PHILIPS

CertaFlux

LED

CertaFlux LED Strip 1ft 775lm HV4

Datasheet

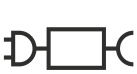
CertaFlux LED Strip

Generation 4 of the Certaflux LED Strip is designed to provide a better efficiency without sacrificing its other success factors as lifetime and light quality. The Certaflux LED Strip is an ideal product for several different applications: office, industry and waterproof.

Key features and benefits

- LED module efficiency up to 165 lm/W
- Long life-time: >50,000 hours
- Good color rendering, CRI: >80
- Color consistency of 3 SDCM
- Color temperatures of 3000 K, 4000 K and 6500 K
- One-foot (280mm) and two-foot (560mm) lengths available
- Two lumen packages: 775lm per foot and 1100lm per foot
- PCB width is only 20mm
- Wide temperature range (Tc) from -40°C to +85°C
- Push-in connectors enable automatic wiring
- Designed to work together with CertaDrive drivers
- Three year system warranty

October 2021



Ordering data

Commercial product name	EOC	12NC	Box quantity
CertaFlux LED Strip 1ft 775lm 830 HV4	8718696 903728 00	9290 016 84606	168
CertaFlux LED Strip 1ft 775lm 840 HV4	8718699 666521 00	9290 016 84706	168

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux LED Strip 1ft 775lm HV4	318	580	580	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

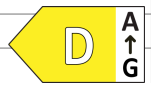
** Value at which life time is specified

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

Optical characteristics - table per color (CCT)

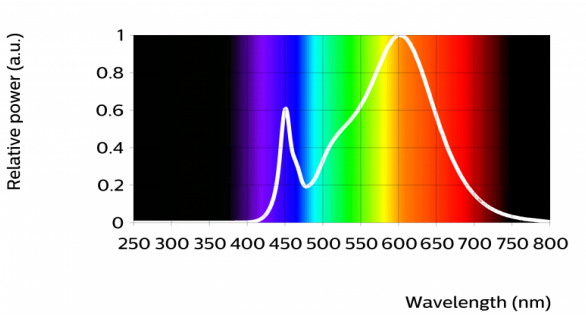
CertaFlux LED Strip 1ft 775lm 830 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	638	690	742	lm
Module efficacy		147		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.433, 0.400)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		830/369		
Photobiological safety			RG1 unlimited	



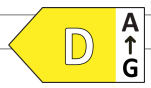
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	830	lm	lm/W
80% I-nom 254mA	Tc 25 °C	607	166
	Tc-nom 45 °C	589	163
	Tc-max 85 °C	546	155
I-nom 318mA	Tc 25 °C	748	161
	Tc-nom 45 °C	690	147
	Tc-max 85 °C	670	150
I-max 580mA	Tc 25 °C	1285	143
	Tc-nom 45 °C	1244	140
	Tc-max 85 °C	1146	132



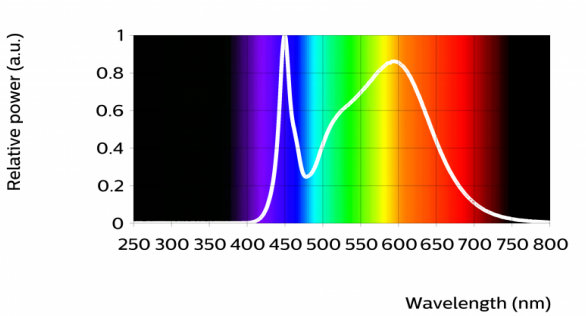
CertaFlux LED Strip 1ft 775lm 840 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	692	748	804	lm
Module efficacy		159		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.378, 0.373)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		840/369		
Photobiological safety			RG1 unlimited	



