



Ref. Certif. No.

DK-45723-P8-M3-UL

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product

Built-in LED Module

Name and address of the applicant

Signify Netherlands B.V.
High Tech Campus 48 Eindhoven 5656 AE
THE Netherlands

Name and address of the manufacturer

Signify Netherlands B.V.
High Tech Campus 48 Eindhoven 5656 AE
THE Netherlands

Name and address of the factory

Note: When more than one factory, please report on page 2

Ratings and principal characteristics

☒ Additional Information on page 2

HV: I_{max}: 1200 mA

LV: I_{max}: 2000 mA

☒ Additional Information on page 3-5

Trademark (if any)



Customer's Testing Facility (CTF) Stage used

CTF Stage 3

Model / Type Ref.

Fortimo LED line p xu ylm zcc qR eVgD a, b Strip p w xu yl t zcc s d eVgD a, b Strip p w xu y zcc s d eVgD a, Fortimo LED Line p xu y zcc qR egd a

☒ Additional Information on page 3-6

Additional information (if necessary may also be reported on page 2)

The report was revised to include technical modifications.

☒ Additional Information on page 7

A sample of the product was tested and found to be in conformity with

IEC 62031:2018

As shown in the Test Report Ref. No. which forms part of this Certificate

4789718816.1.1 issued on 2021-11-24

This CB Test Certificate is issued by the National Certification Body



- ☐ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☒ UL (Denmark), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2021-11-29

Original Issue Date: 2021-02-07

Signature:

Jan-Erik Storgaard



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Factory(ies):

Additional information (if necessary)



- ☐ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
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Additional Model Detail(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	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 tot} 81,5 V) or 320 (V _{f 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 (≥ 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 ≤ 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)

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Product Key:
Variant series 1: *b Strip p w x y l t z c c s d e V g D a*

Where:

- b* = Family name (may be "Fortimo LED" or "CertaFlux LED" or "FO" or "CF");
- p* = Performance (may be blank or "PR" or "ST" or "VO" or "OC" or "CES" or "ST FT" or "PR FT");
- w* = Product width in mm (optional) (two digits, if it is omitted width is 20 mm);
- 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* = Value of Lumen output or Value of Lumen output divided by 100 (1-4 digits);
- l* = Measurement unit for Lumen output (may be "lm" or "L");
- t* = Connector designator, optional in case of "ft" or "in" (may be blank or "FC" = front connector or "BC" = back connector);
- z* = CRI of LED divided by 10 (one digit (or blank when *p* = "CES"), may be "8" or "9");
- cc* = Color temperature of LED divided by 100 (two digits or six characters (or blank when *p* = "CES"), may be a value between 27 to 65 (or "27-865" or "27-965" (when *p* = "PR FT" or "ST FT")));
- s* = Specials (may be blank or "HE" = High Efficiency, or "PW" = Premium White);
- d* = Connector designator in case of "ft" or "in" (may be blank or "NA" or "1R" or "FC" = front connector or "BC" = back connector);
- e* = Voltage type (one character, may be "H" or "L");
- g* = Number of LED module's generation (one or two digits, may be "1" or "2" or "3" or "4" or "4+" or "5" or "6");
- D* = Connector designator in case of "mm" (may be blank or "F" = front connector, or "B" = back connector);
- a* = Commercial suffix for commercial purposes (optional)

Additional information (if necessary)


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Maximum ratings of the series:

Type	Flux Type	Flux [lm]	Supply DC Current [mA]	LED Current [mA]	Power [W]	Number of LEDs	t _c [°C]	Max. working voltage for basic insulation to mount. surface [V]
HV	-	5500	600	190	89,1	180	85	420 (350 for $b = \text{Fortimo}$ and $g \geq 4$) (350 for $b = \text{CertaFlux}$ and $g \geq 3$)
	-	2200	600	150	35,64	72	80	
	-	2200 (°)	2 x 480	240	2 x 38,4	96	80	
	-	2300 (§)	720	240	37	48	95	
	-	2200 (§§)	1000	200	69	100	85	
	-	4400	720	180	71,3	144	90	
	-	6400 (*)	600	200	93,6	138	95	
	HF	6000	720	240	60,48	84	95	
	HF	6900 (**)	720	180	59,04	96	85	
	-	5500	600	240	89,4	45	80	
	-	4400	600	200	71,28	36	80	
	-	275	600	200	3,96	8	85	
LV	-	5500	1900	190	72	144	85	120 (350 for Fortimo LED Strip 1450mm 5500lm LV5F)
	-	5500	2000	150	71,3	144	80	
	-	2200 (°)	2 x 700	175	2 x 30,8	112	95	
	-	2200 (§)	800	200	30	48	85	
	-	2200 (§§)	2000	200	69	100	80	
	HF	4000	400	200	39	72	95	
	-	8000	1800	150	63	144	95	
	-	5500	2000	240	79,2	12	80	

(°): When p = "ST FT" or "PR FT" in the product key. LED Modules with 2 separated circuits not insulated from each other.

(§): When p = "OC" in the product key

(§§): When p = "CES" in the product key

(*): When w = "12" in the product key

HF means Flux ≥ 2000 lm/ft

(**): When a = "T" in the product key

Note: "HV/LV" term above indicates that the module can be used in both HV mode or LV mode.

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Variant series 2: *b Strip p w x u y z c c s d e V g D a*

Where:

- b* = Family name (may be "Fortimo LED" or "CertaFlux LED" or "FO" or "CF");
- p* = Performance (may be blank or "PR" or "ST" or "VO" or "OC" or "CES" or "ST FT" or "PR FT" or "CED");
- w* = Product width in mm (optional) (two digits, if it is omitted width is 20 mm);
- 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 (or blank when p = "CES" or "CED"), may be "8" or "9");
- c c* = Color temperature of LED divided by 100 (two digits or six characters (or blank when p = "CES" or "CED"), may be a value between 27 to 65 (or "27-865" or "27-965" (when p = "PR FT" or "ST FT")));
- s* = Specials (may be blank or "HE" = High Efficiency, or "PW" = Premium White);
- d* = Connector designator in case of "ft" or "in" (may be blank or "NA" or "1R" or "FC" = front connector or "BC" = back connector);
- e* = Voltage type (one character, may be "H" or "L");
- g* = Number of LED module's generation (one or two digits, may be "1" or "2" or "3" or "4" or "4+" or "5" or "6");
- D* = Connector designator in case of "mm" (may be blank or "F" = front connector, or "B" = back connector);
- a* = Commercial suffix for commercial purposes (optional, 1-2 digits/characters);

Variant series 3: 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");
- c c* = 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)

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Additionally evaluated to: EN IEC 62031:2020
National Differences specified in the CB Test Report.

Summary of Modifications:

- Update the input current for Fortimo LED Line 1ft HF 830 3R HV5 to 900mA.;
- Release new PCB size for Fortimo LED Line 1ft MF 830 1R HV5 & Fortimo LED Line 2ft MF 830 1R HV5
- Update attachments, see test report

Additional information (if necessary)



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