

**PHILIPS**

**CertaFlux**

**LED**

CertaFlux LED Strip  
12mm 4ft 8xx HV4



## Datasheet

The CertaFlux LED Strip 12 is a uniquely narrow LED module of only 12mm wide. It is available in 1ft, 2ft, 4ft and 5ft versions. This makes the product very suitable for applications like waterproof, battens and trunking.

### Key features and benefits

- Long life-time: >50,000 hours
- LED module efficiency of 160 lm/W
- Economical choice for waterproof, battens and trunking luminaires
- Good color rendering, CRI: >80
- Color consistency of 3 SDCM
- 1ft, 2ft, 4ft and 5ft available
- 1100 lm/ft
- PCB width only 12mm
- Three year system warranty

August 2020



## Ordering data

Commercial product name	12NC	Box quantity
CertaFlux LED Strip 12 4ft 4400lm 830 HV4	9290 021 38006	240
CertaFlux LED Strip 12 4ft 4400lm 840 HV4	9290 021 38106	240
CertaFlux LED Strip 12 4ft 4400lm 865 HV4	9290 021 38206	240

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux LED Strip 12mm 4ft 8xx HV4	273	360	400	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> point)	60	65	90	°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 LED Strip 12 4ft 4400lm 830 HV4

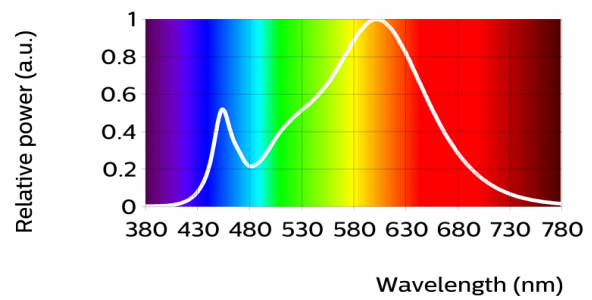
Parameter	Min	Typ	Max	Unit
Luminous flux	3860	4107	4353	lm
Module efficacy	130	138		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.431, 0.401)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		830/359		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



Measurement precision  $\pm 5\%$  for the flux data and  $\pm 6\%$  for the efficacy data. Measurement precision for color coordinates  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$

Performance based on I-nom divided equally among the two channels.

Operation point	830	lm	lm/W
80% I-nom 218mA	Tc 25 °C	3551	150
	Tc-nom 60 °C	3368	145
	Tc-max 90 °C	3341	144
I-nom 273mA	Tc 25 °C	4333	143
	Tc-nom 60 °C	4107	138
	Tc-max 90 °C	4072	137
I-max 400mA	Tc 25 °C	6037	128
	Tc-nom 60 °C	5713	124
	Tc-max 90 °C	5664	123



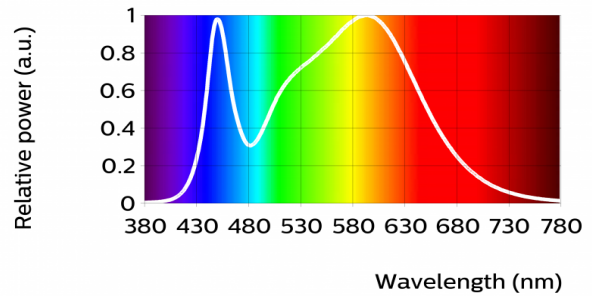
CertaFlux LED Strip 12 4ft 4400lm 840 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	4136	4400	4664	lm
Module efficacy	139	148		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.379, 0.375)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		840/359		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



Measurement precision  $\pm 5\%$  for the flux data and  $\pm 6\%$  for the efficacy data. Measurement precision for color coordinates  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$ .  
 Performance based on I-nom divided equally among the two channels.

