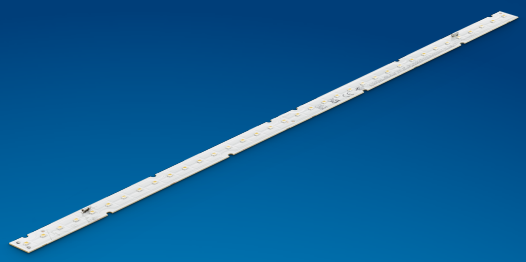
PHILIPS

CertaFlux

LED

CertaFlux LED Strip 2ft MF 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 2ft MF 830 HV5	8719514 470835 00	9290 029 38206	1342512	110
CertaFlux LED Strip 2ft MF 840 HV5	8719514 470859 00	9290 029 38306	1342506	110
CertaFlux LED Strip 2ft MF 865 HV5	8719514 470873 00	9290 029 38406	1342511	110

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux LED Strip 2ft MF HV5	247	480	480	mA

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_c (case temperature at T_c point)	55	85	85	°C

* Nominal value at which typical performance is specified

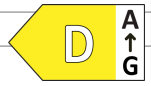
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

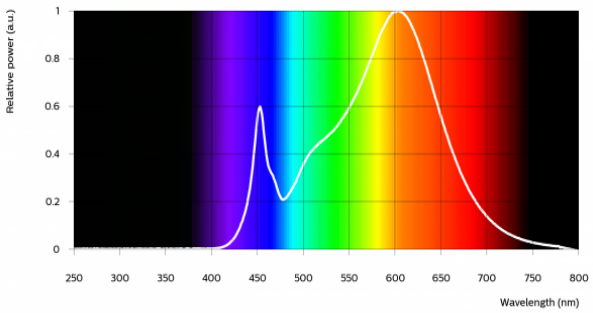
CertaFlux LED Strip 2ft MF 830 HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	1970	2070	2170	lm
Efficacy	155	166	178	lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.432, 0.399)		-
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 198mA	Tc 25 °C	1712	172
	Tc-nom 55 °C	1646	167
	Tc-max 85 °C	1568	161
I-nom 247mA	Tc 25 °C	2106	167
	Tc-nom 55 °C	2070	166
	Tc-max 85 °C	1928	157
I-max 480mA	Tc 25 °C	3853	150
	Tc-nom 55 °C	3702	146
	Tc-max 85 °C	3522	140

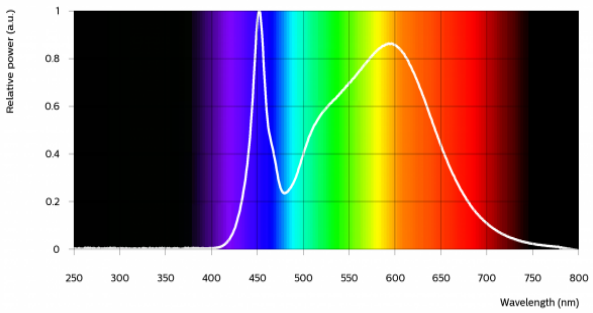


CertaFlux LED Strip 2ft MF 840 HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	2090	2200	2310	lm
Efficacy	165	177	189	lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.377, 0.372)		-
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 198mA	Tc 25 °C	1821	183
	Tc-nom 55 °C	1748	178
	Tc-max 85 °C	1664	171
I-nom 247mA	Tc 25 °C	2242	178
	Tc-nom 55 °C	2200	177
	Tc-max 85 °C	2048	166
I-max 480mA	Tc 25 °C	4111	160
	Tc-nom 55 °C	3944	155
	Tc-max 85 °C	3751	149

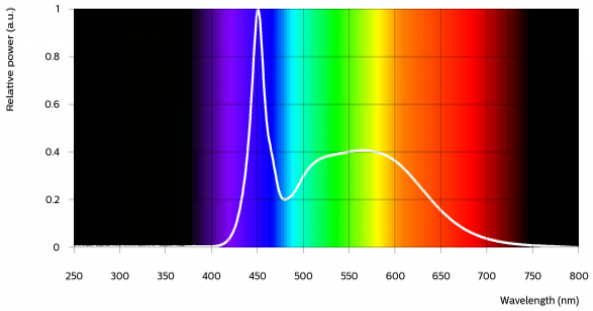


CertaFlux LED Strip 2ft MF 865 HV5

Parameter	Min	Typ	Max	Unit
Luminous flux	2090	2200	2310	lm
Efficacy	165	177	189	lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.309, 0.321)		-
Color consistency			3	SDCM
CRI	80			
R9	0			
Photometric code		865/339		
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	865	lm	lm/W
80% I-nom 198mA	Tc 25 °C	1821	183
	Tc-nom 55 °C	1748	178
	Tc-max 85 °C	1664	171
I-nom 247mA	Tc 25 °C	2242	178
	Tc-nom 55 °C	2200	177
	Tc-max 85 °C	2048	166
I-max 480mA	Tc 25 °C	4111	160
	Tc-nom 55 °C	3944	155
	Tc-max 85 °C	3751	149



