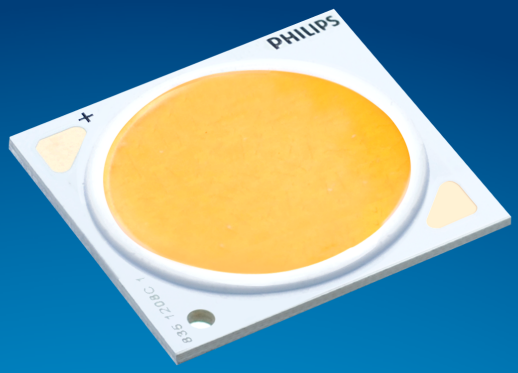
PHILIPS

CertaFlux

LED

CertaFlux SLM C 1208 L14 1818 G2



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

February 2021

indirect

100%

instant

Ordering data

Commercial product name	EOC	12NC	Box quantity
CertaFlux SLM C 827 1208 L14 1818 G2	8719514 283053 00	9290 028 40506	20
CertaFlux SLM C 830 1208 L14 1818 G2	8719514 283077 00	9290 028 40606	20
CertaFlux SLM C 835 1208 L14 1818 G2	8719514 283091 00	9290 028 40706	20
CertaFlux SLM C 840 1208 L14 1818 G2	8719514 283114 00	9290 028 40806	20
CertaFlux SLM C 850 1208 L14 1818 G2	8719514 283138 00	9290 028 40906	20
CertaFlux SLM C 860 1208 L14 1818 G2	8719514 283152 00	9290 028 41006	20
CertaFlux SLM C 927 1208 L14 1818 G2	8719514 283176 00	9290 028 41106	20
CertaFlux SLM C 930 1208 L14 1818 G2	8719514 283190 00	9290 028 41206	20
CertaFlux SLM C 935 1208 L14 1818 G2	8719514 283213 00	9290 028 41306	20
CertaFlux SLM C 940 1208 L14 1818 G2	8719514 283237 00	9290 028 41406	20
CertaFlux SLM C 950 1208 L14 1818 G2	8719514 283251 00	9290 028 41506	20
CertaFlux SLM C 930 VW 1208 L14 1818 G2	8719514 283398 00	9290 028 42206	20
CertaFlux SLM C 935 VW 1208 L14 1818 G2	8719514 283411 00	9290 028 42306	20
CertaFlux SLM C 940 VW 1208 L14 1818 G2	8719514 283435 00	9290 028 42406	20

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux SLM C 1208 L14 1818 G2	800	see performance window	1600	mA

Module temperatures

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

* Nominal value at which typical performance is specified

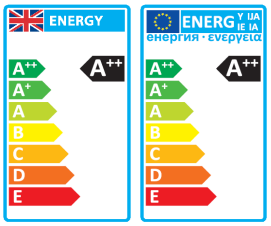
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

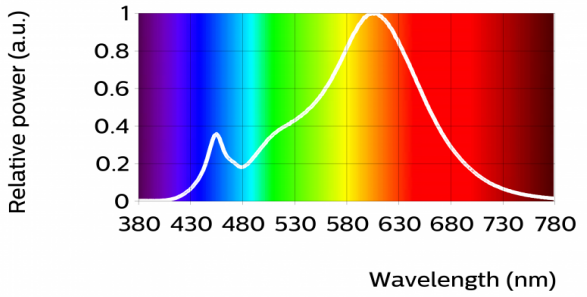
CertaFlux SLM C 827 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3517	3782	4160	lm
Module efficacy		139		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		827/359		
Photobiological safety			RG1 unlimited	



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

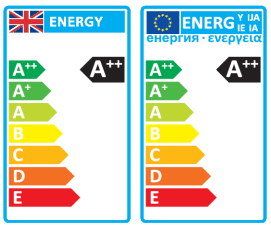
Operation point	827	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3393	155
	Tc 85 °C	3099	145
	Tc 95 °C	2988	140
I-nom 800mA	Tc 25 °C	4157	149
	Tc 85 °C	3782	139
	Tc 95 °C	3640	134
I-max 1600mA	Tc 25 °C	7586	127
	Tc 85 °C	6808	116
	Tc 95 °C	6513	112



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
82	93	94	81	83	93	81	57	8	85	82	80	85	97