Operation point	840	lm	lm/W
	80% I-nom 218mA	Tc 25 °C	3805
Tc-nom 60 °C		3609	155
Tc-max 90 °C		3579	155
I-nom 273mA	Tc 25 °C	4643	153
	Tc-nom 60 °C	4400	148
	Tc-max 90 °C	4363	147
I-max 400mA	Tc 25 °C	6469	138
	Tc-nom 60 °C	6122	133
	Tc-max 90 °C	6069	132



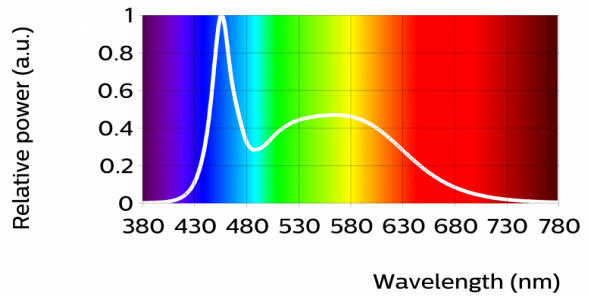
CertaFlux LED Strip 12 4ft 4400lm 865 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	4026	4283	4540	lm
Module efficacy	136	144		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.309, 0.325)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		865/359		
Radiation angle		120		deg
Photobiological safety			RG1 unlimited	



Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5  
 Performance based on I-nom divided equally among the two channels.

Operation point	865	lm	lm/W
80% I-nom 218mA	Tc 25 °C	3704	156
	Tc-nom 60 °C	3513	151
	Tc-max 90 °C	3484	150
I-nom 273mA	Tc 25 °C	4520	149
	Tc-nom 60 °C	4283	144
	Tc-max 90 °C	4247	143
I-max 400mA	Tc 25 °C	6297	134
	Tc-nom 60 °C	5960	129
	Tc-max 90 °C	5909	128



## Electrical characteristics

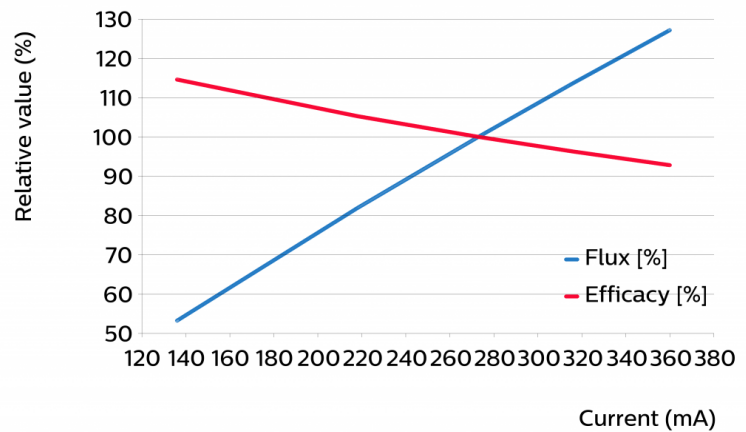
Parameter	Min	Typ	Max	Unit
Forward voltage	106.5	108.7	110.9	V
Power consumption	29.1	29.7	30.3	W = kWh/1000h
Number of modules in series per chain			2	
Number of modules in parallel			4	

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

## Tuning information

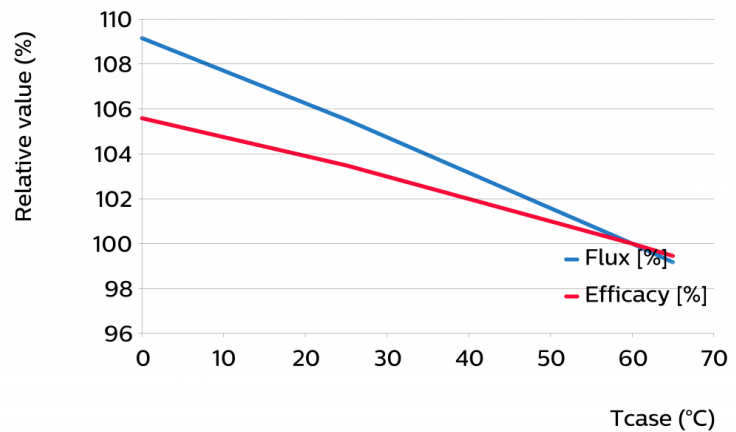
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
360	127	93
316	114	96
273	100	100
218	82	105
136	53	115



