

PHILIPS

CertaFlux

LED

CertaFlux LED Strip
2ft 1550lm 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

August 2019



Ordering data

Commercial product name	EOC	12NC	Box quantity
CertaFlux LED Strip 2ft 1550lm 830 HV4	8718699 666668 00	9290 016 85006	168
CertaFlux LED Strip 2ft 1550lm 840 HV4	8718699 666682 00	9290 016 85106	168
CertaFlux LED Strip 2ft 1550lm 865 HV4	8718699 666705 00	9290 016 85206	168

Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux LED Strip 2ft 1550lm 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)

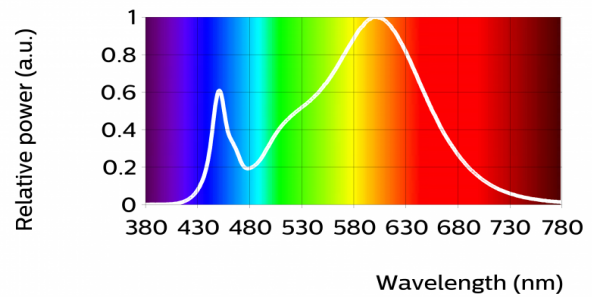
CertaFlux LED Strip 2ft 1550lm 830 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	1364	1451	1538	lm
Module efficacy	148	158		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		



Measurement precision $\pm 5\%$ for the flux data and $\pm 6\%$ 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	1215	166
	Tc-nom 45 °C	1179	163
	Tc-max 85 °C	1092	155
I-nom 318mA	Tc 25 °C	1496	161
	Tc-nom 45 °C	1451	158
	Tc-max 85 °C	1341	149
I-life 580mA	Tc 25 °C	2571	143
	Tc-nom 45 °C	2488	140
	Tc-max 85 °C	2293	132



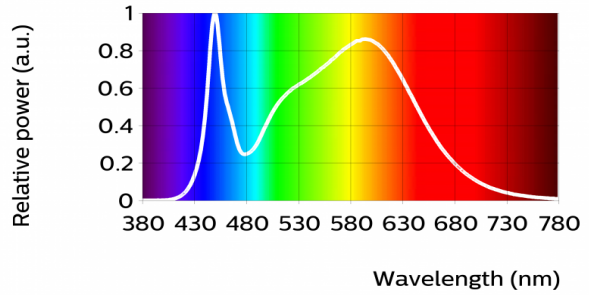
CertaFlux LED Strip 2ft 1550lm 840 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	1455	1548	1641	lm
Module efficacy	158	168		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		



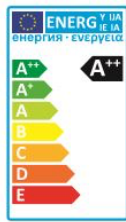
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	840	lm	lm/W
80% I-nom 254mA	Tc 25 °C	1299	178
	Tc-nom 45 °C	1260	174
	Tc-max 85 °C	1168	165
I-nom 318mA	Tc 25 °C	1599	172
	Tc-nom 45 °C	1548	168
	Tc-max 85 °C	1434	160
I-life 580mA	Tc 25 °C	2749	153
	Tc-nom 45 °C	2660	149
	Tc-max 85 °C	2451	141



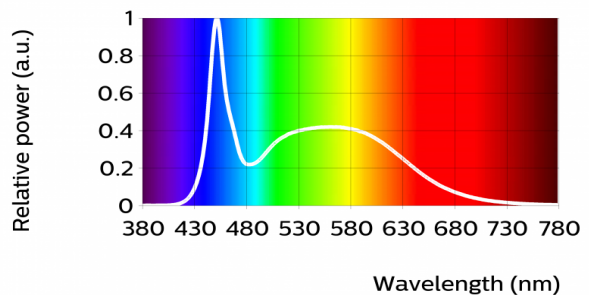
CertaFlux LED Strip 2ft 1550lm 865 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	1431	1522	1614	lm
Module efficacy	156	166		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.311, 0.326)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		865/369		



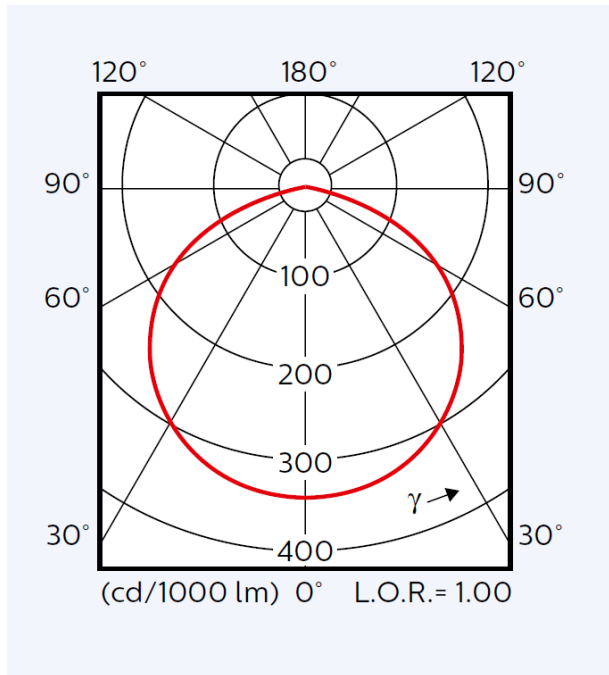
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	865	lm	lm/W
80% I-nom 254mA	Tc 25 °C	1274	174
	Tc-nom 45 °C	1236	171
	Tc-max 85 °C	1145	162
I-nom 318mA	Tc 25 °C	1569	169
	Tc-nom 45 °C	1522	166
	Tc-max 85 °C	1406	157
I-life 580mA	Tc 25 °C	2696	150
	Tc-nom 45 °C	2610	147
	Tc-max 85 °C	2405	138



