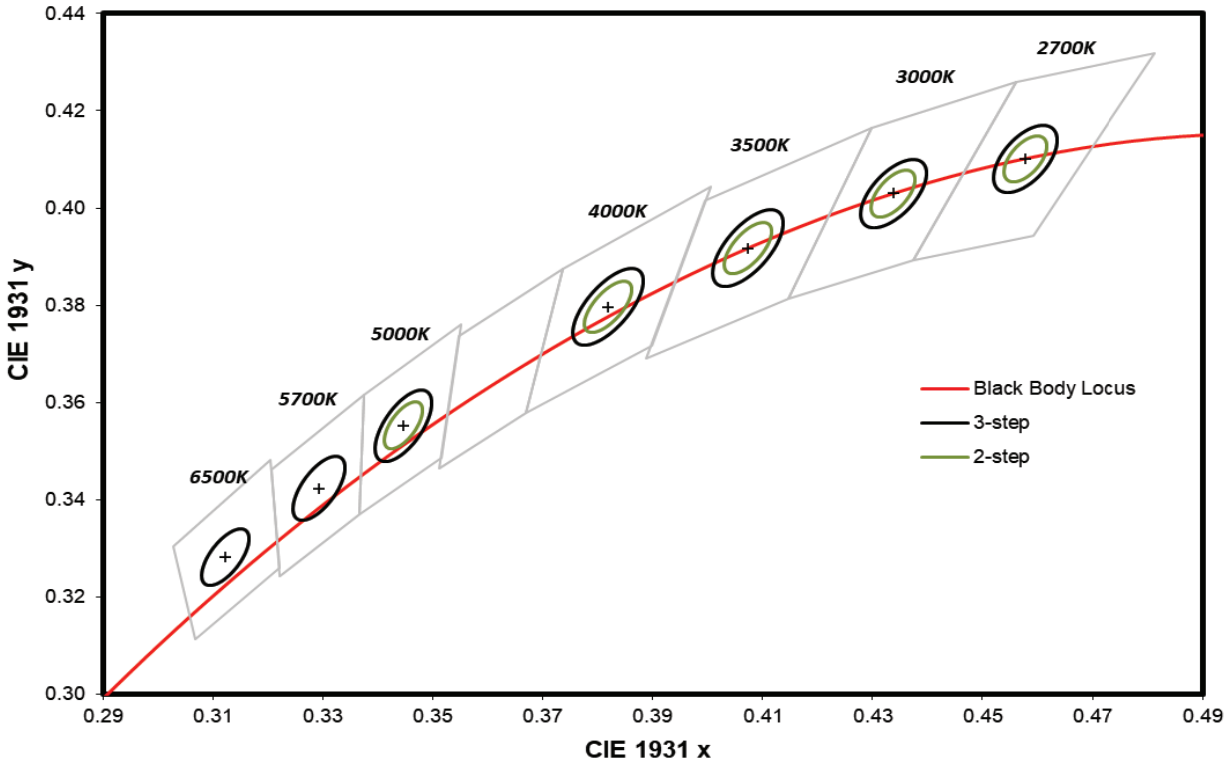


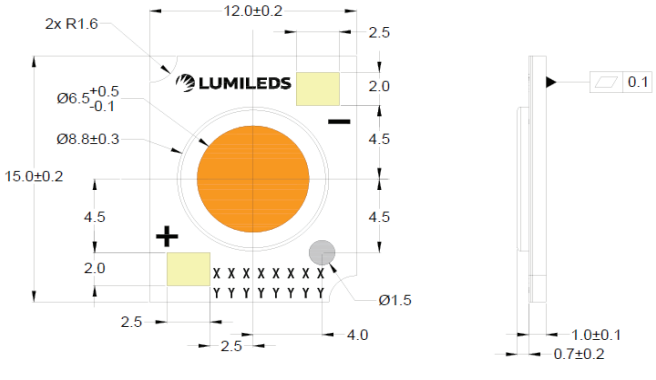
Figure 7. 2-step and 3-step MacAdam ellipse illustration for Table 5.

