

ENEC LICENSE

License No. ENEC-01182-P4-PLUS-UL
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License Holder Signify Netherlands B.V.
High Tech Campus 48
Eindhoven, 5656 AE Netherlands
Production site

Certification Mark See Page 2
Certified Product See Annex 1
Model Built-in LED Module
Fortimo SLM zcc Lee hh s Gij a, Fortimo SLM C zcc dd m Lee s
Gi a
See Page 2

Trademark

PHILIPS

Rated Voltage / Frequency Vmax 44 V DC
Rated Current / Power Imax 2750 mA DC
See Test Report for further ratings
Insulation Class --
Degree of protection (IP) --
Tested acc. to PD EPRS 001:2018-05 (Based on EN 62717:2017)
Test Report No. 4789257094.2-1 issued on 2019-12-13
Additional This certificate replaces certificate no. ENEC-01182-P3-PLUS-
UL issued on 2019-08-30.
Safety ENEC: ENEC-01182-P5

Certification Manager
Jan-Erik Storgaard

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 License, in accordance with the ENEC Requirements. The Designated License holder 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 License 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with the Service Agreement including without limitation if the Standard identified on this Certificate is amended or withdrawn prior the Date of Withdrawal of conflicting Standard(s).

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Model Details:

Fortimo SLM zcc Lee hh s Gij 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 25 and 57);

ee = Diameter of Light Emitting Surface (LES) in mm (one or two digits, may be a value between 9 and 19);

hh = Holder type (two 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 "4" or "5");

j = Number of generation of Holder (one digit, may be "1" or "2");

a = Suffix for commercial purposes (optional)

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 25 and 57);

dd = Color of light (two or three characters or none, may be "CW" or "FP" or "FPR" or "FW" or "FWW" or "PW" or blank)

m = Die matrix (4 digits, may be "1202" or "1203" or "1204" or "1205" or "1208" or "1211")

ee = Diameter of Light Emitting Surface (LES) in mm (one or two digits, may be a value between 9 and 19);

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 "4" or "5");

a = Suffix for commercial purposes (optional)

Production Sites:

Additional Information:

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 25 and 57);

dd = Color of light (two or three characters or none, may be "CW" or "FP" or "FPR" or "FW" or "FWW" or "PW" or blank)

m = Die matrix (4 digits, may be "1202" or "1203" or "1204" or "1205" or "1208" or "1211")

ee = Diameter of Light Emitting Surface (LES) in mm (one or two digits, may be a value

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between 9 and 19);

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 "4" or "5");

a = Suffix for commercial purposes (optional)

Maximum ratings of the series:

CoB Type (Die matrix) Diameter of LES of CoB [mm] CCT

[K] DC Current

[mA] Power

[W] Power Density of CoB [W/mm²] tc

[°C]

1211 19 ≤ 4000 2400 (Vf tot 37,5 V) 90 0,32 105

> 4000 1500 (Vf tot 36 V) * 54 0,19

1208 15 ≤ 4000 1690 (Vf tot 36 V) 60,8 0,34 105

> 4000 935 (Vf tot 36 V) * 33,7 0,19

1205 13 ≤ 4000 1200 (Vf tot 36 V) 43,2 0,33 105

> 4000 700 (Vf tot 36 V) * 25,2 0,19

1204 13 ≤ 4000 960 (Vf tot 36 V) 34,6 0,26 105

> 4000 700 (Vf tot 36 V) * 25,2 0,19

1203 9 ≤ 4000 600 (Vf tot 36 V) 21,6 0,34 105

> 4000 340 (Vf tot 36 V) * 12,2 0,19

1202 9 ≤ 4000 480 (Vf tot 36 V) 17,3 0,27 105

> 4000 340 (Vf tot 36 V) * 12,2 0,19

* : See additional information

Higher numeric generations of CoB is a suitable replacement for lower numeric generations without additional normal temperature test on the final product if:

- The final product thermal management construction is not reduced, and
- The CoB size is identical, and
- The rated power of CoB is lower or equal

Variants:

Product Key:

Variant series 2: 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 "FPR" or "FWW" or "PW" or "PC" or "FLS" or "FIS" or "FVF" or blank)

m = Die matrix (4 digits, may be "1202" or "1203" or "1204" or "1205" or "1208" or "1211" or "1216")

ee = Diameter of Light Emitting Surface (LES) in mm (two digits, may be a value between 06 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", "7");

a = Suffix for commercial purposes (optional)

Maximum ratings of the series:

CoB Type

(Die matrix) Diameter of LES of CoB [mm] DC Current

The product and production sites listed on the License comply with the ENEC requirement and the UL Global Service Agreement, with reference to Terms and Conditions for the ENEC mark. The Owner of the License is entitled to use the ENEC 15 (as shown in annex 1) for the products listed on the License and manufactured at the production site listed. UL has to be informed in writing about any changes to the product or production site in accordance with the Term and Conditions of the ENEC mark.



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[mA] Power

[W] Power Density of CoB [W/mm²] tc

[°C]

1216 23 * 2750 (Vf tot 41 V) 113 0,27 105

1211 18,5* 2400 (Vf tot 41 V) 98 0,37 105

1208 15 * 1710 (Vf tot 41 V) 70 0,40 105

1206 13 * 1200 (Vf tot 41 V) 49 0,37 105

1205 13 * 1050 (Vf tot 41 V) 43 0,32 105

1204

13 ^ 850 (Vf tot 41 V) 35 0,26 105

9 ** 1350 (Vf tot 44 V) 59 0,93 105

9 ^ 740 (Vf tot 41 V) 30 0,48 105

1203 9 * 570 (Vf tot 41 V) 23 0,37 105

1202 6,5 ^ 380 (Vf tot 41 V) 16 0,47 105

6 ** 675 (Vf tot 44 V) 30 0,90 105

^: Concerning CoB's Generation 6

*: Concerning CoB's Generation 6 and 7

**: Concerning CoB's Generation 7

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Annex 1 to License No. ENEC-01182-P4-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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