

**PHILIPS**

**CertaFlux**

**LED**

CertaFlux LED Strip 12mm  
5ft 8xx HV4



## Datasheet

The CertaFlux LED Strip 12 is a uniquely narrow LED module of only 12mm wide. It is available in 1ft, 2ft, 4ft and 5ft versions. This makes the product very suitable for applications like waterproof, battens and trunking.

### Key features and benefits

- Long life-time: >50,000 hours
- LED module efficiency of 160 lm/W
- Economical choice for waterproof, battens and trunking luminaires
- Good color rendering, CRI: >80
- Color consistency of 3 SDCM
- 1ft, 2ft, 4ft and 5ft available
- 1100 lm/ft
- PCB width only 12mm
- Three year system warranty

May 2023



## Ordering data

| Commercial product name                   | EOC               | 12NC           | EPREL registration # | Box quantity |
|---|-------------------|----------------|----------------------|--------------|
| CertaFlux LED Strip 12 5ft 5500lm 830 HV4 | 8718699 727703 00 | 9290 021 38306 | 769358               | 240          |
| CertaFlux LED Strip 12 5ft 5500lm 840 HV4 | 8718699 727727 00 | 9290 021 38406 | 769359               | 240          |
| CertaFlux LED Strip 12 5ft 5500lm 865 HV4 | 8718699 727741 00 | 9290 021 38506 | 769360               | 240          |

## Drive currents

| Parameter                            | Nominal* | Life** | Max*** | Unit |
|--------------------------------------|----------|--------|--------|------|
| CertaFlux LED Strip 12mm 5ft 8xx HV4 | 273      | 360    | 400    | mA   |

## Module temperatures

| Parameter   | Nominal* | Life** | Max*** | Unit |
|---|----------|--------|--------|------|
| T <sub>c</sub> (case temperature at T <sub>c</sub> point) | 60       | 65     | 90     | °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

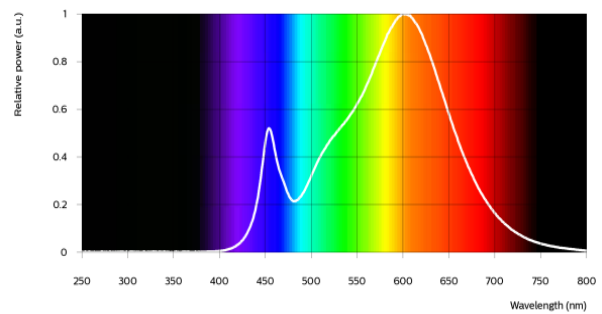
## Optical characteristics - table per color (CCT)

### CertaFlux LED Strip 12 5ft 5500lm 830 HV4


| Parameter                          | Min   | Typ            | Max           | Unit |
|------------------------------------|---|----------------|---------------|------|
| Luminous flux                      | 4841  | 5150           | 5459          | lm   |
| Efficacy                           | 130   | 138            | 147           | lm/W |
| Correlated color temperature (CCT) |   | 3000           |               | K    |
| Color coordinates (CIEx, CIEy)     |   | (0.431, 0.401) |               | -    |
| Color consistency                  |   |                | 3             | SDCM |
| CRI                                | 80  |                |               |      |
| R9                                 |   |                |               |      |
| Photometric code                   |  | 830/359        |               |      |
| Photobiological safety             |   |                | RG1 unlimited |      |

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 218mA | Tc 25 °C     | 4367 | 148  |
|                 | Tc-nom 60 °C | 4142 | 143  |
|                 | Tc-max 90 °C | 3931 | 138  |
| I-nom 273mA     | Tc 25 °C     | 5329 | 140  |
|                 | Tc-nom 60 °C | 5050 | 136  |
|                 | Tc-max 90 °C | 4788 | 131  |
| I-max 400mA     | Tc 25 °C     | 7424 | 126  |
|                 | Tc-nom 60 °C | 7026 | 122  |
|                 | Tc-max 90 °C | 6652 | 117  |