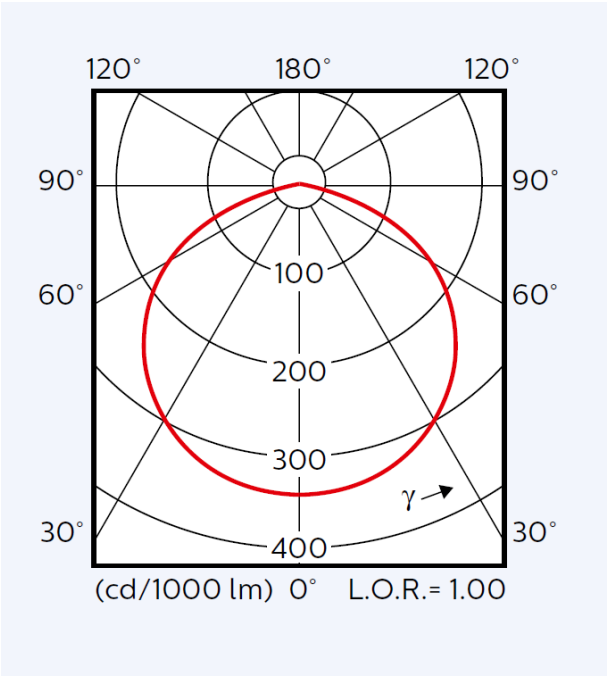
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	840	lm	lm/W
80% I-nom 254mA	Tc 25 °C	649	178
	Tc-nom 45 °C	630	175
	Tc-max 85 °C	584	166
I-nom 318mA	Tc 25 °C	799	172
	Tc-nom 45 °C	748	159
	Tc-max 85 °C	717	160
I-max 580mA	Tc 25 °C	1374	153
	Tc-nom 45 °C	1330	149
	Tc-max 85 °C	1225	141



Beam shape

The Philips LED module generates a Lambertian beam shape, which is a pragmatic starting point for OEMs wishing to design secondary optics.



Electrical characteristics

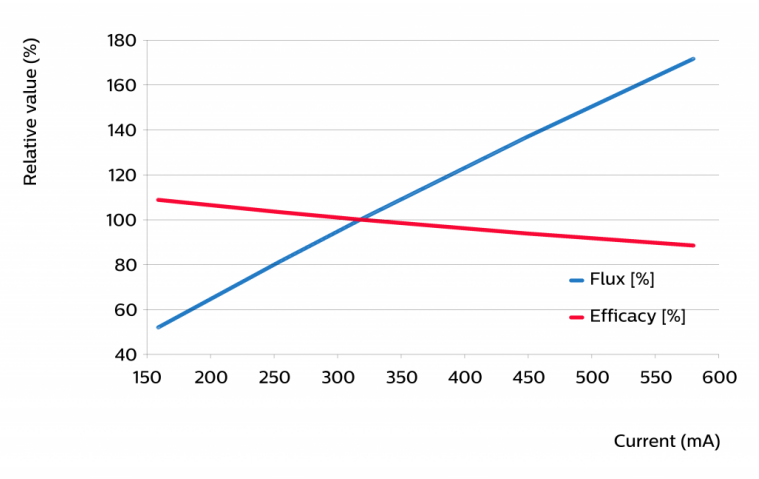
Parameter	Min	Typ	Max	Unit
Forward voltage	14.1	14.8	14.9	V
Power consumption	4.47	4.71	4.75	W = kWh/1000h
Number of modules in series per chain			17	

Measurement precision for Vf +/- 3%. Measurement precision for power +/- 3.3%
Specifications stated at Tc-nom and I-nom
Parallel connection allowed. Check www.easydesignintool.com.

Tuning information

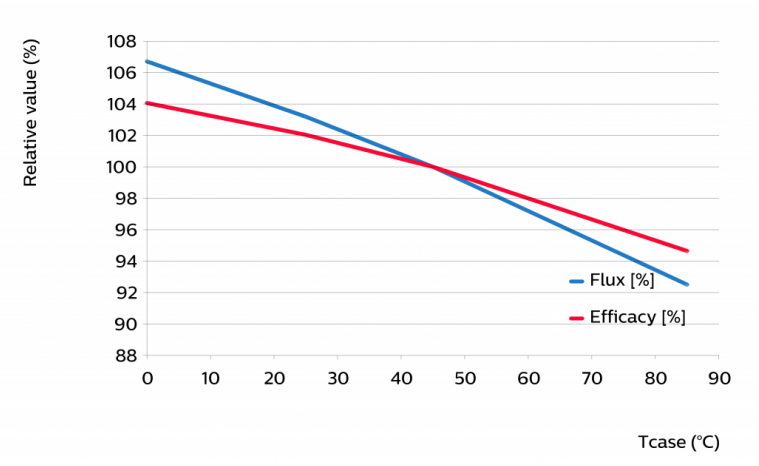
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
580	172	88
449	137	94
318	100	100
254	81	103
159	52	109



