PHILIPS

CertaFlux

LED

CertaFlux LED Strip 1ft LF HV5

Datasheet

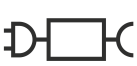
CertaFlux LED Strip HV5

With the Generation 5 of the CertaFlux LED Strip the next step in efficiency improvement has been taken. The CertaFlux LED Strip HV5 is a competitive and high performing LED module. It is very suitable for usage in indoor luminaires like troffers and waterproofs.

Key features and benefits

- High LED Module efficiency: 176 Lm/W (at 4000K, CRI80)
- Long lifetime: >50.000 hours (L80B50)
- Good color rendering: >80
- High color consistency: 3 SDCM
- Available color temperatures: 3000K, 4000K, 6500K
- Lumen packages: LF (775lm/ft) and MF (1100lm/ft)
- Lengths: 1ft and 2ft

September 2022



Ordering data

Commercial product name	EOC	12NC	EPREL registration #	Box quantity
CertaFlux LED Strip 1ft LF 830 HV5	8719514 470699 00	9290 029 37506	1342508	110
CertaFlux LED Strip 1ft LF 840 HV5	8719514 470712 00	9290 029 37606	1342507	110

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux LED Strip 1ft LF HV5	258	480	480	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	45	85	85	°C

* Nominal value at which typical performance is specified

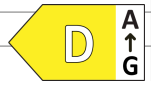
** Value at which life time is specified

*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

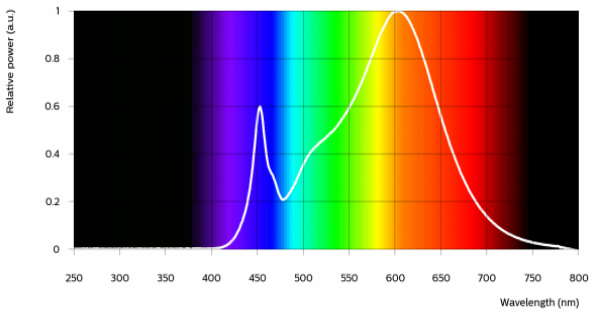
CertaFlux LED Strip 1ft LF 830 HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	690	730	770	lm
Efficacy	155	167	180	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.433, 0.400)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		830/339		
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.

Operation point	830	lm	lm/W
80% I-nom 206mA	Tc 25 °C	594	171
	Tc-nom 45 °C	579	168
	Tc-max 85 °C	544	160
I-nom 258mA	Tc 25 °C	730	167
	Tc-nom 45 °C	730	167
	Tc-max 85 °C	669	156
I-max 480mA	Tc 25 °C	1284	150
	Tc-nom 45 °C	1251	148
	Tc-max 85 °C	1174	140

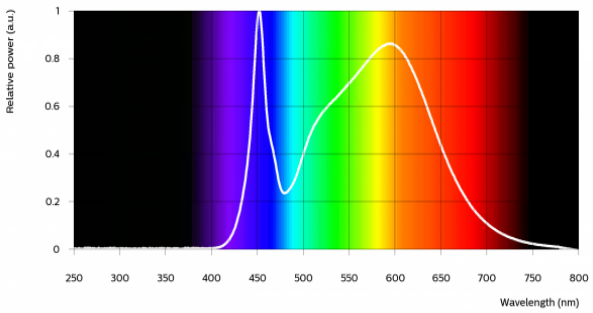


CertaFlux LED Strip 1ft LF 840 HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	740	775	810	lm
Efficacy	166	178	190	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.378, 0.373)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		840/339		
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.

Operation point	840	lm	lm/W
80% I-nom 206mA	Tc 25 °C	631	182
	Tc-nom 45 °C	614	179
	Tc-max 85 °C	577	170
I-nom 258mA	Tc 25 °C	776	177
	Tc-nom 45 °C	775	178
	Tc-max 85 °C	709	165
I-max 480mA	Tc 25 °C	1368	160
	Tc-nom 45 °C	1331	157
	Tc-max 85 °C	1248	149



Electrical characteristics

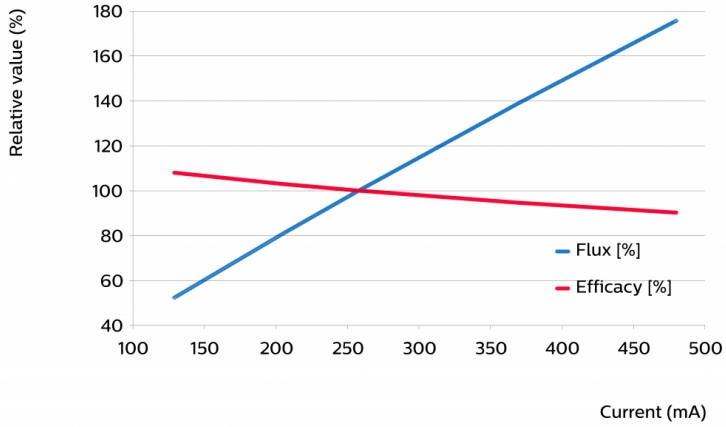
Parameter	Min	Typ	Max	Unit
Forward voltage	16.6	16.9	17.2	V
Power consumption	4.27	4.36	4.45	W = kWh/1000h
Number of modules in series per chain			20	