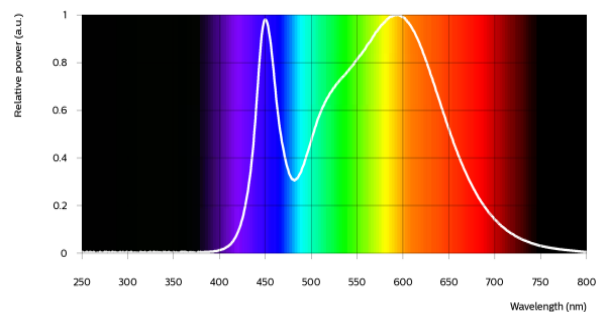


### CertaFlux LED Strip 12 5ft 5500lm 840 HV4


| Parameter                          | Min   | Typ            | Max           | Unit |
|------------------------------------|---|----------------|---------------|------|
| Luminous flux                      | 5170  | 5500           | 5830          | lm   |
| Efficacy                           | 139   | 148            | 157           | lm/W |
| Correlated color temperature (CCT) |   | 4000           |               | K    |
| Color coordinates (CIEx, CIEy)     |   | (0.379, 0.375) |               | -    |
| Color consistency                  |   |                | 3             | SDCM |
| CRI                                | 80  |                |               |      |
| R9                                 |   |                |               |      |
| Photometric code                   |  | 840/359        |               |      |
| Photobiological safety             |   |                | RG1 unlimited |      |

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 | 840          | lm   | lm/W |
|-----------------|--------------|------|------|
| 80% I-nom 218mA | Tc 25 °C     | 4475 | 151  |
|                 | Tc-nom 60 °C | 4245 | 146  |
|                 | Tc-max 90 °C | 4028 | 141  |
| I-nom 273mA     | Tc 25 °C     | 5461 | 144  |
|                 | Tc-nom 60 °C | 5175 | 139  |
|                 | Tc-max 90 °C | 4907 | 134  |
| I-max 400mA     | Tc 25 °C     | 7608 | 130  |
|                 | Tc-nom 60 °C | 7200 | 125  |
|                 | Tc-max 90 °C | 6817 | 120  |

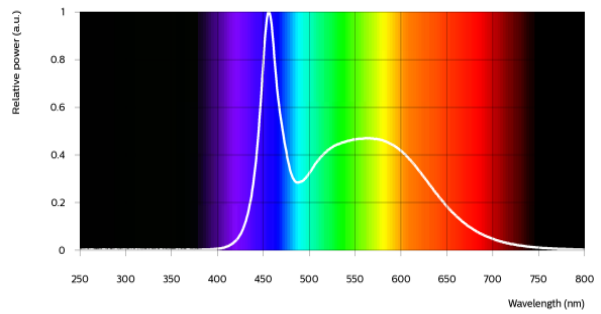


CertaFlux LED Strip 12 5ft 5500lm 865 HV4

| Parameter                          | Min   | Typ            | Max           | Unit |
|------------------------------------|---|----------------|---------------|------|
| Luminous flux                      | 4841  | 5150           | 5459          | lm   |
| Efficacy                           | 130   | 138            | 147           | lm/W |
| Correlated color temperature (CCT) |   | 6500           |               | K    |
| Color coordinates (CIEx, CIEy)     |   | (0.309, 0.325) |               | -    |
| Color consistency                  |   |                | 3             | SDCM |
| CRI                                | 80  |                |               |      |
| R9                                 |   |                |               |      |
| Photometric code                   |  | 865/359        |               |      |
| 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 218mA | Tc 25 °C     | 4410 | 149  |
|                 | Tc-nom 60 °C | 4183 | 144  |
|                 | Tc-max 90 °C | 3970 | 139  |
| I-nom 273mA     | Tc 25 °C     | 5382 | 142  |
|                 | Tc-nom 60 °C | 5100 | 137  |
|                 | Tc-max 90 °C | 4835 | 132  |
| I-max 400mA     | Tc 25 °C     | 7498 | 128  |
|                 | Tc-nom 60 °C | 7096 | 123  |
|                 | Tc-max 90 °C | 6718 | 118  |



