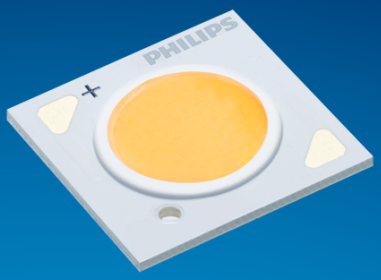
PHILIPS

CertaFlux

LED

CertaFlux SLM C 1204 L09 1515 G2 HD



Datasheet

Experience good performance with affordable cost

CertaFlux LED SLM G2

CertaFlux LED SLM is a most cost effective and affordable CoB family from Philips. With upgrade from Gen 1 to Gen 2, 8% efficacy improvement is achieved. On top of this, we extend to 2 new product lines within the family - High Density range and Vivid White range, which can help our OEM customers with more flexibility to develop their luminaires with more extensive portfolio. Flux range from 500lm to 6000m, available in 2700K, 3000K, 3500K, 4000K,5000K with CRI 80 and CRI90, and fully compatible with our Philips Drivers.

Key features and benefits

- Cost effective SLM CoB
- Complete portfolio
- Flexibility to select a different lumen output between 500lm to 6000m
- System approach (CoB + Driver + Holder)
- Flexibility to design Luminaire performance (high efficacy or high output)
- 50,000 hours lifetime

September 2021

Ordering data

Commercial product name	EOC	12NC	Box quantity
CertaFlux SLM C 830 1204 L09 1515 G2 HD	8719514 283619 00	9290 028 43306	20
CertaFlux SLM C 930 1204 L09 1515 G2 HD	8719514 283633 00	9290 028 43406	20
CertaFlux SLM C 940 1204 L09 1515 G2 HD	8719514 283657 00	9290 028 43506	20
CertaFlux SLM C 930 VW 1204 L09 1515 G2 HD	8719514 283671 00	9290 028 43606	20

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux SLM C 1204 L09 1515 G2 HD	450	900	900	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	85	95	105	°C

* Nominal value at which typical performance is specified

** Value at which life time is specified

*** Maximum value for safe operation, do not operate above this value

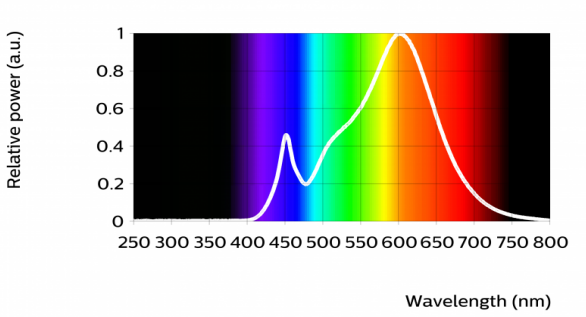
Optical characteristics - table per color (CCT)

CertaFlux SLM C 830 1204 L09 1515 G2 HD

Parameter	Min	Typ	Max	Unit
Luminous flux	1895	2037	2241	lm
Module efficacy		133		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	82	82		
Photometric code		830/359		
Photobiological safety			RG1 unlimited	

Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	830	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1864	151
	Tc 85 °C	1685	140
	Tc 95 °C	1621	136
I-nom 450mA	Tc 25 °C	2266	144
	Tc 85 °C	2037	133
	Tc 95 °C	1956	129
I-max 900mA	Tc 25 °C	3989	118
	Tc 85 °C	3528	107
	Tc 95 °C	3364	103



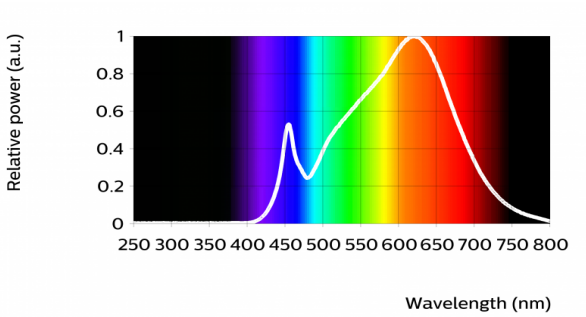
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
81	91	96	81	82	90	83	58	4	80	81	75	83	98

CertaFlux SLM C 930 1204 L09 1515 G2 HD

Parameter	Min	Typ	Max	Unit
Luminous flux	1609	1730	1903	lm
Module efficacy		113		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	92	92		
R9	50			
Photometric code		930/359		
Photobiological safety			RG1 unlimited	

Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	930	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1583	128
	Tc 85 °C	1431	119
	Tc 95 °C	1376	115
I-nom 450mA	Tc 25 °C	1924	123
	Tc 85 °C	1730	113
	Tc 95 °C	1661	109
I-max 900mA	Tc 25 °C	3387	101
	Tc 85 °C	2996	91
	Tc 95 °C	2857	87