Table 5. 2-step and 3-step MacAdam ellipse color bin definitions for LUXEON CoB Core Range.

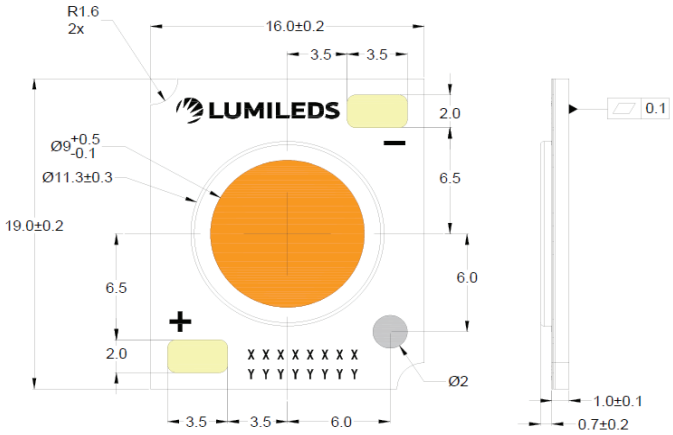
NOMINAL CCT	COLOR SPACE	CENTER POINT [1] (cx, cy)	MAJOR AXIS, a		MINOR AXIS, b		ELLIPSE ROTATION ANGLE, θ
			2-step	3-step	2-step	3-step	
2700K	2-step, 3-step MacAdam ellipse	(0.4578, 0.4101)	0.00540	0.00810	0.00280	0.00420	53.70°
3000K	2-step, 3-step MacAdam ellipse	(0.4338, 0.4030)	0.00556	0.00834	0.00272	0.00408	53.22°
3500K	2-step, 3-step MacAdam ellipse	(0.4073, 0.3917)	0.00618	0.00927	0.00276	0.00414	54.00°
4000K	2-step, 3-step MacAdam ellipse	(0.3818, 0.3797)	0.00626	0.00939	0.00268	0.00402	53.72°
5000K	2-step, 3-step MacAdam ellipse	(0.3447, 0.3553)	0.00548	0.00822	0.00236	0.00354	59.62°
5700K	2-step, 3-step MacAdam ellipse	(0.3287, 0.3417)	-	0.00745	-	0.00320	59.09°
6500K	2-step, 3-step MacAdam ellipse	(0.3123, 0.3282)	-	0.00669	-	0.00285	58.57°

Notes for Table 5:
1. Lumileds maintains a tolerance of ±0.005 on x and y coordinates in the CIE 1931 color space.