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

Tc [°C]	Flux [%]	Efficacy [%]
65	99	99
60	100	100
25	106	103
0	109	106



## Lumen maintenance

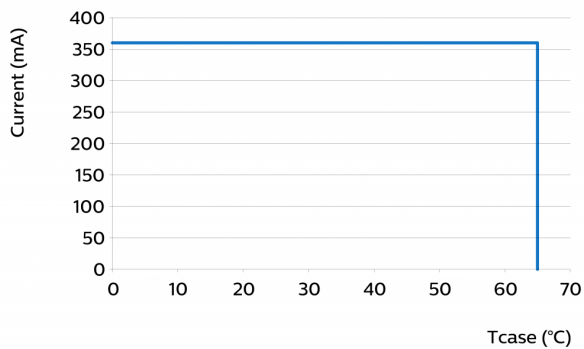
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
Tc 25°C	80% Inom 218 mA	>70	>70	>70	>70	>70	>70	57	54	52
	I nom 273 mA	>70	>70	>70	>70	>70	>70	38	35	34
	I life 360 mA	>70	>70	>70	>70	>70	70	36	34	33
Tc nom 60°C	80% Inom 218 mA	>70	>70	>70	>70	>70	>70	54	51	50
	I nom 273 mA	>70	>70	>70	>70	>70	>70	36	34	33
	I life 360 mA	>70	>70	>70	>70	69	67	34	32	31
Tc life 65°C	80% I nom 218 mA	>70	>70	>70	>70	>70	>70	51	48	47
	I nom 273 mA	>70	>70	>70	>70	69	67	34	32	31
	I life 360 mA	>70	>70	>70	69	65	63	32	30	29

## Lifetime

Parameter	Value	Unit
M70F50 nominal	>70000	hours
M70F50 life	>70000	hours

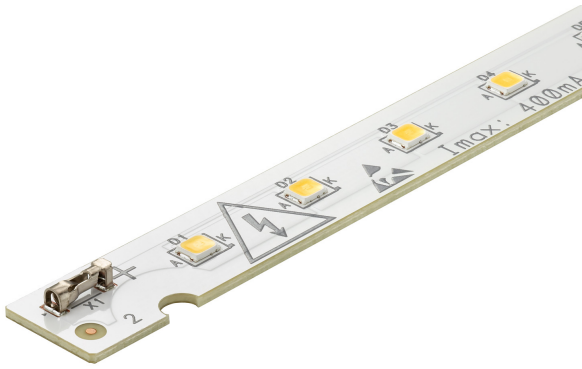
Switching cycles in accordance to EU 1194/2012: >15000.

## Performance Window



## Wiring

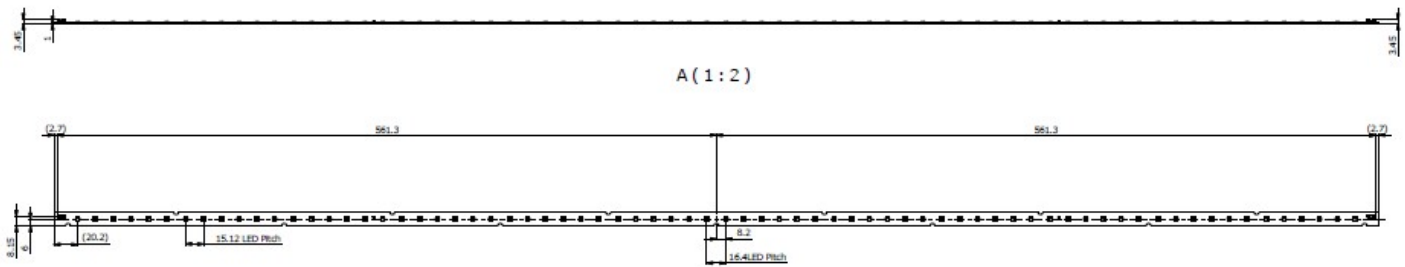
Specification item	Value	Unit	Condition
Input wire cross-section	0.2...0.5	mm <sup>2</sup>	solid wire
	20...24	AWG	solid wire
Input wire strip length	5.2...5.8	mm	
Input wire cross-section	0.33...0.5	mm <sup>2</sup>	stranded wire
	20...22	AWG	stranded wire
Input wire strip length	5.2...5.8	mm	



Connecting the module with wrong polarity may result in damage beyond repair.

## Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	1127	1128	1129	mm
Width	11.8	12	12.6	mm
Height PCB		1		mm
Height total	3.25	3.45	3.65	mm
Product mass		30		gram



## Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		400	mA
Case temperature (Tc-max)		90	°C
ESD (direct contact)		1	kV
Working voltage		350	V <sub>dc</sub>



## Application information

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### Certificates and Standards

CE  
ENEC  
ENEC+

### Environmental

RoHS/REACH

### Application

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Dimming

Yes



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