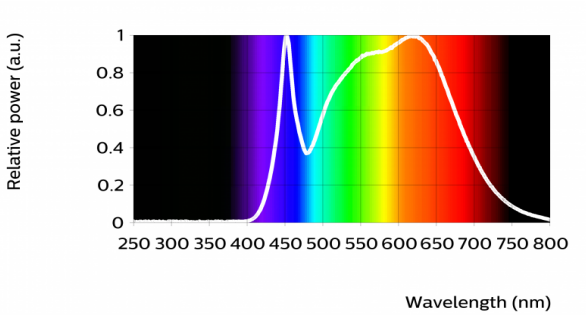
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
93	96	98	93	93	95	93	83	61	90	93	81	94	98

CertaFlux SLM C 940 1204 L09 1515 G2 HD

Parameter	Min	Typ	Max	Unit
Luminous flux	1705	1834	2017	lm
Module efficacy		120		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			3	SDCM
CRI	92	92		
R9	50			
Photometric code		940/359		
Photobiological safety			RG1 unlimited	

Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	940	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1678	136
	Tc 85 °C	1516	126
	Tc 95 °C	1459	122
I-nom 450mA	Tc 25 °C	2039	130
	Tc 85 °C	1834	120
	Tc 95 °C	1760	116
I-max 900mA	Tc 25 °C	3591	107
	Tc 85 °C	3177	97
	Tc 95 °C	3030	93



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
93	94	94	94	92	93	96	89	71	85	93	74	94	96

CertaFlux SLM C 930 VW 1204 L09 1515 G2 HD

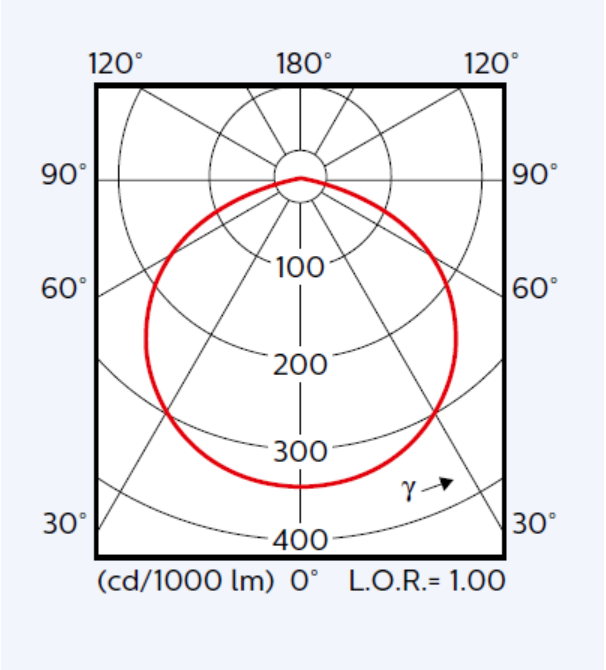
Parameter	Min	Typ	Max	Unit
Luminous flux	1609	1730	1903	lm
Module efficacy		113		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.426, 0.394)		-
Color consistency			3	SDCM
CRI	92	92		
R9	50			
Photometric code		930/359		
Photobiological safety			RG1 unlimited	

Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	930	lm	lm/W
80% I-nom 360mA	Tc 25 °C	1583	128
	Tc 85 °C	1431	119
	Tc 95 °C	1376	115
I-nom 450mA	Tc 25 °C	1924	123
	Tc 85 °C	1730	113
	Tc 95 °C	1661	109
I-max 900mA	Tc 25 °C	3387	101
	Tc 85 °C	2996	91
	Tc 95 °C	2857	87

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
94	98	98	93	94	96	94	82	61	93	93	83	95	99

Beam shape



Electrical characteristics

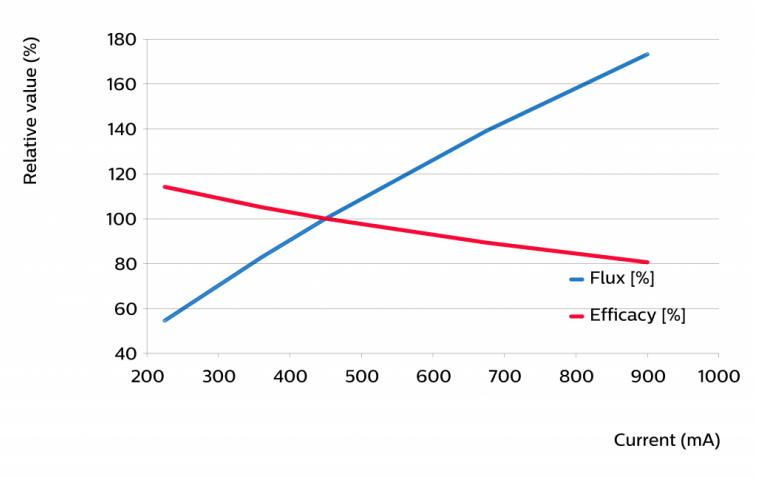
Parameter	Min	Typ	Max	Unit
Forward voltage	32.0	34.0	36.0	V
Power consumption	14.4	15.3	16.2	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel			1	