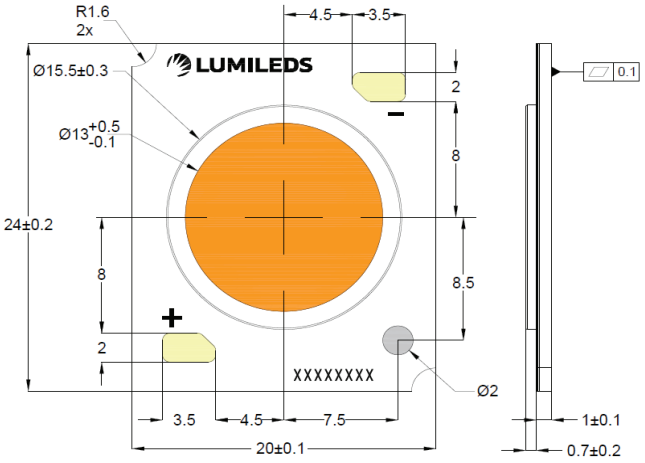
Mechanical Dimensions



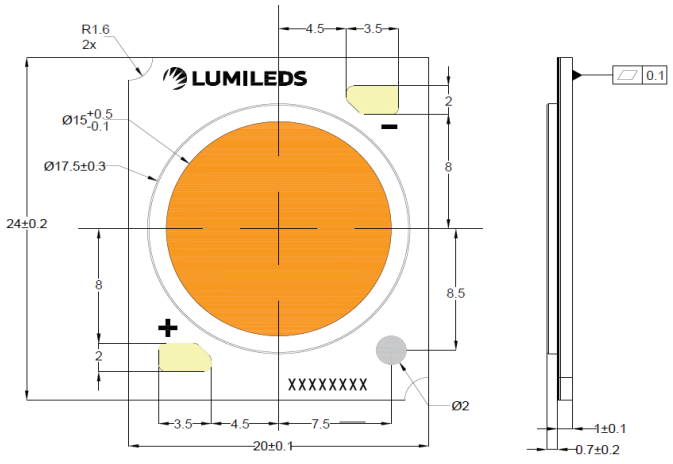
L2C5-xxxx1202x060x



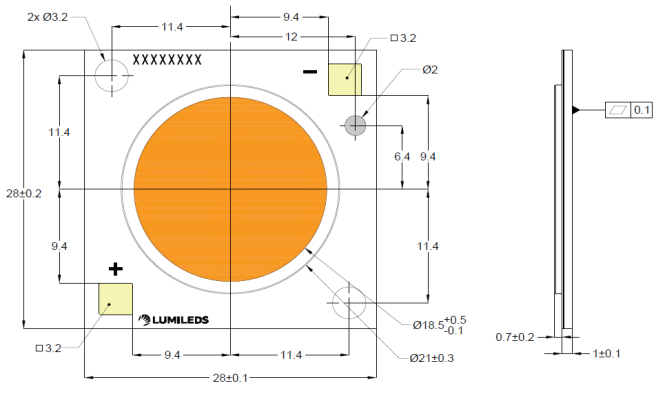
L2C5-xxxx1202x090x, L2C5-xxxx1203x090x, L2C5-xxxx1204x090x



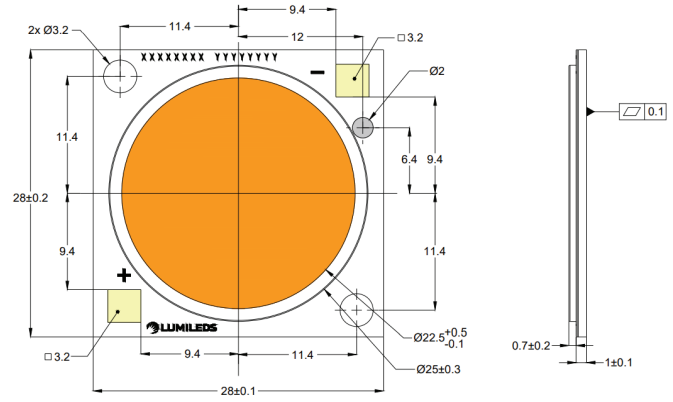
L2C5-xxxx1205x130x



L2C5-xxxx1208x150x, L2C5-xxxx1210x150x



L2C5-xxxx1211x190x



L2C5-xxxx1216x230x, L2C5-xxxx1812x230x and L2C5-xxxx1816x230x

Figure 8. Mechanical dimensions for LUXEON CoB Core Range.

Notes for Figure 8:
1. Drawings not to scale.
2. All dimensions are in millimeters.
3. Dam heights: 0.7mm is applicable to L2C5-xx90xxxxxxxx, 0.5mm to L2C5-xx80xxxxxxxx.

Packaging and Labeling Information

LUXEON CoB Core Range LEDs are packaged in tubes then in a carton box. Each tube contains a specified number of LEDs. The LEDs in each tube come from a single category code, ensuring they are all well-matched for light output, color, and forward voltage. Each tube contains a rubber stopper at one end. The tube label has both alphanumeric and bar code information. The carton boxes have printed information providing part numbers with CAT codes that indicate luminous flux, color and forward voltage bins.

