

**PHILIPS**

**Fortimo**

**LED**

Fortimo LEDFlex  
2000lm/m 8xx G1



Datasheet

# Fortimo LEDFlex system

## Key features and benefits

- Ideal for built-in applications on aluminum extrusions and for various decorative lighting applications such as cove lighting, indoor facade accent lighting.
- Luminous flux range of 1000/1500/2000/2500 lm/m
- Colour temperature 2700/3000/4000/6500 K with 3 SDCM color consistency
- CRI 80
- Efficacy up to 144 lm/W
- Narrow pitch distance with 70 leds per meter enables best uniformity
- High design freedom by cut-options every 10 cm
- Self-adhesive 3M tape on the back for simple mounting on various surfaces
- PCB to PCB and wire to PCB connectors for toolless handling and connection
- Life-time of 50,000 hours
- Five year warranty

September 2021



indirect



instant



## Ordering data

| Commercial product name                 | EOC               | 12NC           | Box quantity |
|-----------------------------------------|-------------------|----------------|--------------|
| Fortimo LEDFlex 5m 2000lm/m 830 C10 G1  | 8718699 661687 00 | 9290 014 91680 | 15           |
| Fortimo LEDFlex 5m 2000lm/m 840 C10 G1  | 8718699 661700 00 | 9290 014 91780 | 15           |
| Fortimo LEDFlex 5m 2000lm/m 827 C10 G1  | 8718699 661724 00 | 9290 014 91880 | 15           |
| Fortimo LEDFlex 5m 2000lm/m 865 C10 G1  | 8718699 661748 00 | 9290 014 91980 | 15           |
| Fortimo LEDFlex 50m 2000lm/m 830 C10 G1 | 8718699 662080 00 | 9290 014 93680 | 5            |
| Fortimo LEDFlex 50m 2000lm/m 840 C10 G1 | 8718699 662103 00 | 9290 014 93780 | 5            |

## Module temperatures

| Parameter                                                 | Nominal* | Life** | Max*** | Unit |
|-----------------------------------------------------------|----------|--------|--------|------|
| T <sub>c</sub> (case temperature at T <sub>c</sub> point) | 65       | 75     | 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)

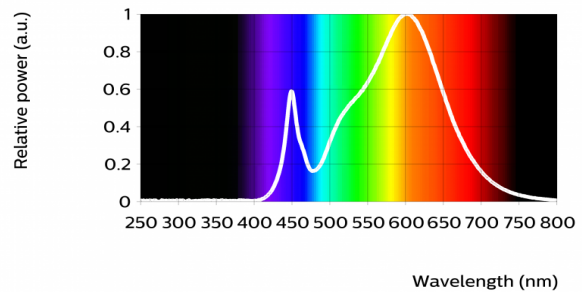
Fortimo LEDFlex 5m 2000lm/m 830 C10 G1  
Fortimo LEDFlex 50m 2000lm/m 830 C10 G1

| Parameter                          | Min  | Typ            | Max           | Unit |
|------------------------------------|------|----------------|---------------|------|
| Luminous flux                      | 1800 | 2000           | 2200          | lm   |
| Module efficacy                    |      | 134            |               | lm/W |
| Correlated color temperature (CCT) |      | 3000           |               | K    |
| Color coordinates (CIEx, CIEy)     |      | (0.434, 0.403) |               | -    |
| Color consistency                  |      |                | 3             | SDCM |
| CRI                                | 80   |                |               |      |
| Photometric code                   |      | 830/359        |               |      |
| Radiation angle                    |      | 120            |               | deg  |
| Photobiological safety             |      |                | RG1 unlimited |      |

R9>0.

Flux expressed per meter

Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5



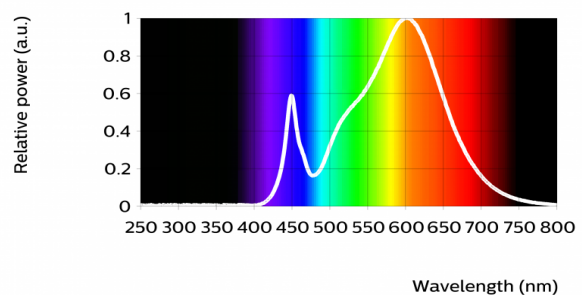
Fortimo LEDFlex 5m 2000lm/m 840 C10 G1  
Fortimo LEDFlex 50m 2000lm/m 840 C10 G1

| Parameter                          | Min  | Typ            | Max           | Unit |
|------------------------------------|------|----------------|---------------|------|
| Luminous flux                      | 1800 | 2000           | 2200          | lm   |
| Module efficacy                    |      | 144            |               | lm/W |
| Correlated color temperature (CCT) |      | 4000           |               | K    |
| Color coordinates (CIEx, CIEy)     |      | (0.382, 0.380) |               | -    |
| Color consistency                  |      |                | 3             | SDCM |
| CRI                                | 80   |                |               |      |
| Photometric code                   |      | 840/359        |               |      |
| Radiation angle                    |      | 120            |               | deg  |
| Photobiological safety             |      |                | RG1 unlimited |      |

R9>0.