Measurement precision for Vf +/- 3%. Measurement precision for power +/- 3.3%

Tuning information

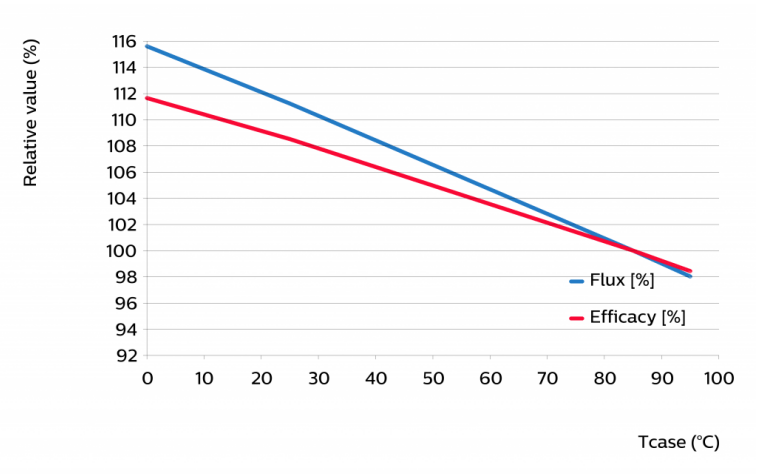
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
900	173	81
675	139	89
450	100	100
360	83	105
225	55	114



Flux and efficacy versus temperature at Tc (at I nominal)

Tc [°C]	Flux [%]	Efficacy [%]
95	98	98
85	100	100
25	111	109
0	116	112



Lumen maintenance

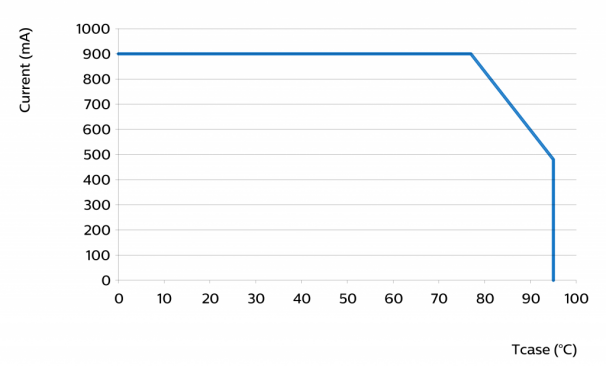
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 360 mA	Tc 75°C	>50	>50	>50	49	41	38	23	19	18
	Tc 85°C	>50	>50	>50	44	37	34	21	17	16
	Tc 95°C	>50	>50	>50	41	34	31	19	16	15
I-nom 450 mA	Tc 75°C	>50	>50	>50	47	39	36	22	18	17
	Tc 85°C	>50	>50	>50	42	36	33	20	17	15
	Tc 95°C	>50	>50	48	39	33	30	18	15	14
I-max 900 mA	Tc 75°C	47	40	37	29	25	23	14	11	10
	Tc 85°C	43	36	33	26	22	20	12	10	9
	Tc 95°C	38	32	30	24	20	18	11	9	8

Lifetime

Parameter	Value	Unit
M70F50 nominal	>50000	hours
M70F50 life	>50000	hours

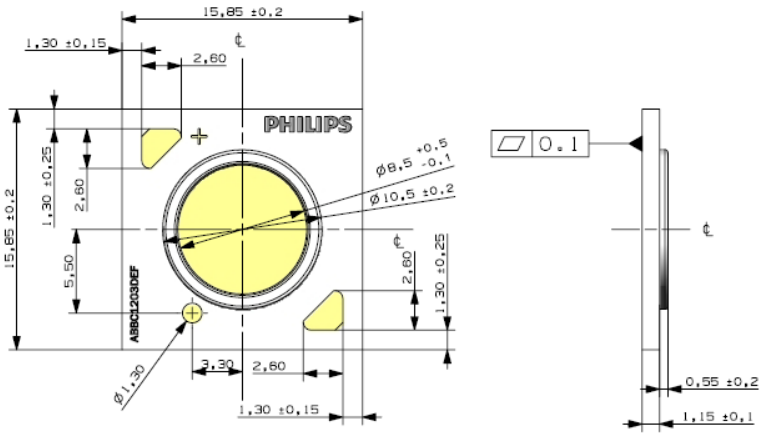
Switching cycles in accordance to EU 1194/2012: >15000.

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	15.65	15.85	16.05	mm
Width	15.65	15.85	16.05	mm
Height PCB	1.05	1.15	1.25	mm
Height including dam	1.4	1.7	2	mm
Product mass		0.76		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		900	mA
Case temperature (Tc-max)		105	°C
ESD (direct contact)	8		kV
Working voltage		60	V_{dc}
Ambient temperature	-20	40	°C
Storage temperature	-40	80	°C

Application information

Certificates and Standards
IEC/EN 62031
IEC/TR 62778
UL 8750
CE
UL

Application	
Dimming	Yes

UK importer address: 3 Guildford Business Park, GU2 8XG

07/09/2021

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