## Electrical characteristics

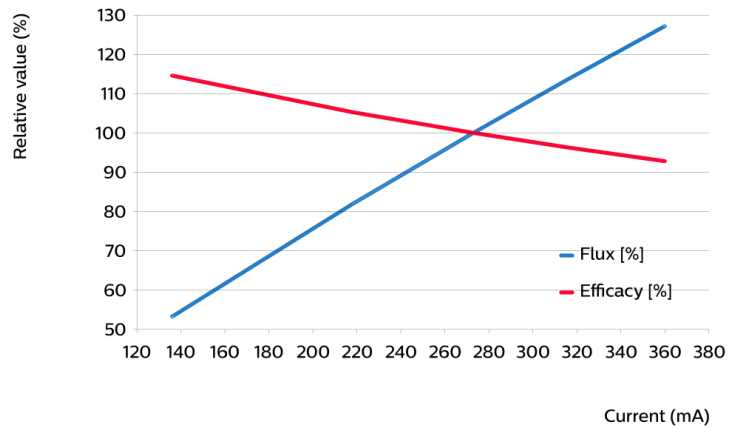
| Parameter                             | Min   | Typ   | Max   | Unit          |
|---------------------------------------|-------|-------|-------|---------------|
| Forward voltage                       | 133.5 | 136.3 | 139.0 | V             |
| Power consumption                     | 36.5  | 37.2  | 37.9  | W = kWh/1000h |
| Number of modules in series per chain |       |       | 2     |               |
| Number of modules per chain           |       |       | 1     |               |
| Number of modules in parallel         |       |       | 1     |               |

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

## Tuning information

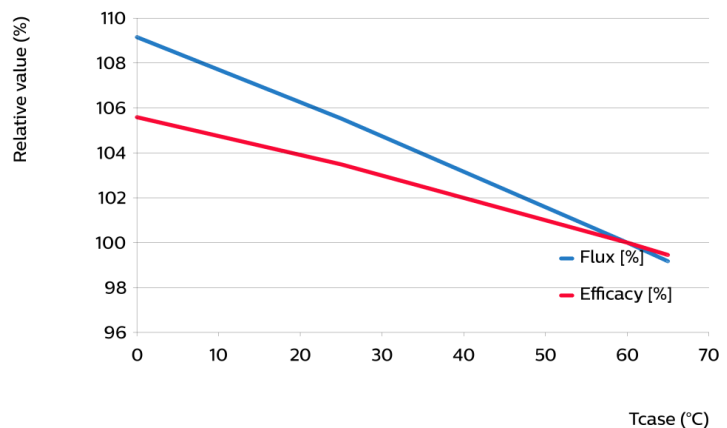
Flux and efficacy versus current (at Tc nominal)

| I [mA] | Flux [%] | Efficacy [%] |
|--------|----------|--------------|
| 360    | 127      | 93           |
| 316    | 114      | 96           |
| 273    | 100      | 100          |
| 218    | 82       | 105          |
| 136    | 53       | 115          |



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

| Tc [°C] | Flux [%] | Efficacy [%] |
|---------|----------|--------------|
| 65      | 99       | 99           |
| 60      | 100      | 100          |
| 25      | 106      | 103          |
| 0       | 109      | 106          |



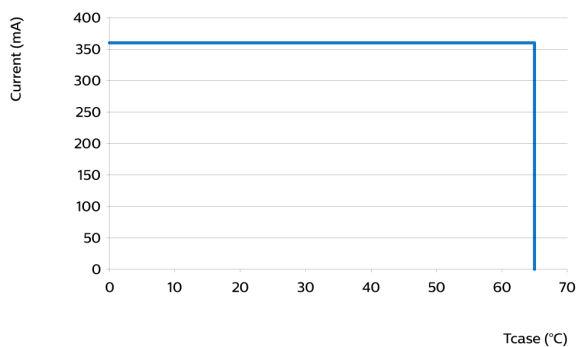
## Lumen maintenance

| Operation point | Lumen maintenance<br>x 1000 hours | L70 |     |     | L80 |     |     | L90 |     |     |
|-----------------|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                 |                                   | B50 | B20 | B10 | B50 | B20 | B10 | B50 | B20 | B10 |
| Tc 25°C         | 80% Inom 218 mA                   | >70 | >70 | >70 | >70 | >70 | >70 | 57  | 54  | 52  |
|                 | I nom 273 mA                      | >70 | >70 | >70 | >70 | >70 | >70 | 38  | 35  | 34  |
|                 | I life 360 mA                     | >70 | >70 | >70 | >70 | >70 | 70  | 36  | 34  | 33  |
| Tc nom 60°C     | 80% Inom 218 mA                   | >70 | >70 | >70 | >70 | >70 | >70 | 54  | 51  | 50  |
|                 | I nom 273 mA                      | >70 | >70 | >70 | >70 | >70 | >70 | 36  | 34  | 33  |
|                 | I life 360 mA                     | >70 | >70 | >70 | >70 | 69  | 67  | 34  | 32  | 31  |
| Tc life 65°C    | 80% I nom 218 mA                  | >70 | >70 | >70 | >70 | >70 | >70 | 51  | 48  | 47  |
|                 | I nom 273 mA                      | >70 | >70 | >70 | >70 | 69  | 67  | 34  | 32  | 31  |
|                 | I life 360 mA                     | >70 | >70 | >70 | 69  | 65  | 63  | 32  | 30  | 29  |