Electrical characteristics

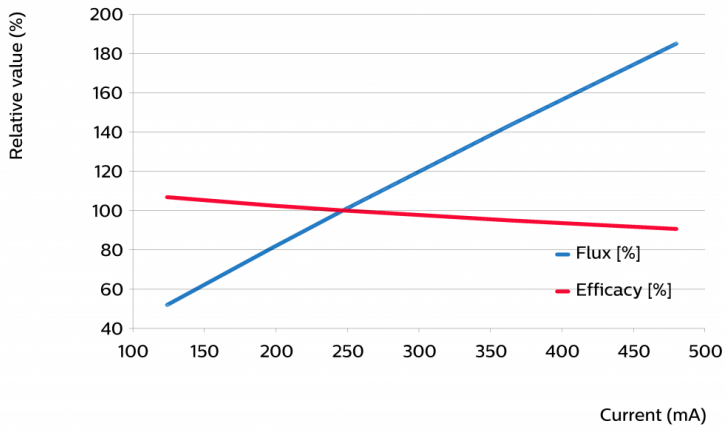
Parameter	Min	Typ	Max	Unit
Forward voltage	49.4	50.4	51.4	V
Power consumption	12.2	12.4	12.7	W = kWh/1000h
Number of modules in series per chain			6	

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

Tuning information

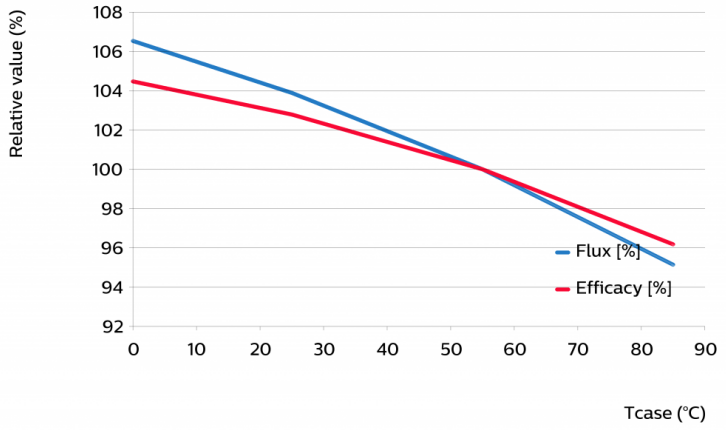
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
480	185	91
364	143	95
247	100	100
198	81	102
124	52	107



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

Tc [°C]	Flux [%]	Efficacy [%]
85	95	96
55	100	100
25	104	103
0	107	104



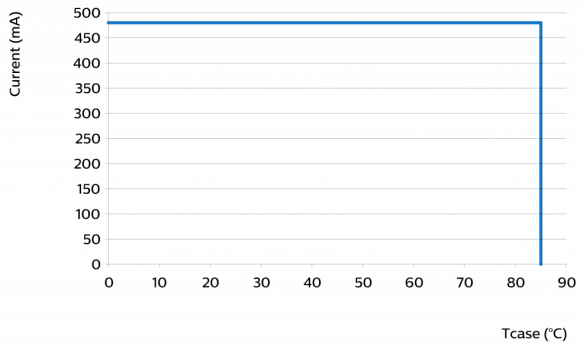
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% Inom=198mA	Tc=25°C	>87	>87	>87	>87	>87	>87	>87	>87	>87
	Tc_nom=45°C	>87	>87	>87	>87	>87	>87	67	66	65
	Tc_life=85°C	>60	>60	>60	>60	>60	>60	50	48	47
Inom=247mA	Tc=25°C	>87	>87	>87	>87	>87	>87	>87	>87	>87
	Tc_nom=45°C	>87	>87	>87	>87	>87	>87	67	65	64
	Tc_life=85°C	>60	>60	>60	>60	>60	>60	50	48	47
Ilife=480mA	Tc=25°C	>87	>87	>87	>87	>87	>87	83	80	79
	Tc_nom=45°C	>87	>87	>87	>87	>87	>87	59	57	56
	Tc_life=85°C	>60	>60	>60	>60	>60	>60	44	42	41

Lifetime

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

Performance Window

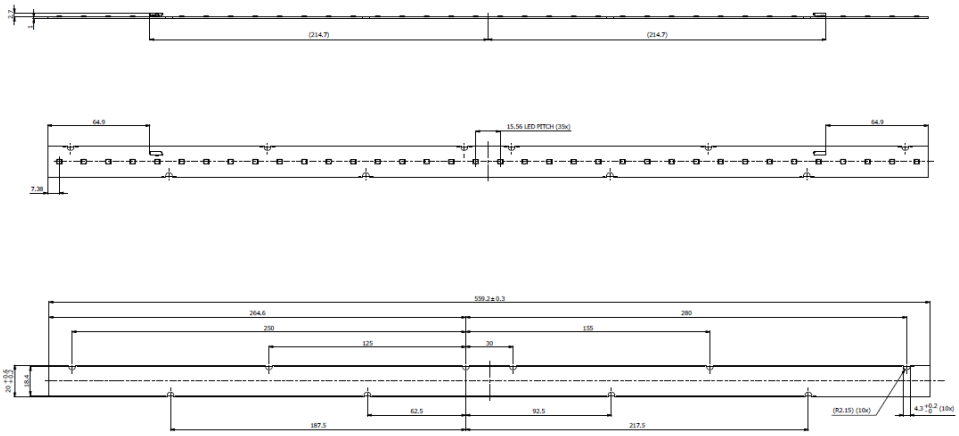


Wiring

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	558.9	559.2	559.5	mm
Width	19.8	20	20.6	mm
Height PCB		1		mm
Height total		2.7		mm
Product mass		21.4		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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