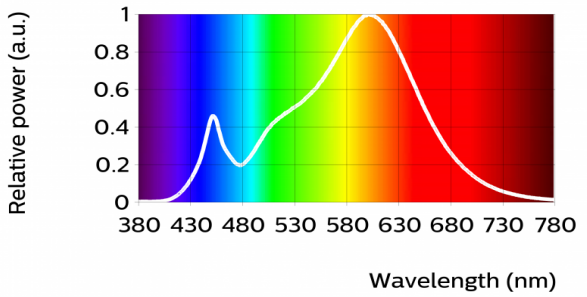
CertaFlux SLM C 830 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3701	3980	4378	lm
Module efficacy		146		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	80	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

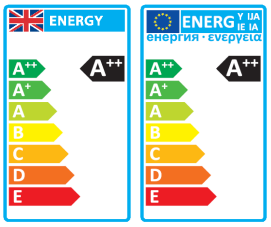
Operation point	830	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3570	163
	Tc 85 °C	3261	152
	Tc 95 °C	3144	148
I-nom 800mA	Tc 25 °C	4374	157
	Tc 85 °C	3980	146
	Tc 95 °C	3831	142
I-max 1600mA	Tc 25 °C	7985	133
	Tc 85 °C	7167	122
	Tc 95 °C	6857	118



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

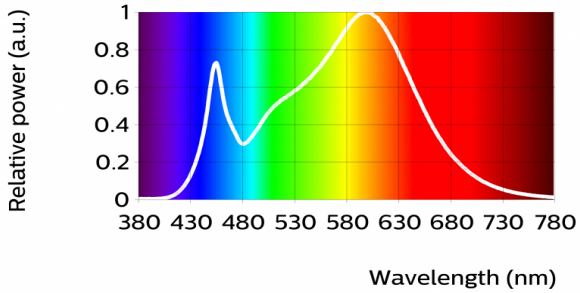
CertaFlux SLM C 835 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3776	4060	4466	lm
Module efficacy		149		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.392)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		835/359		
Photobiological safety			RG1 unlimited	



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

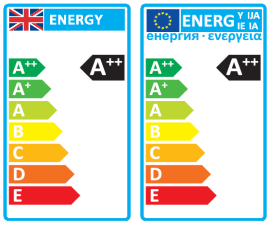
Operation point	835	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3641	166
	Tc 85 °C	3326	155
	Tc 95 °C	3207	151
I-nom 800mA	Tc 25 °C	4462	160
	Tc 85 °C	4060	149
	Tc 95 °C	3908	144
I-max 1600mA	Tc 25 °C	8148	136
	Tc 85 °C	7314	125
	Tc 95 °C	6999	120



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
82	93	95	81	83	90	83	61	8	83	81	72	85	98

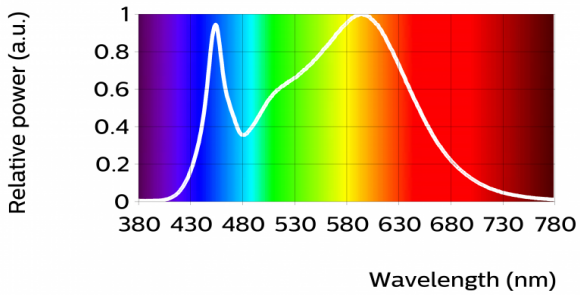
CertaFlux SLM C 840 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3854	4144	4559	lm
Module efficacy		152		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		840/359		
Photobiological safety			RG1 unlimited	



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

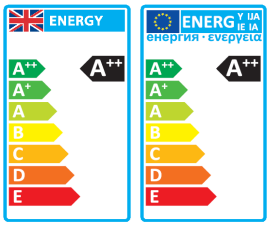
Operation point	840	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3717	170
	Tc 85 °C	3395	158
	Tc 95 °C	3274	154
I-nom 800mA	Tc 25 °C	4554	164
	Tc 85 °C	4144	152
	Tc 95 °C	3989	147
I-max 1600mA	Tc 25 °C	8319	139
	Tc 85 °C	7469	127
	Tc 95 °C	7146	123



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
82	91	96	81	82	88	84	62	5	81	81	67	84	98