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

Tc [°C]	Flux [%]	Efficacy [%]
85	93	95
45	100	100
25	103	102
0	107	104



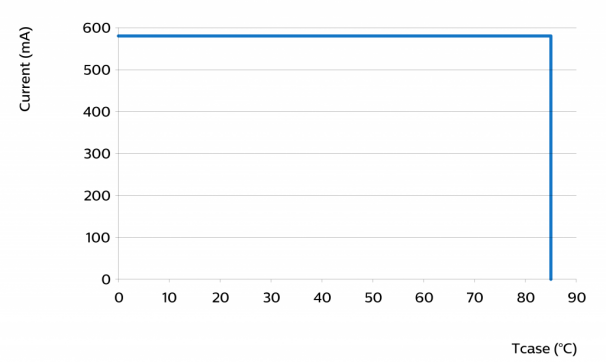
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I -nom 255 mA	Tc 25°C	>100	>100	>100	>100	>100	>100	65	63	62
	Tc-nom 45°C	>100	>100	>100	>100	>100	>100	52	50	49
	Tc-life 85°C	>100	>100	>100	73	71	69	34	33	32
I-nom 318 mA	Tc 25°C	>100	>100	>100	>100	>100	>100	62	60	59
	Tc-nom 45°C	>100	>100	>100	>100	>100	>100	50	48	47
	Tc-life 85°C	>100	>100	>100	70	68	66	33	32	31
I-life 580 mA	Tc 25°C	>100	>100	>100	>100	>100	>100	55	53	52
	Tc-nom 45°C	>100	>100	>100	94	90	88	44	42	41
	Tc-life 85°C	100	96	95	62	60	59	29	28	28

Lifetime

Parameter	Value	Unit
M70F50 nominal	87000	hours
M70F50 life	60000	hours

Performance Window

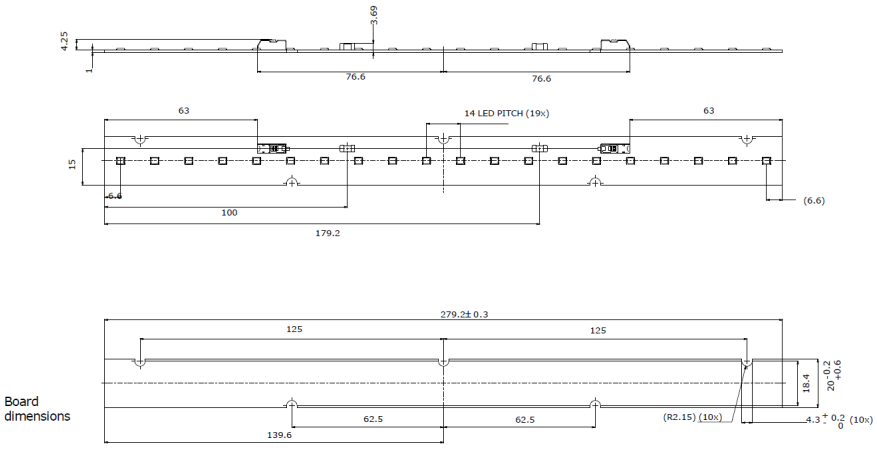


Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.33…0.5	mm²	solid wire
	20…22	AWG	solid wire
Input wire strip length	6.1…7.1	mm	
Input wire cross-section	0.33…0.75	mm²	stranded (tin-dipped) wire
	18…22	AWG	stranded (tin-dipped) wire
Input wire strip length	6.1…7.1	mm	

Mechanical characteristics

Parameter	Min	Typ	Max	Unit
Length	278.9	279.2	279.5	mm
Width	19.8	20	20.6	mm
Height PCB		1		mm
Height with connector		5.25	5.7	mm
Product mass		12		gram



Absolute ratings

Parameter	Min	Max	Unit
Current through the LED module (I-max)		580	mA
Case temperature (Tc-max)		85	°C
Power at rated Vf-max and I-max		9.7	W
ESD (direct contact)	1		kV
Working voltage		350	V_{dc}
Ambient temperature	-40		°C

Application information

Certificates and Standards
IEC 62031:2008/A1:2012/A2:2014
EN 62031:2008/A1:2013/A2:2015
Relevant clauses of IEC 62471:2006 (Incl. IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)
Relevant clauses of EN 62471:2008 (With IEC/TR 62471-2: 2009 and IEC/TR 62778: 2014)
ENEC
ENEC+
CE

Application	
IP rating	No IP-rating
Overheating protection	No protection
Dimming	Yes

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www.philips.com/oem

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