ENEC+ LICENCE

Licence No.	ENEC-01182-P1-PLUS-UL
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Date of Issue	2018-02-27

Licence Holder
Philips Lighting B.V.
High Tech Campus 45
Eindhoven, 5656 AE The Netherlands

Production site
██████████████████████████

ENEC License No.
ENEC-01182

Certification Mark
See Annex 1

Certified Product
Model
Built-in LED Module
Fortimo SLM C zcc dd m Lee s Gi a
See Page 2

Trademark
PHILIPS

Rated Voltage / Frequency
Rated Current / Power
See Rated Current/Power
Max 2750 mA DC
(see Pag 3 for further performance ratings)

Insulation Class
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Degree of protection (IP)
--

Complying with following European Standards for safety and the EPRS for performance
PD EPRS 001:2014-12; (IEC 62717:2014-12 Ed.1.0)

EPRS Test Report No.
Additional
4788293213-3 issued on 2018-02-27

Certification Manager
Jan-Erik Storgaard

Certification Body
UL International Demko A/S, Borupvang 5A, DK-2750
Ballerup, Denmark, Tel. +45 44 85 65 65, info.dk@ul.com
www.ul-europe.com

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Product Key:

Main Series: **Fortimo SLM C** *zcc dd m Lee s Gi a*

Where:

z	=	CRI of LED divided by 10 (one digit, may be "7" or "8" or "9");
cc	=	Color temperature of LED divided by 100 (two digits, may be a value between 22 and 65);
dd	=	Color of light (two or three characters or none, may be "CW" or "FP" or "FPR" or "FW" or "FWW" or "PW" or "PC" or blank)
m	=	Die matrix (4 digits, may be "1202" or "1202s" or "1203" or "1204" or "1204s" or "1205" or "1208" or "1211" or "1216")
ee	=	Diameter of Light Emitting Surface (LES) in mm (one or two digits, may be a value between 6 and 23);
s	=	CoB size in mm (four digits, example 2828: CoB dimensions = 28 mm x 28 mm);
i	=	Number of generation of CoB (one digit, may be "6" or "7");
a	=	Suffix for commercial purposes (optional)

Maximum ratings of the series:

CoB Type (Die matrix)	Diameter of LES of CoB [mm]	DC Current [mA]	Power [W]	Power Density of CoB [W/mm²]
1216	23 *; 23**	2750 (V_{ftot} 41 V)	113	0,27
1211	19 *; 19**	2400 (V_{ftot} 41 V)	98	0,35
1208	15 *; 19**	1710 (V_{ftot} 41 V)	70	0,40
1205	13 *; 13**	1050 (V_{ftot} 41 V)	43	0,32
1204	13 *	850 (V_{ftot} 41 V)	35	0,26
	9 **	1350 (V_{ftot} 44 V)	59,4	0,93
1204s	9 *	740 (V_{ftot} 41 V)	30,3	0,47
1203	9 *; 9**	570 (V_{ftot} 41 V)	23	0,36
1202s	6,5 *	380 (V_{ftot} 41 V)	15,5	0,47
1202	6 **	675 (V_{ftot} 44 V)	29,7	0,90

*: Concerning CoB's Generation 6
**: Concerning CoB's Generation 7

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Variant series 1: **Fortimo SLM** *zcc* L*ee* *hh* s G*ij* *a*

Where:

z	=	CRI of LED divided by 10 (one digit, may be "7" or "8" or "9");
cc	=	Color temperature of LED divided by 100 (two digits, may be a value between 22 and 65);
ee	=	Diameter of Light Emitting Surface (LES) in mm (one or two digits, may be a value between 6 and 23);
hh	=	Holder type (two or three characters or none, may be "DL" or "PI" or "ZP" or "ZPw" or blank);
s	=	CoB size in mm (four digits, example 2828: CoB dimensions = 28 mm x 28 mm));
i	=	Number of generation of CoB (one digit, may be "6" or "7");
j	=	Number of generation of Holder (one digit, may be "1" or "2");
a	=	Suffix for commercial purposes (optional).

Maximum ratings of the series:

CoB Type	Diameter of LES of CoB [mm]	DC Current [mA]	Power [W]	Power Density of CoB [W/mm^2]
1216	23 *; 23**	2400 (V_{ftot} 41 V)	98	0,24
1211	19 *; 19**	2400 (V_{ftot} 41 V)	98	0,35
1208	15 *; 19**	1710 (V_{ftot} 41 V)	70	0,40
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1204s	9 *	740 (V_{ftot} 41 V)	30,3	0,47
1203	9 *; 9**	570 (V_{ftot} 41 V)	23	0,36
1202s	6,5 *	380 (V_{ftot} 41 V)	15,5	0,47
1202	6 **	675 (V_{ftot} 44 V)	29,7	0,90

*: Concerning CoB's Generation 6
**: Concerning CoB's Generation 7

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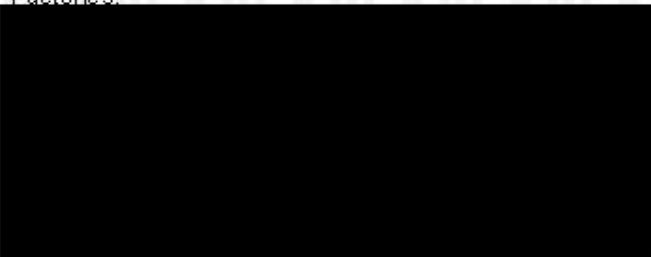**Page** 4/4
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Performance ratings of the series (Gen6 / Gen7 & power density @ max <u>safety</u> current < 0.7 W/mm^2):

Max Supply Current/Voltage [mA]	Max Power [W]	Max Luminous Flux [lm]	Efficacy [lm/W]	CCT [K]	CRI
1200 mA	41,5	6500	84-156	2200-6500	70,80,90
Tp Max	85 °C				
Ambient temperature Range:	-10 + 50 °C				

Performance ratings of the series (Gen7 & power density @ max <u>safety</u> current ≥ 0.7 W/mm^2):

Max Supply Current/Voltage [mA]	Max Power [W]	Max Luminous Flux [lm]	Efficacy [lm/W]	CCT [K]	CRI
700 mA	25,7	3100	78-121	2200-6500	70,80,90
Tp Max	95 °C				
Ambient temperature Range:	-10 + 50 °C				

Factories:

Additional Information:
This certificate replaces Certificate No. ENEC-01182-A3-PLUS1.1-UL issued on 2017-08-10

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Certification Body

UL

Annex 1 to Licence No.
ENEC-01182-P1-PLUS-UL

Annex of the form of the Mark

* Identification number of the Certification Body

Size of the mark:

The size of the mark may be reduced on the condition that it remains legible and that the ratio b/a=1,7 is kept

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Certification Body

This is to certify that representative sample(s) of the Product described herein ("Certified Product") have been investigated and found in compliance with the Standard(s) indicated on this Licence, in accordance with the ENEC Requirements. The Designated Licenceholder is entitled to use the ENEC 15 Mark (as shown in annex 1) for the Certified Product manufactured at the production site(s) identified above in accordance with the ENEC Mark Service Agreement including without limitation the ENEC Mark Testing and Certification Services Service Terms. Only those Products bearing the ENEC Mark should be considered as being covered by UL's ENEC Mark Service. This Licence shall remain valid unless terminated earlier in accordance with the Service Agreement including without limitation if the Standard identified on this Certificate is amended or withdrawn prior the Date of Withdrawal of conflicting Standard(s).