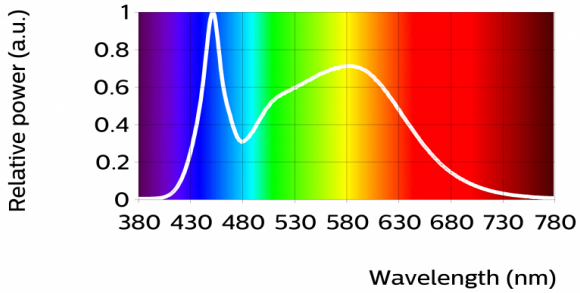
CertaFlux SLM C 850 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3856	4146	4561	lm
Module efficacy		152		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		850/359		
Photobiological safety			RG1 unlimited	



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

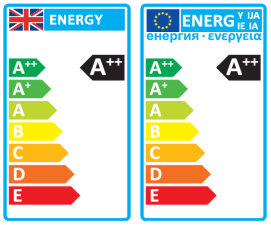
Operation point	850	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3718	170
	Tc 85 °C	3397	158
	Tc 95 °C	3275	154
I-nom 800mA	Tc 25 °C	4556	164
	Tc 85 °C	4146	152
	Tc 95 °C	3992	147
I-max 1600mA	Tc 25 °C	8326	139
	Tc 85 °C	7476	127
	Tc 95 °C	7154	123



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
81	88	94	82	82	84	86	66	3	72	82	67	82	97

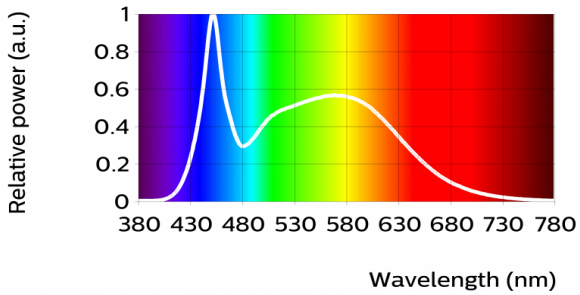
CertaFlux SLM C 860 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3858	4148	4563	lm
Module efficacy		152		lm/W
Correlated color temperature (CCT)		6000		K
Color coordinates (CIEx, CIEy)		(0.322, 0.337)		-
Color consistency			3	SDCM
CRI	80	82		
Photometric code		860/359		
Photobiological safety			RG1 unlimited	



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

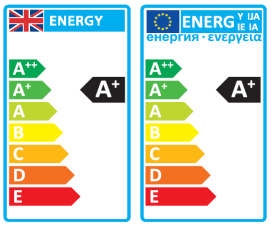
Operation point	860	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3719	170
	Tc 85 °C	3398	158
	Tc 95 °C	3277	154
I-nom 800mA	Tc 25 °C	4558	164
	Tc 85 °C	4148	152
	Tc 95 °C	3993	147
I-max 1600mA	Tc 25 °C	8333	139
	Tc 85 °C	7483	127
	Tc 95 °C	7161	123



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
81	88	93	82	82	82	88	68	5	72	82	64	83	96

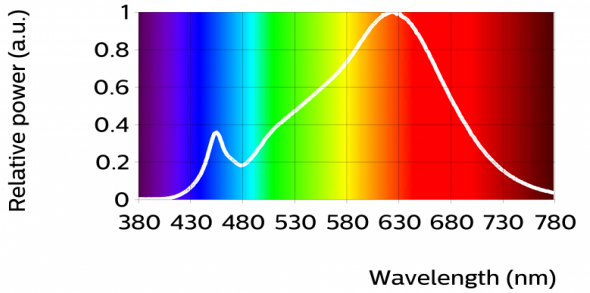
CertaFlux SLM C 927 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	2991	3216	3537	lm
Module efficacy		118		lm/W
Correlated color temperature (CCT)		2700		K
Color coordinates (CIEx, CIEy)		(0.458, 0.410)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		927/359		
Photobiological safety			RG1 unlimited	



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

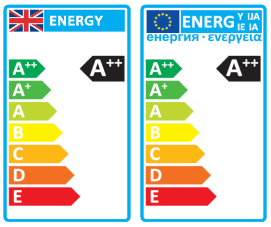
Operation point	927	lm	lm/W
80% I-nom 640mA	Tc 25 °C	2885	132
	Tc 85 °C	2635	123
	Tc 95 °C	2541	119
I-nom 800mA	Tc 25 °C	3535	127
	Tc 85 °C	3216	118
	Tc 95 °C	3095	114
I-max 1600mA	Tc 25 °C	6449	108
	Tc 85 °C	5787	99
	Tc 95 °C	5536	95