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

Tuning information

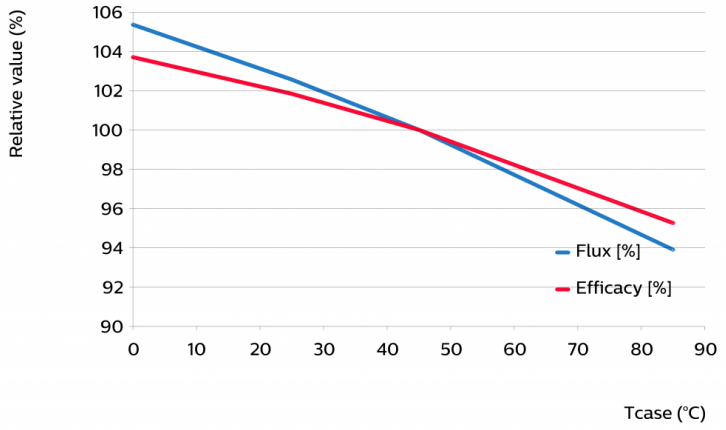
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
480	176	90
369	139	95
258	100	100
206	81	103
129	52	108



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

Tc [°C]	Flux [%]	Efficacy [%]
85	94	95
45	100	100
25	103	102
0	105	104



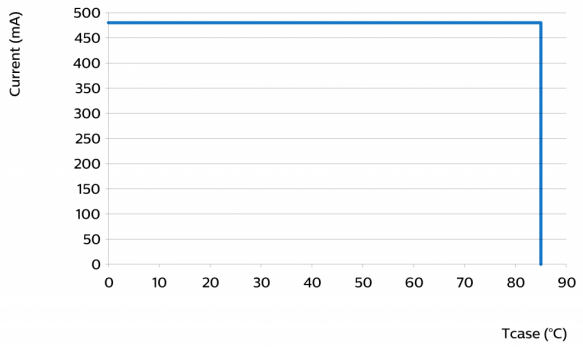
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=206mA	Tc=25°C	>87	>87	>87	>87	>87	>87	>87	>87	>87
	Tc_nom=45°C	>87	>87	>87	>87	>87	>87	>87	87	84
	Tc_life=85°C	>60	>60	>60	>60	>60	>60	>60	57	56
Inom=258mA	Tc=25°C	>87	>87	>87	>87	>87	>87	>87	>87	>87
	Tc_nom=45°C	>87	>87	>87	>87	>87	>87	87	80	80
	Tc_life=85°C	>60	>60	>60	>60	>60	>60	58	55	53
Ilife=480mA	Tc=25°C	>87	>87	>87	>87	>87	>87	>87	>87	>87
	Tc_nom=45°C	>87	>87	>87	>87	>87	>87	76	72	71
	Tc_life=85°C	>60	>60	>60	>60	>60	>60	51	48	47

Lifetime

Parameter	Value	Unit
M70F50 nominal	>87000	hours
M70F50 life	>60000	hours

Performance Window

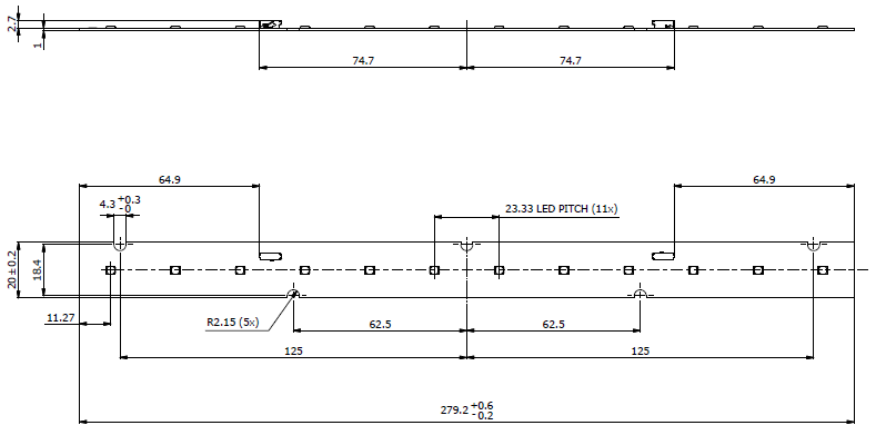


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.2…0.75	mm^2	solid wire, stranded wire
	18…24	AWG	solid wire, stranded wire
Input wire strip length	7.5…9.5	mm	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	279	279.2	279.8	mm
Width	19.8	20	20.2	mm
Height PCB		1		mm
Height total		2.7		mm
Product mass		10.6		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		480	mA
Case temperature (Tc-max)		85	°C
ESD (direct contact)	8		kV
Working voltage		350	V_{dc}
Storage temperature	-40	80	°C

Application information

Certificates and Standards
CE
ENEC
ENEC+

Environmental
RoHS/REACH

Application	
Dimming	Yes

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