

**PHILIPS**

**CertaFlux**

**LED**

CertaFlux LED Strip  
2ft 2200lm 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 2200lm 830 HV4	8718699 666729 00	9290 016 85306	168
CertaFlux LED Strip 2ft 2200lm 840 HV4	8718699 666743 00	9290 016 85406	168
CertaFlux LED Strip 2ft 2200lm 865 HV4	8718699 666767 00	9290 016 85506	168

## Drive currents

Parameter	Nominal*	Life**	Max***	Unit
CertaFlux LED Strip 2ft 2200lm HV4	328	580	580	mA

## Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T <sub>c</sub> (case temperature at T <sub>c</sub> 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)

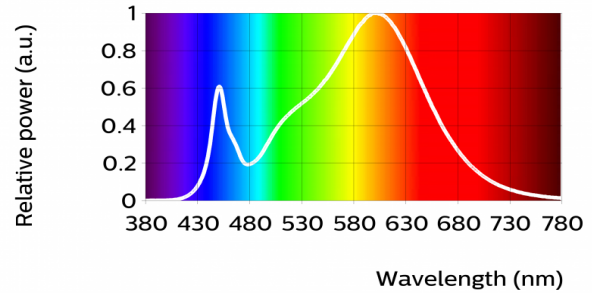
### CertaFlux LED Strip 2ft 2200lm 830 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	1935	2059	2183	lm
Module efficacy	146	156		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.432, 0.399)		-
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  $\pm 0.005$ . Measurement precision for CRI  $\pm 1.5$

Operation point	830	lm	lm/W
80% I-nom 262mA	Tc 25 °C	1758	166
	Tc-nom 55 °C	1676	161
	Tc-max 85 °C	1579	155
I-nom 328mA	Tc 25 °C	2163	161
	Tc-nom 55 °C	2059	156
	Tc-max 85 °C	1939	149
I-life 580mA	Tc 25 °C	3613	143
	Tc-nom 55 °C	3433	138
	Tc-max 85 °C	3222	132



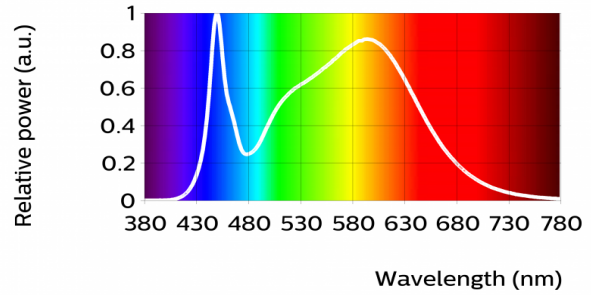
CertaFlux LED Strip 2ft 2200lm 840 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	2065	2197	2329	lm
Module efficacy	156	166		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.377, 0.372)		-
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 262mA	Tc 25 °C	1877	178
	Tc-nom 55 °C	1790	172
	Tc-max 85 °C	1687	165
I-nom 328mA	Tc 25 °C	2310	172
	Tc-nom 55 °C	2197	166
	Tc-max 85 °C	2071	159
I-life 580mA	Tc 25 °C	3859	153
	Tc-nom 55 °C	3667	148
	Tc-max 85 °C	3441	141



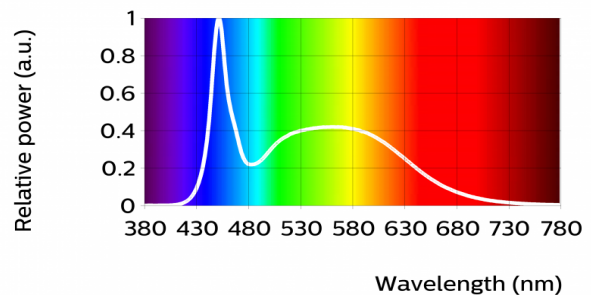
CertaFlux LED Strip 2ft 2200lm 865 HV4

Parameter	Min	Typ	Max	Unit
Luminous flux	2031	2160	2290	lm
Module efficacy	154	163		lm/W
Correlated color temperature (CCT)		6500		K
Color coordinates (CIEx, CIEy)		(0.310, 0.325)		-
Color consistency			3	SDCM
CRI	80			
Photometric code		865/369		