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
93	97	99	93	93	97	92	82	60	92	95	86	94	99

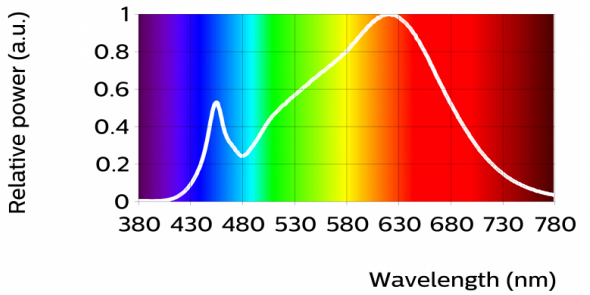
CertaFlux SLM C 930 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3147	3384	3722	lm
Module efficacy		124		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			3	SDCM
CRI	90	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

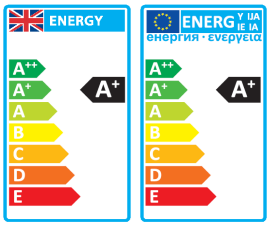
Operation point	930	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3036	139
	Tc 85 °C	2773	129
	Tc 95 °C	2674	126
I-nom 800mA	Tc 25 °C	3719	134
	Tc 85 °C	3384	124
	Tc 95 °C	3257	120
I-max 1600mA	Tc 25 °C	6788	113
	Tc 85 °C	6092	104
	Tc 95 °C	5828	100



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

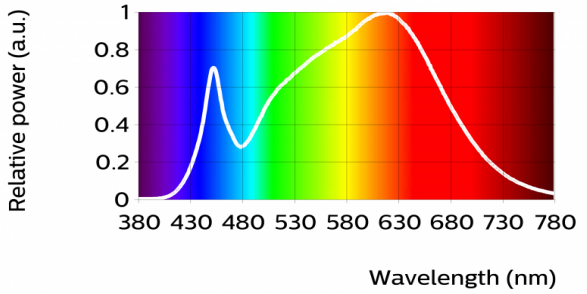
CertaFlux SLM C 935 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3332	3582	3940	lm
Module efficacy		131		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.407, 0.392)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		935/359		
Photobiological safety			RG1 unlimited	



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

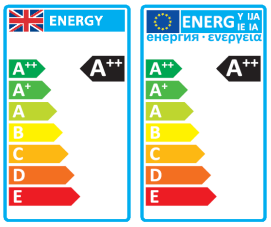
Operation point	935	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3213	147
	Tc 85 °C	2935	137
	Tc 95 °C	2830	133
I-nom 800mA	Tc 25 °C	3937	141
	Tc 85 °C	3582	131
	Tc 95 °C	3448	127
I-max 1600mA	Tc 25 °C	7189	120
	Tc 85 °C	6453	110
	Tc 95 °C	6174	106



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92	94	96	92	91	92	93	83	59	86	92	77	92	97

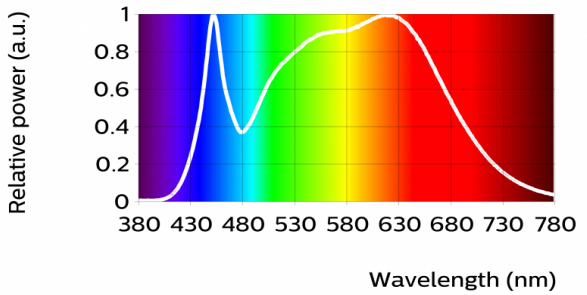
CertaFlux SLM C 940 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3333	3583	3942	lm
Module efficacy		131		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.382, 0.380)		-
Color consistency			3	SDCM
CRI	90	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

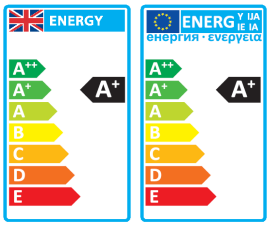
Operation point	940	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3214	147
	Tc 85 °C	2936	137
	Tc 95 °C	2831	133
I-nom 800mA	Tc 25 °C	3938	141
	Tc 85 °C	3583	131
	Tc 95 °C	3449	127
I-max 1600mA	Tc 25 °C	7192	120
	Tc 85 °C	6457	110
	Tc 95 °C	6178	106



