

# ENEC+ LICENSE

License No. ENEC-01127-P11-L-PLUS-UL

Page 1/6

Date of Issue 2023-03-29

**License Holder** SIGNIFY NETHERLANDS B.V.  
HIGH TECH CAMPUS 48 EINDHOVEN 5656 AE  
NETHERLANDS

**Production site**

**ENEC License No. (safety)** ENEC License Number (Safety):  
ENEC-01127-P9 issue on 2023-03-17  
Issued by ENEC Member Body:  
15, UL International Demko A/S, Borupvang 5A, DK-2750 Ballerup, Denmark

**Certification Mark** See Annex 1

**Certified Product** Built-in LED Module

**Model** Main series: **Fortimo LED line p xu ylm zcc qR eVgd a**  
See page 3 and 5 for additional Information

**Trademark** 

**Ratings** HV: I<sub>max</sub>: 1200 mA —

LV: I<sub>max</sub>: 2000 mA —

See page 3 and 4 for additional ratings

**Complying with the following** PD EPRS 001:2018-05 (based on EN 62717:2017)

**EPRS standard for**

**performance**

**EPRS Test Report No.**

4790778539.2.1-2 issued on 2023-03-24

**Additional Information**

This certificate replaces previous certificate no. ENEC-01127-P10-L-PLUS-UL issued on 2022-08-31

---

**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 a valid ENEC Mark and 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with the Service Agreement including without limitation if the Standard identified on this License is amended or withdrawn prior the Date of Withdrawal of conflicting Standard(s).

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



# ENEC+ LICENSE

**License No.** ENEC-01127-P11-L-PLUS-UL  
**Page** 2/6  
**Date of Issue** 2023-03-29

---

## 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 a valid ENEC Mark and 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 License is amended or withdrawn prior the Date of Withdrawal of conflicting Standard(s).



# ENEC+ LICENSE

License No. ENEC-01127-P11-L-PLUS-UL  
Page 3/6  
Date of Issue 2023-03-29

Additional Model(s):

Product Key:

Main series: Fortimo LED line *p xu ylm zcc qR eVgd a*

Where:

- p* = Performance (may be blank or "PR" or "ST" or "VO");  
*x* = Product length in feet or mm or inch (1-4 digits/characters (for example 1.5 or 102));  
*u* = Measurement unit for product length (two characters, may be "ft" or "mm" or "in");  
*y* = Lumen output (three or four or five digits);  
*z* = CRI of LED divided by 10 (one digit, may be "8" or "9");  
*cc* = Color temperature of LED divided by 100 (two digits, may be between 27 and 73);  
*q* = Number of LED's rows (one digit, may be "1" or "2" or "3" or "4" or "6" or "9" or "T");  
*e* = Voltage type (one character, may be "H" or "L");  
*g* = Number of LED module's generation (one digit, may be "2" or "3" or "4" or "5");  
*d* = Connector designator (may be blank or "F" = front connector, or "B" = back connector, or "D" = dual entry connector);  
*a* = Commercial suffix for commercial purposes (optional)

## Maximum ratings of the series:

Type	DC Current [mA]	Power [W]	Max Luminous Flux [lm]	T <sub>p</sub> Max [°C]	CCT [K]	CRI	Efficacy [lm/W]
HV	570	40	12000	90	2700-6500	80 90	114-169
HV (*)	1000	93,6					
HV (**)	1000	40					
HV (***)	640 (V <sub>f tot</sub> 81,5 V) or 320 (V <sub>f tot</sub> 163 V)	52,2					
HV (****)	1200	86,4					
HV (*****)	800	21					
LV	1120	40					
LV(#)	1440	47,52					

Ambient Temperature range: -10 °C - +50 °C

(\*): High flux modules (≥ 2000 lm/ft)

(\*\*): Only for model Fortimo LED line 2ft 1250lm *zcc 2R HVgd a*

(\*\*\*): When *q* = "T" in the product key. Maximum current depends on connecting method of the module.