Table 6. Number of LEDs per tube for LUXEON CoB Core Range.

PART NUMBER	TOTAL UNITS PER TUBE	TOTAL TUBES PER INNER BOX	TOTAL UNITS PER INNER BOX
L2C5-xxxx1202x060x	20	5	100
L2C5-xxxx1202x090x	20	5	100
L2C5-xxxx1203x090x	20	5	100
L2C5-xxxx1204x090x	20	5	100
L2C5-xxxx1205x130x	20	5	100
L2C5-xxxx1208x150x	20	5	100
L2C5-xxxx1210x150x	20	5	100
L2C5-xxxx1211x190x	10	5	50
L2C5-xxxx1216x230x	10	5	50
L2C5-xxxx1812x230x	10	5	50
L2C5-xxxx1816x230x	10	5	50

Tube

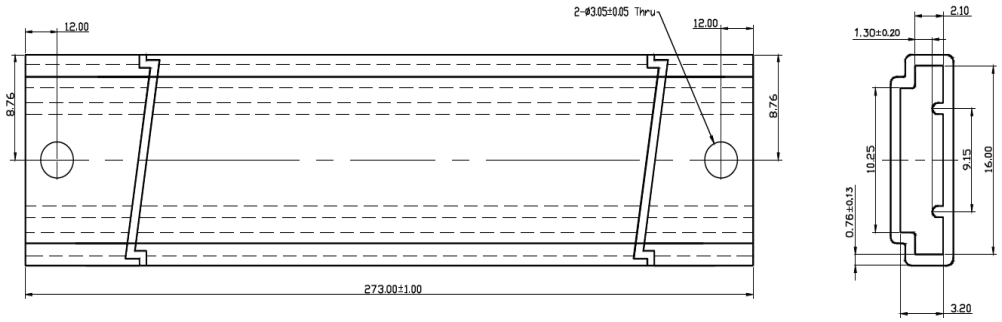


Figure 9a. Tube dimensions for L2C5-xxxx1202x060x.

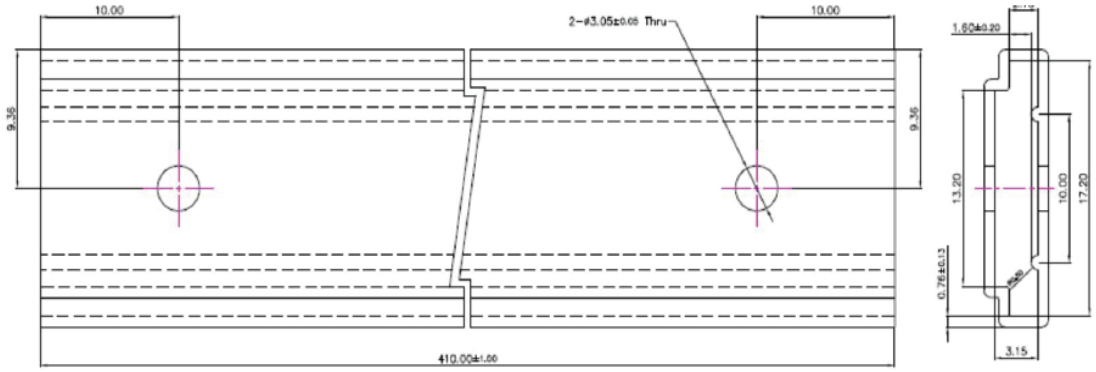


Figure 9b. Tube dimensions for L2C5-xxxx1202x090x, L2C5-xxxx1203x090x and L2C5-xxxx1204x090x.

Notes for Figures 9a and 9b:
1. Drawings not to scale.
2. All dimensions are in millimeters.