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

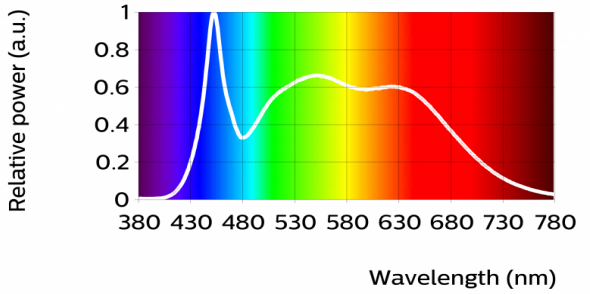
CertaFlux SLM C 950 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3334	3585	3944	lm
Module efficacy		131		lm/W
Correlated color temperature (CCT)		5000		K
Color coordinates (CIEx, CIEy)		(0.345, 0.355)		-
Color consistency			3	SDCM
CRI	90	92		
R9	70			
Photometric code		950/359		
Photobiological safety			RG1 unlimited	



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

Operation point	950	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3215	147
	Tc 85 °C	2937	137
	Tc 95 °C	2832	133
I-nom 800mA	Tc 25 °C	3940	141
	Tc 85 °C	3585	131
	Tc 95 °C	3451	127
I-max 1600mA	Tc 25 °C	7198	120
	Tc 85 °C	6463	110
	Tc 95 °C	6184	106



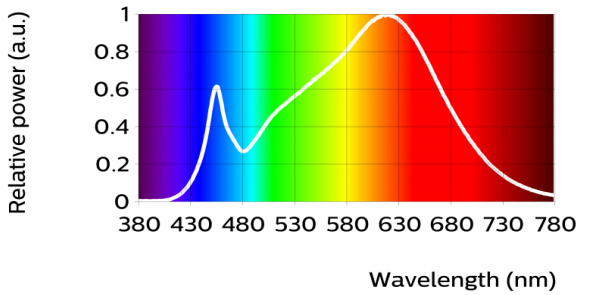
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
93	94	92	93	94	89	98	93	79	83	91	67	93	96

CertaFlux SLM C 930 VW 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3147	3384	3722	lm
Module efficacy		124		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.426, 0.394)		-
Color consistency			3	SDCM
CRI	90	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 640mA	Tc 25 °C	3036	139
	Tc 85 °C	2773	129
	Tc 95 °C	2674	126
I-nom 800mA	Tc 25 °C	3719	134
	Tc 85 °C	3384	124
	Tc 95 °C	3257	120
I-max 1600mA	Tc 25 °C	6788	113
	Tc 85 °C	6092	104
	Tc 95 °C	5828	100



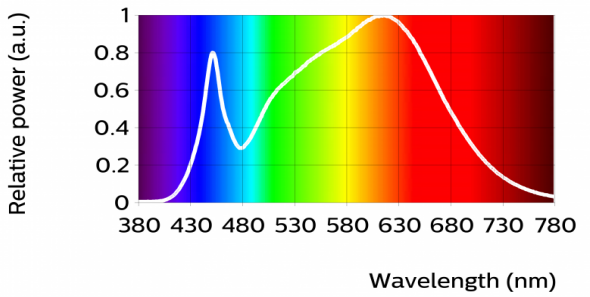
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
94	98	98	93	94	96	94	82	61	93	93	83	95	99

CertaFlux SLM C 935 VW 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3332	3583	3941	lm
Module efficacy		131		lm/W
Correlated color temperature (CCT)		3500		K
Color coordinates (CIEx, CIEy)		(0.401, 0.384)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		935/359		
Photobiological safety			RG1 unlimited	

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

Operation point	935	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3214	147
	Tc 85 °C	2936	137
	Tc 95 °C	2831	133
I-nom 800mA	Tc 25 °C	3938	141
	Tc 85 °C	3583	131
	Tc 95 °C	3449	127
I-max 1600mA	Tc 25 °C	7192	120
	Tc 85 °C	6457	110
	Tc 95 °C	6178	106