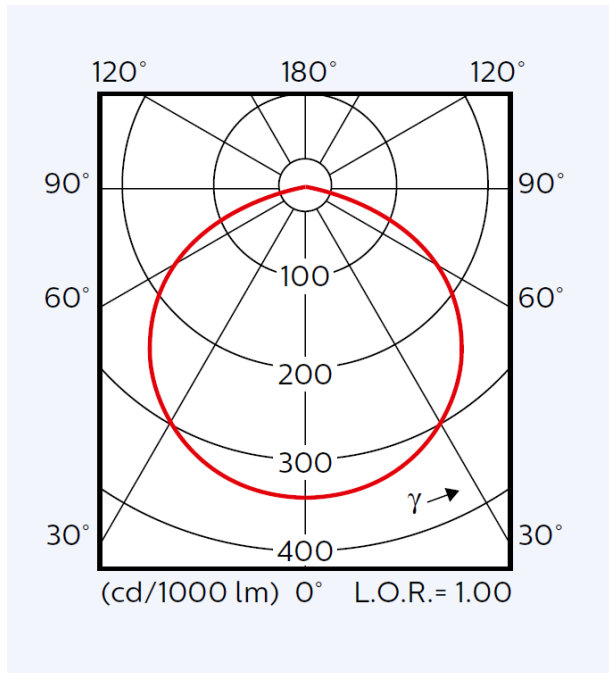
Measurement precision ± 5% for the flux data and ± 6% for the efficacy data. Measurement precision for color coordinates ± 0.005. Measurement precision for CRI ± 1.5

Operation point	865	lm	lm/W
80% I-nom 262mA	Tc 25 °C	1844	174
	Tc-nom 55 °C	1758	169
	Tc-max 85 °C	1656	162
I-nom 328mA	Tc 25 °C	2268	169
	Tc-nom 55 °C	2160	163
	Tc-max 85 °C	2033	156
I-life 580mA	Tc 25 °C	3789	150
	Tc-nom 55 °C	3601	145
	Tc-max 85 °C	3380	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	39.1	40.3	41.5	V
Power consumption	12.8	13.2	13.6	W = kWh/1000h
Number of modules in series per chain			6	

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

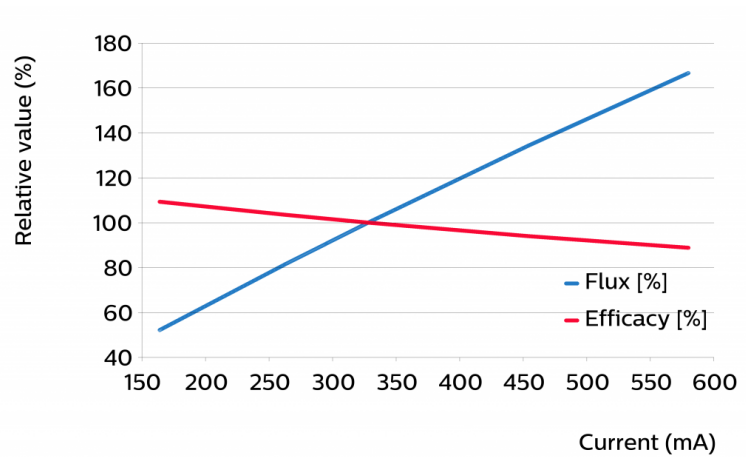
Specifications stated at Tc-nom and I-nom

Parallel connection allowed. Check [www.easydesignintool.com](http://www.easydesignintool.com).