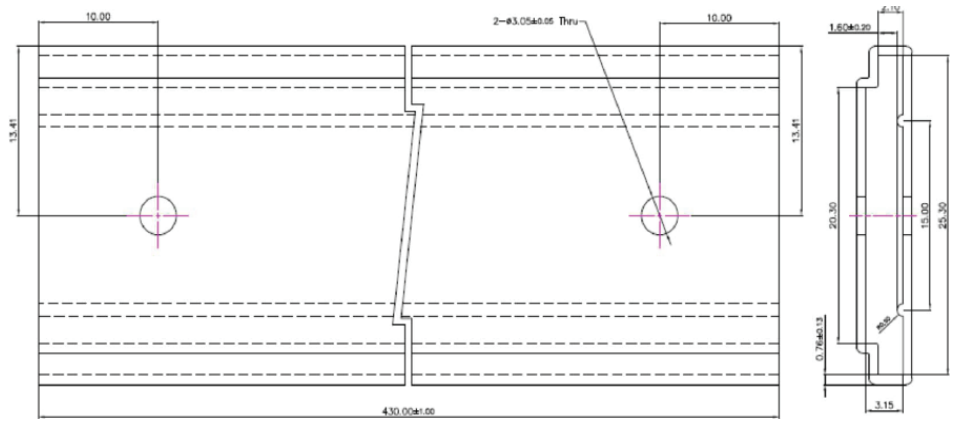


Figure 9c. Tube dimensions for L2C5-xxxx1205x130x, L2C5-xxxx1208x150x and L2C5-xxxx1210x150x.

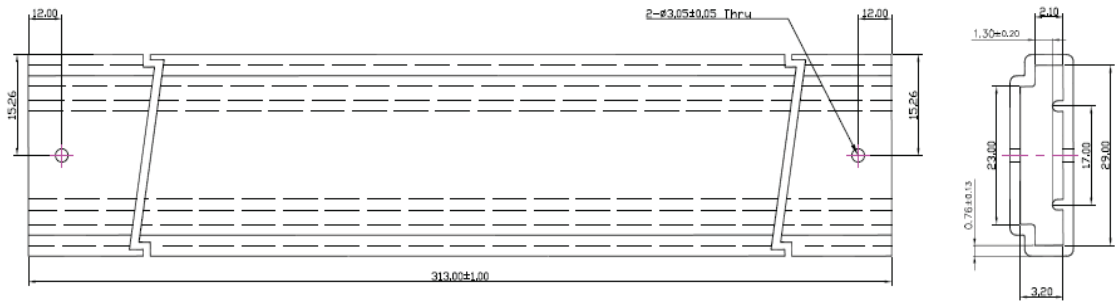


Figure 9d. Tube dimensions for L2C5-xxxx1211x190x, L2C5-xxxx1216x230x, L2C5-xxxx1812x230x and L2C5-xxxx1816x230x.

Notes for Figures 9c and 9d:
1. Drawings not to scale.
2. All dimensions are in millimeters.

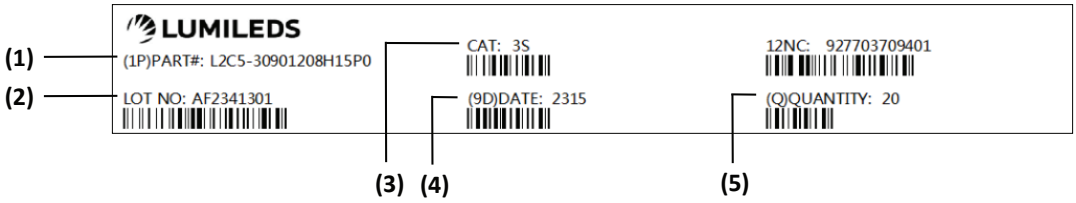


Figure 10. Example of a tube label for LUXEON CoB Core Range.