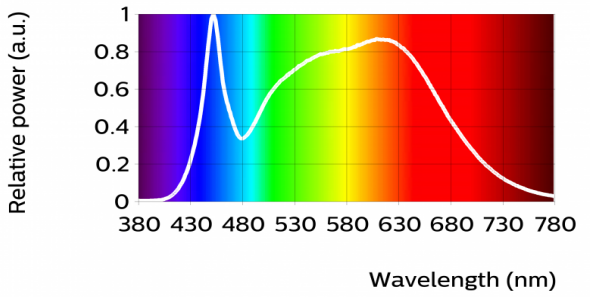
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92	94	95	92	92	92	93	83	59	86	92	78	93	97

CertaFlux SLM C 940 VW 1208 L14 1818 G2

Parameter	Min	Typ	Max	Unit
Luminous flux	3332	3583	3941	lm
Module efficacy		131		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.376, 0.371)		-
Color consistency			3	SDCM
CRI	90	92		
R9	50			
Photometric code		940/359		
Photobiological safety			RG1 unlimited	

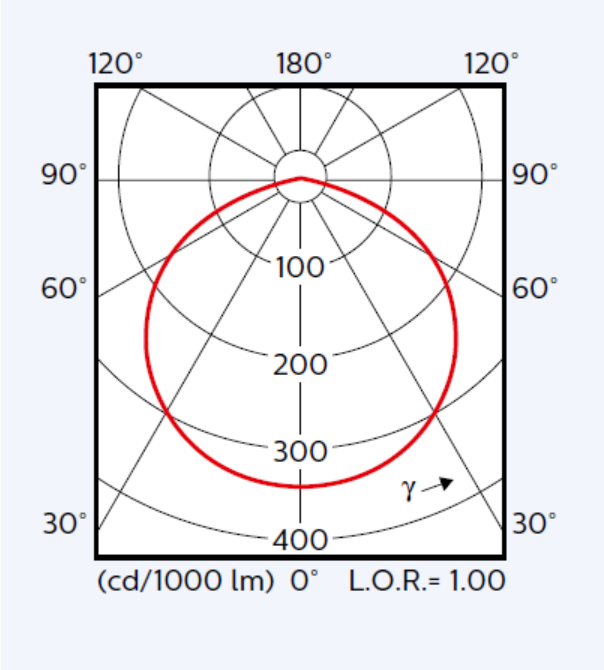
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5

Operation point	940	lm	lm/W
80% I-nom 640mA	Tc 25 °C	3214	147
	Tc 85 °C	2936	137
	Tc 95 °C	2831	133
I-nom 800mA	Tc 25 °C	3938	141
	Tc 85 °C	3583	131
	Tc 95 °C	3449	127
I-max 1600mA	Tc 25 °C	7192	120
	Tc 85 °C	6457	110
	Tc 95 °C	6178	106



R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
93	95	94	93	92	91	95	87	67	86	92	74	93	96

Beam shape



Electrical characteristics

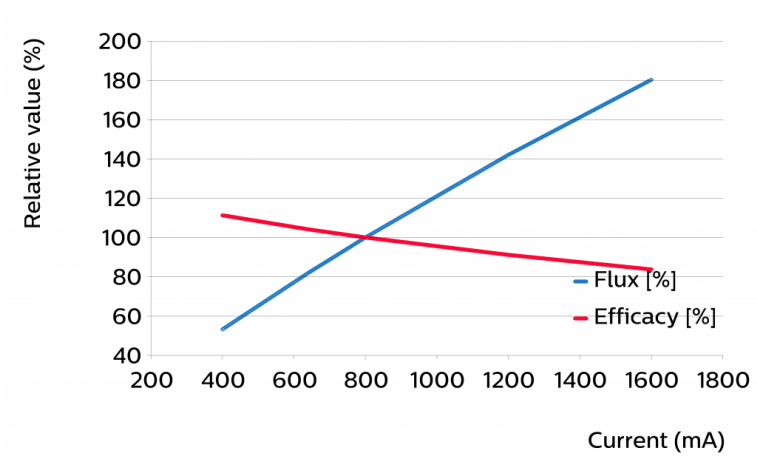
Parameter	Min	Typ	Max	Unit
Forward voltage	32.1	34.1	36.1	V
Power consumption	25.7	27.3	28.9	W = kWh/1000h
Number of modules in series per chain			1	
Number of modules in parallel			1	