## Tuning information

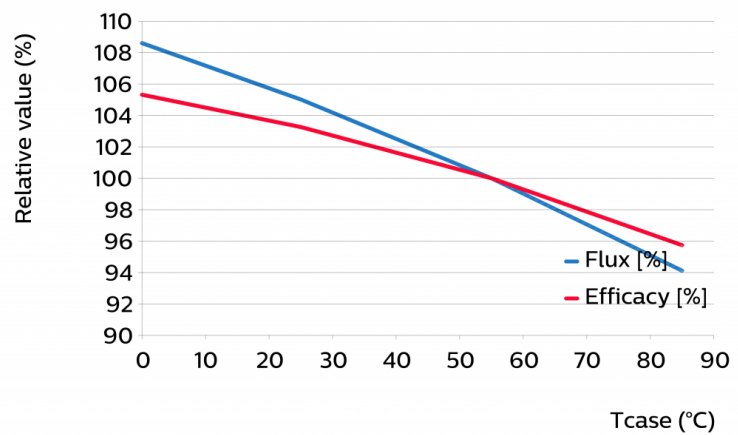
Flux and efficacy versus current (at Tc nominal)

I [mA]	Flux [%]	Efficacy [%]
580	167	89
454	134	94
328	100	100
262	81	104
164	52	109



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

Tc [°C]	Flux [%]	Efficacy [%]
85	94	96
55	100	100
25	105	103
0	109	105



## Lumen maintenance

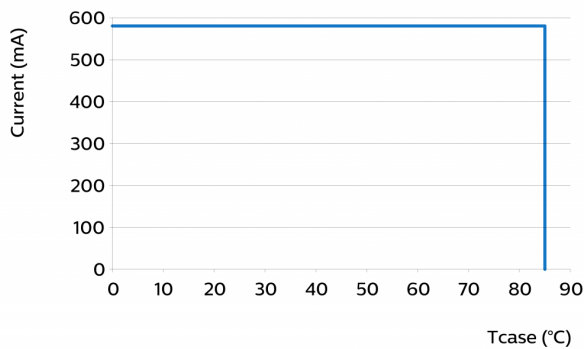
Operation point	Lumen maintenance x 1000 hours	L70			L80			L90		
		B50	B20	B10	B50	B20	B10	B50	B20	B10
80% I-nom 262 mA	Tc 25°C	>100	>100	>100	>100	>100	>100	65	63	62
	Tc-nom 45°C	>100	>100	>100	>100	>100	>100	52	50	49
	Tc-life 85°C	>100	>100	>100	73	71	69	34	33	32
I-nom 328 mA	Tc 25°C	>100	>100	>100	>100	>100	>100	62	60	59
	Tc-nom 45°C	>100	>100	>100	94	91	89	44	43	42
	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



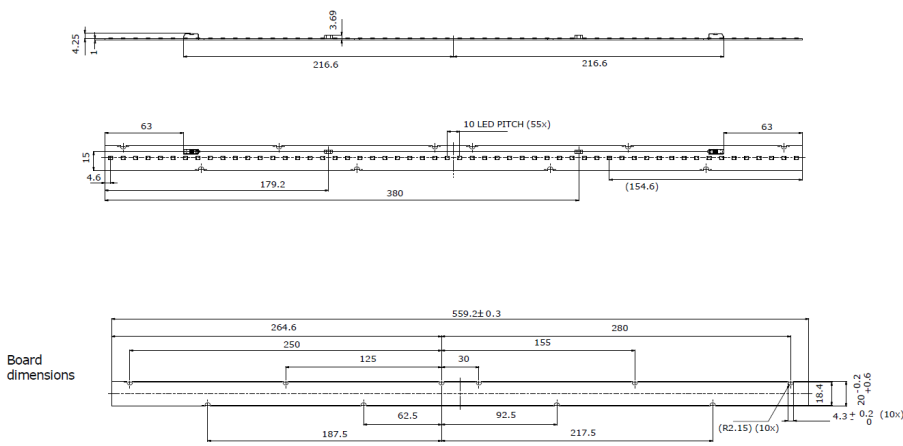
## Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.33...0.5	mm <sup>2</sup>	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 <sup>2</sup>	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		27.3	W
ESD (direct contact)		1	kV
Working voltage		350	V <sub>dc</sub>
Ambient temperature	-40		°C



## Application information

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### 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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