## Lifetime

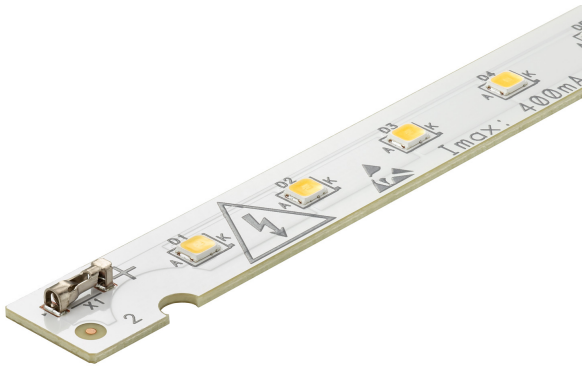
| Parameter      | Value  | Unit  |
|----------------|--------|-------|
| M70F50 nominal | >70000 | hours |
| M70F50 life    | >70000 | hours |

## Performance Window



## Wiring

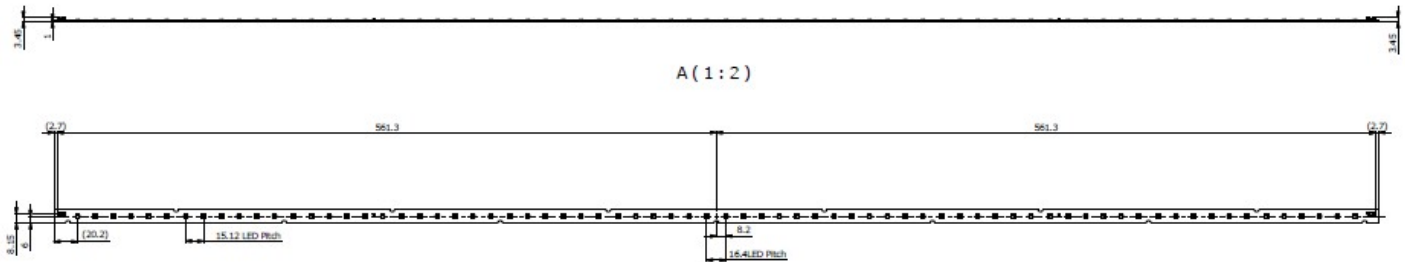
| Specification item       | Value      | Unit            | Condition     |
|--------------------------|------------|-----------------|---------------|
| Input wire cross-section | 0.2...0.5  | mm <sup>2</sup> | solid wire    |
|                          | 20...24    | AWG             | solid wire    |
| Input wire strip length  | 5.2...5.8  | mm              |               |
| Input wire cross-section | 0.33...0.5 | mm <sup>2</sup> | stranded wire |
|                          | 20...22    | AWG             | stranded wire |
| Input wire strip length  | 5.2...5.8  | mm              |               |



Connecting the module with wrong polarity may result in damage beyond repair.

## Mechanical characteristics

| Parameter    | Min  | Typ  | Max  | Unit |
|--------------|------|------|------|------|
| Length       | 1403 | 1404 | 1405 | mm   |
| Width        | 11.8 | 12   | 12.6 | mm   |
| Height PCB   |      | 1    |      | mm   |
| Height total | 3.25 | 3.45 | 3.65 | mm   |
| Product mass |      | 38   |      | gram |



## Absolute ratings

| Parameter                              | Min | Max | Unit            |
|--|-----|-----|-----------------|
| Current through the LED module (I-max) |     | 400 | mA              |
| Case temperature (Tc-max)              |     | 90  | °C              |
| ESD (direct contact)                   | 1   |     | kV              |
| Working voltage                        |     | 350 | V <sub>dc</sub> |

## Application information

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### Certificates and Standards

CE  
ENEC  
ENEC+

### Environmental

RoHS/REACH

### Application

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Dimming

Yes



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