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

Tuning information

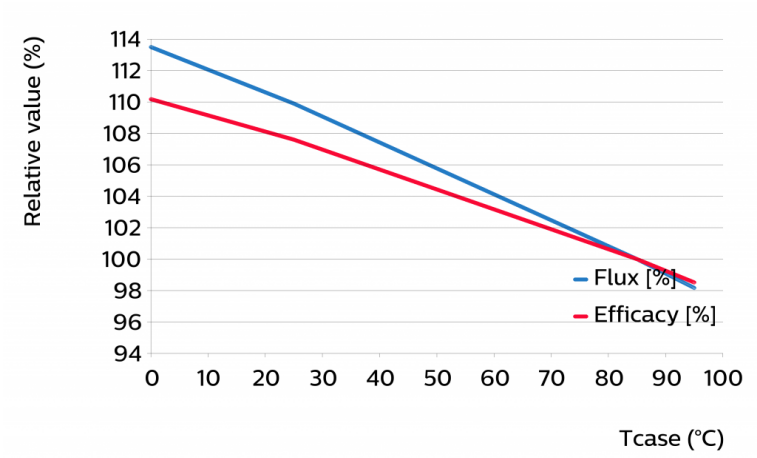
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
1600	180	84
1200	142	91
800	100	100
640	82	104
400	53	111



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

Tc [°C]	Flux [%]	Efficacy [%]
95	98	99
85	100	100
25	110	108
0	113	110



Lumen maintenance

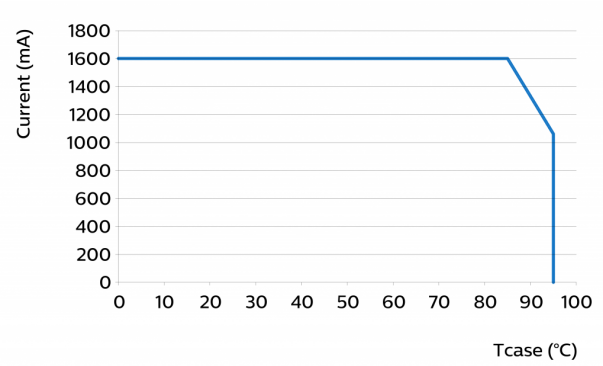
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 640 mA	Tc 75°C	>50	>50	>50	>50	42	39	24	20	18
	Tc 85°C	>50	>50	>50	46	39	35	21	18	16
	Tc 95°C	>50	>50	>50	42	35	32	20	16	15
I-nom 800 mA	Tc 75°C	>50	>50	>50	48	41	37	22	19	17
	Tc 85°C	>50	>50	>50	44	37	34	20	17	16
	Tc 95°C	>50	>50	>50	40	34	31	19	16	14
I-max 1600 mA	Tc 75°C	>50	42	39	31	26	24	15	12	11
	Tc 85°C	45	38	35	28	24	22	13	11	10
	Tc 95°C	41	34	31	25	31	19	12	10	9

Lifetime

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

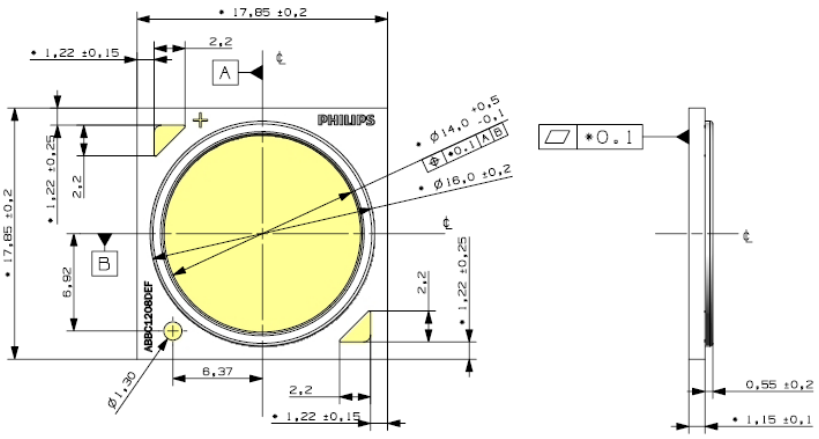
Switching cycles in accordance to EU 1194/2012: >15000.

Performance Window



Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	17.65	17.85	18.05	mm
Width	17.65	17.85	18.05	mm
Height PCB	1.05	1.15	1.25	mm
Height including dam	1.4	1.7	2	mm
Product mass		0.98		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		1600	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

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