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	28.0	28.9	29.8	V
Power consumption	8.9	9.2	9.5	W = kWh/1000h
Number of modules in series per chain			8	

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

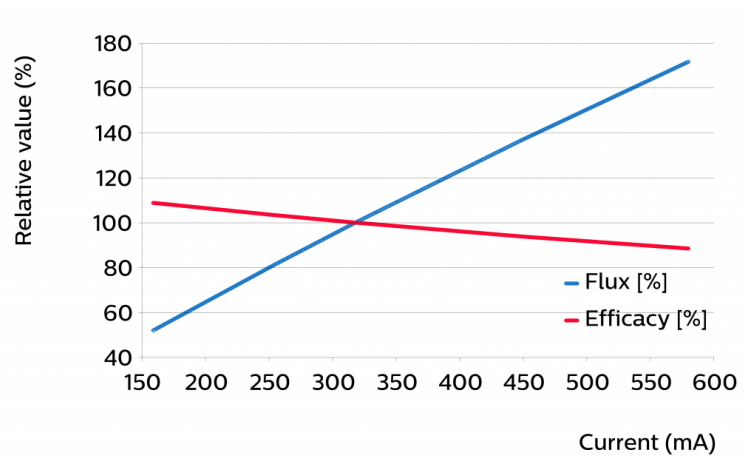
Specifications stated at Tc-nom and I-nom

Parallel connection allowed. Check www.easydesignintool.com.

Tuning information

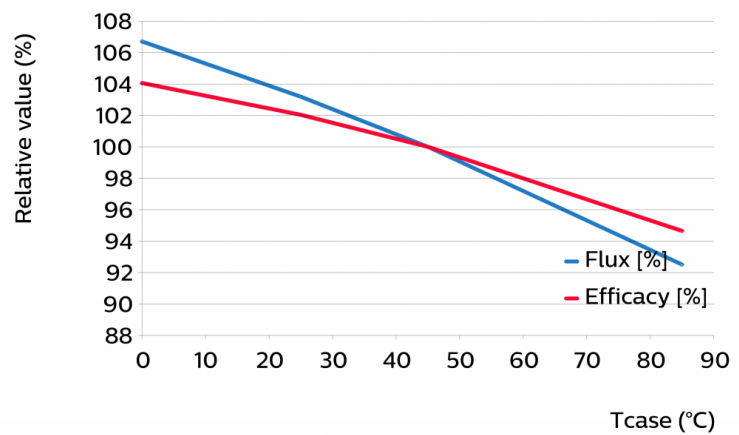
Flux and efficacy versus current (at Tc nominal)

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

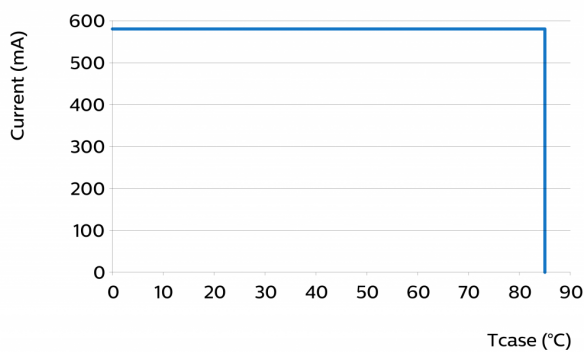
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 255 mA	Tc 25°C	>100	>100	>100	>100	>100	>100	65	63	62
	Tc-nom 45°C	>100	>100	>100	>100	>100	>100	52	50	49
	Tc-life 85°C	>100	>100	>100	73	71	69	34	33	32
I-nom 318 mA	Tc 25°C	>100	>100	>100	>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

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

Performance Window



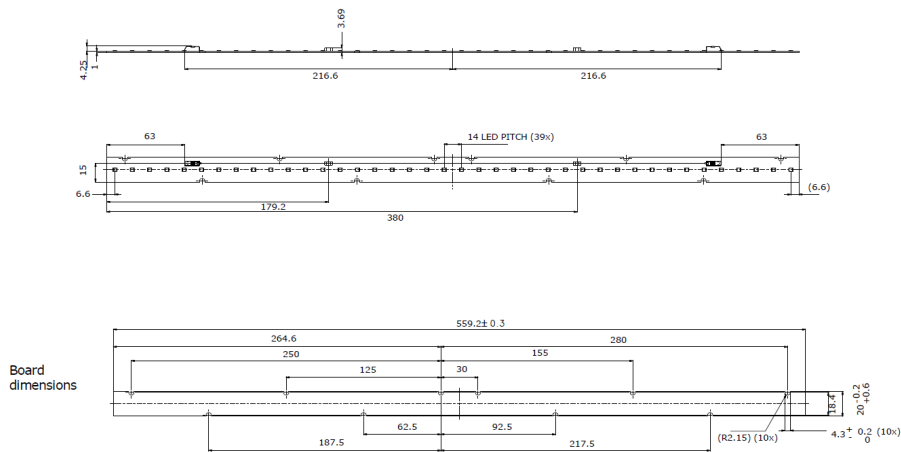
Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.33...0.5	mm ²	solid wire
	20...22	AWG	solid wire
Input wire strip length	6.1...7.1	mm	
Input wire cross-section	0.33...0.75	mm ²	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	558.9	559.2	559.5	mm
Width	19.8	20	20.6	mm
Height PCB		1		mm
Height with connector		5.25	5.7	mm
Product mass		24		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		19.5	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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