(\*\*\*\*): For model Lunux (Fortimo LED line 415mm 12000lm *zcc 9R HV4 L*)

(\*\*\*\*\*): For model Fortimo LED line 1ft 800lm *zcc 4R HV4 L*

(#) Middle Flux module (between 700 and 1700lm per ft), *g*=5

## 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 a valid ENEC Mark and 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 License is amended or withdrawn prior the Date of Withdrawal of conflicting Standard(s).



# ENEC+ LICENSE

License No. ENEC-01127-P11-L-PLUS-UL

Page 4/6

Date of Issue 2023-03-29

## Maximum safety ratings of the series:

Type	Supply DC Current [mA]	Power [W]	Number of LEDs	$t_c$ [°C]	Max. working voltage for basic insulation to mount. surface [V]
HV	570	40	72	90	420 (°)
HV (*)	1000	93,6	176	95	420
HV (**)	1000	40	120	85	420
HV (***)	640 ( $V_{f \text{ tot}}$ 81,5 V) or 320 ( $V_{f \text{ tot}}$ 163 V)	52,2	46	95	420
HV (****)	1200	86,4	184	85	420 (°°)
HV (*****)	800	21	32	80	350 (°°°)

LV	1120	40	44	90	120
LV(#)	1440	47,52	88	85	120

(\*): High flux modules ( $\geq 2000$  lm/ft),  $T_c$ : 85 if  $g=5$

(\*\*): Only for model Fortimo LED line 2ft 1250lm zcc 2R HVgd a

(\*\*\*): When  $q = "T"$  in the product key. Maximum current depends on connecting method of the module.

(\*\*\*\*): For model Lunux (Fortimo LED line 415mm 12000lm zcc 9R HV4 L)

(\*\*\*\*\*) : For model Fortimo LED line 1ft 800lm zcc 4R HV4 L

(°): 450 V for model Fortimo LED line 1ft ylm zcc 3R HV4B T with parameter  $y \leq 1500$  lm

(°°): When 1 mm additional creepage to mounting surface is taken near the supply terminal (to be verified in the final product)

(°°°): When insulating washers (or plastic optics) are used on fixing screws.

(#) Middle Flux module (between 700 and 1700lm per ft)

## 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 a valid ENEC Mark and 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 License is amended or withdrawn prior the Date of Withdrawal of conflicting Standard(s).



# ENEC+ LICENSE

License No. ENEC-01127-P11-L-PLUS-UL  
Page 5/6  
Date of Issue 2023-03-29

**Variant series 1: Fortimo LED Line** *p x u y z c c q R e g d a*

## Where:

- p* = Performance (may be blank or "PR" or "ST" or "VO");
- x* = Product length in feet or mm or inch (1-4 digits/characters (for example 1.5 or 102));
- u* = Measurement unit for product length (two characters, may be "ft" or "mm" or "in");
- y* = lumen output classification (may be "LF", or "MF", or "SMF", or "HF", or "VHF");
- z* = CRI of LED divided by 10 (one digit, may be "8" or "9");
- cc* = Color temperature of LED divided by 100 (two digits, may be between 27 and 73);
- q* = Number of LED's rows (one digit, may be "1" or "2" or "3" or "4" or "6" or "9" or "T");
- e* = Voltage type (characters, may be "HV" for High voltage or "LV" for Low Voltage or "HV/LV" for High voltage and Low voltage are compatible);
- g* = Number of LED module's generation (one digit, may be "2" or "3" or "4" or "5");
- d* = Connector designator (may be blank or "F" = front connector, or "B" = back connector, or "D" = dual entry connector);
- a* = Commercial suffix for commercial purposes (optional)

---

## 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 a valid ENEC Mark and 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 License is amended or withdrawn prior the Date of Withdrawal of conflicting Standard(s).



# Annex 1 to License No. ENEC-01127-P11-L-PLUS-UL

Annex of the form of the Mark



15 is the 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

---

## 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 a valid ENEC Mark and 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 License is amended or withdrawn prior the Date of Withdrawal of conflicting Standard(s).