Notes for Figure 10 - Tube Label descriptions for customer use:
Field labels not described are for Lumileds internal use only.
1. Lumileds part number.
2. Unique production lot identification number. This number is required for traceability purpose.
3. Product category code.
4. LED test date in YYWW format.
5. Number of LED emitters in a tube.

Inner Box

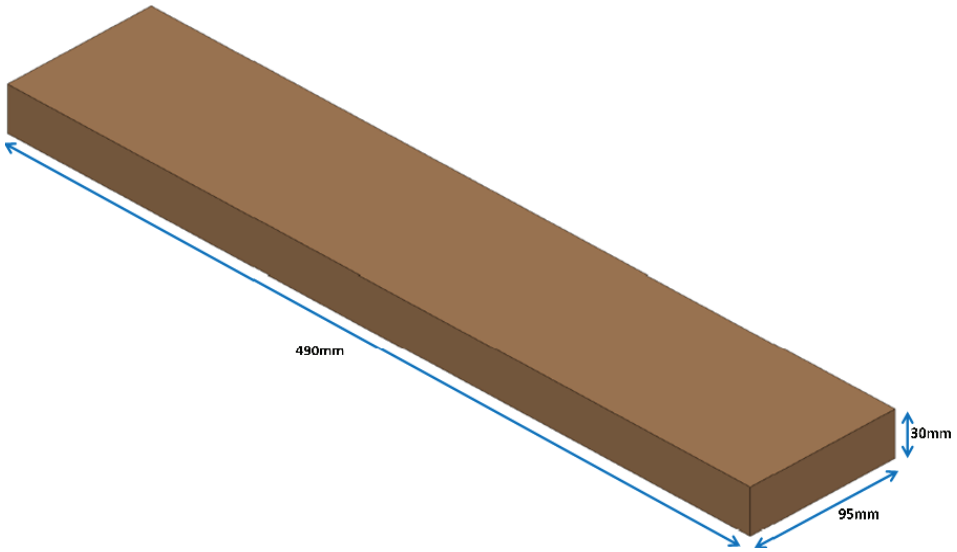


Figure 11. Dimensions for inner box packaging for LUXEON CoB Core Range.

Table 7. Inner box information for LUXEON CoB Core Range.

BOX TYPE	DIMENSIONS (mm)			AVERAGE WEIGHT (100pcs/box)	AVERAGE WEIGHT (50pcs/box)
	H	L	W		
Inner Box	30	490	95	0.340Kg	0.305Kg

Figure 12. Example of inner box label for LUXEON CoB Core Range.

Notes for Figure 12 – Inner Box Label descriptions for customer use:
Field labels not described are for Lumileds internal use only.
1. Number of LED emitters in a box.
2. Lumileds part number.
3. Customer part number for custom requests only.
4. LED test date in YYWW format.
5. Unique production lot identification number. This number is required for traceability purpose.
6. Product category code.
7. EU regulatory address.

Outer Box

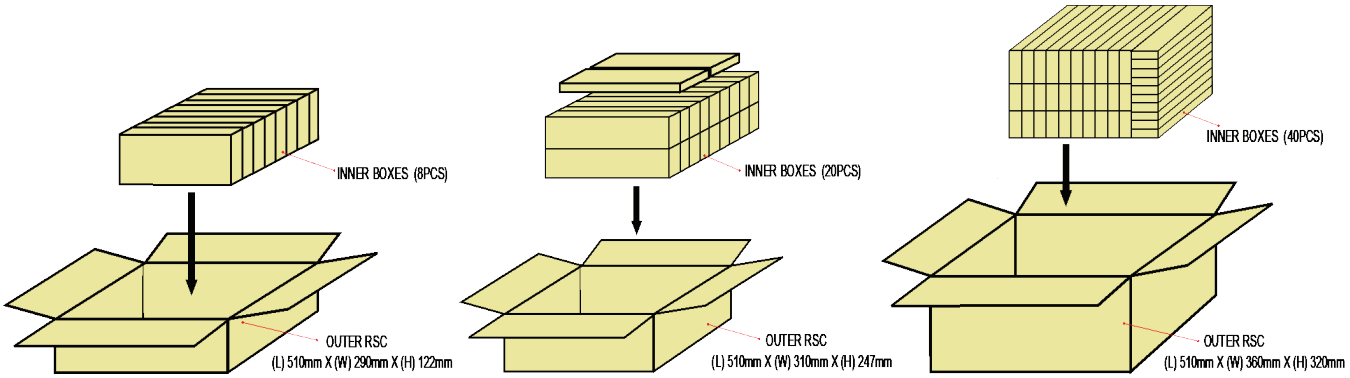


Figure 13. Dimensions for outer box packaging for LUXEON CoB Core Range.

Table 8. Outer box information for LUXEON CoB Core Range.

BOX TYPE	DIMENSIONS (mm)			MAXIMUM INNER BOXES PER OUTER BOX	MAXIMUM QUANTITY PER OUTER BOX	AVERAGE WEIGHT (100pcs/box)	AVERAGE WEIGHT (50pcs/box)
	H	L	W				
Outer Box 8	122	510	290	8	800	3.05kg	2.77kg
Outer Box 20	247	510	310	20	2000	7.55kg	6.85kg
Outer Box 40	320	510	360	40	4000	15.10kg	13.70kg

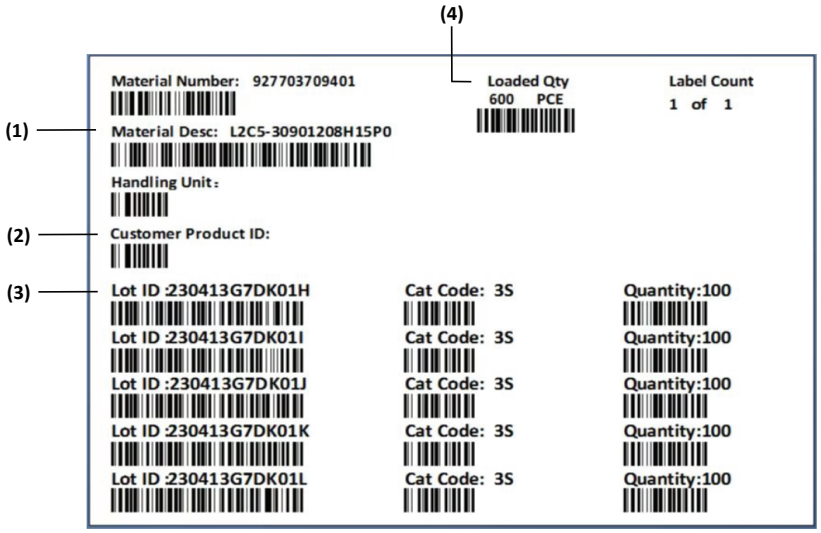


Figure 14. Example of outer box label for LUXEON CoB Core Range.

Notes for Figure 14 – Outer Box Label descriptions for customer use:
Field labels not described are for Lumileds internal use only.
1. Lumileds part number.
2. Customer part number for custom requests only.
3. Unique production lot identification number. This number is required for traceability purpose.
4. Total number of LED emitters in a shipment box.

About Lumileds

Companies developing automotive, mobile, IoT and illumination lighting applications need a partner who can collaborate with them to push the boundaries of light. With over 100 years of inventions and industry firsts, Lumileds is a global lighting solutions company that helps customers around the world deliver differentiated solutions to gain and maintain a competitive edge. As the inventor of Xenon technology, a pioneer in halogen lighting and the leader in high performance LEDs, Lumileds builds innovation, quality and reliability into its technology, products and every customer engagement. Together with its customers, Lumileds is making the world better, safer, more beautiful—with light.

To learn more about our lighting solutions, visit lumileds.com.

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