Flux expressed per meter

Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5



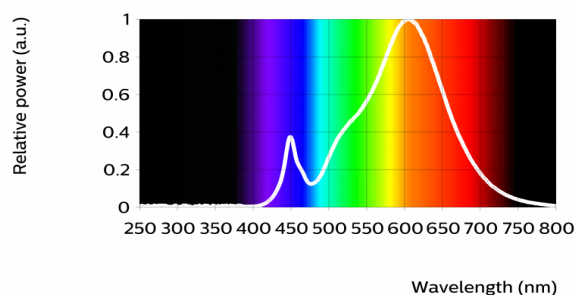
## Fortimo LEDFlex 5m 2000lm/m 827 C10 G1

| Parameter                          | Min                                                                               | Typ            | Max           | Unit |
|------------------------------------|-----------------------------------------------------------------------------------|----------------|---------------|------|
| Luminous flux                      | 1800                                                                              | 2000           | 2200          | lm   |
| Module efficacy                    |                                                                                   | 128            |               | lm/W |
| Correlated color temperature (CCT) |                                                                                   | 2700           |               | K    |
| Color coordinates (CIEx, CIEy)     |                                                                                   | (0.458, 0.410) |               | -    |
| Color consistency                  |                                                                                   |                | 3             | SDCM |
| CRI                                | 80                                                                                |                |               |      |
| Photometric code                   |                                                                                   | 827/359        |               |      |
| Radiation angle                    |  | 120            |               | deg  |
| Photobiological safety             |                                                                                   |                | RG1 unlimited |      |

R9>0.

Flux expressed per meter

Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5



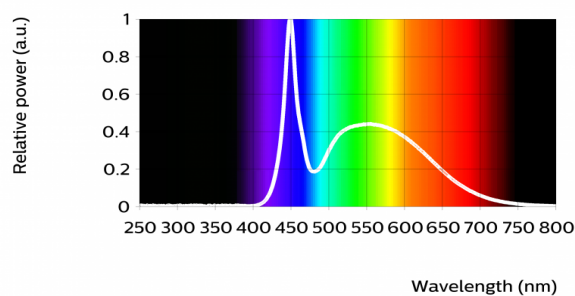
## Fortimo LEDFlex 5m 2000lm/m 865 C10 G1

| Parameter                          | Min                                                                                 | Typ            | Max           | Unit |
|------------------------------------|-------------------------------------------------------------------------------------|----------------|---------------|------|
| Luminous flux                      | 1800                                                                                | 2000           | 2200          | lm   |
| Module efficacy                    |                                                                                     | 144            |               | lm/W |
| Correlated color temperature (CCT) |                                                                                     | 6500           |               | K    |
| Color coordinates (CIEx, CIEy)     |                                                                                     | (0.312, 0.328) |               | -    |
| Color consistency                  |                                                                                     |                | 3             | SDCM |
| CRI                                | 80                                                                                  |                |               |      |
| Photometric code                   |                                                                                     | 865/359        |               |      |
| Radiation angle                    |  | 120            |               | deg  |
| Photobiological safety             |                                                                                     |                | RG1 unlimited |      |

R9>0.

Flux expressed per meter

Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5



## Electrical characteristics

### Fortimo LEDFlex 5m 2000lm/m 830 C10 G1 Fortimo LEDFlex 50m 2000lm/m 830 C10 G1

| Parameter         | Min  | Typ  | Max  | Unit          |
|-------------------|------|------|------|---------------|
| Forward voltage   | 22.8 | 24.0 | 25.2 | V             |
| Power consumption |      | 14.9 |      | W = kWh/1000h |
| Thermal power     |      | 8.8  |      | W             |

Power expressed per meter. Measurement precision for power +/- 3.3%.

Maximum LEDFlex length is 7 meter, using 250mm cable at Tc nominal where luminous flux is above 90% of claimed.

For details see Design in Guide on [www.philips.com/oem](http://www.philips.com/oem).

### Fortimo LEDFlex 5m 2000lm/m 840 C10 G1 Fortimo LEDFlex 50m 2000lm/m 840 C10 G1

| Parameter         | Min  | Typ  | Max  | Unit          |
|-------------------|------|------|------|---------------|
| Forward voltage   | 22.8 | 24.0 | 25.2 | V             |
| Power consumption |      | 13.8 |      | W = kWh/1000h |
| Thermal power     |      | 7.4  |      | W             |

Power expressed per meter. Measurement precision for power +/- 3.3%.

Maximum LEDFlex length is 7 meter, using 250mm cable at Tc nominal where luminous flux is above 90% of claimed.

For details see Design in Guide on [www.philips.com/oem](http://www.philips.com/oem).

### Fortimo LEDFlex 5m 2000lm/m 827 C10 G1

| Parameter         | Min  | Typ  | Max  | Unit          |
|-------------------|------|------|------|---------------|
| Forward voltage   | 22.8 | 24.0 | 25.2 | V             |
| Power consumption |      | 15.6 |      | W = kWh/1000h |
| Thermal power     |      | 9.5  |      | W             |

Power expressed per meter. Measurement precision for power +/- 3.3%.

Maximum LEDFlex length is 7 meter, using 250mm cable at Tc nominal where luminous flux is above 90% of claimed.

For details see Design in Guide on [www.philips.com/oem](http://www.philips.com/oem).

### Fortimo LEDFlex 5m 2000lm/m 865 C10 G1

| Parameter         | Min  | Typ  | Max  | Unit          |
|-------------------|------|------|------|---------------|
| Forward voltage   | 22.8 | 24.0 | 25.2 | V             |
| Power consumption |      | 13.8 |      | W = kWh/1000h |
| Thermal power     |      | 7.6  |      | W             |

Power expressed per meter. Measurement precision for power +/- 3.3%.

Maximum LEDFlex length is 7 meter, using 250mm cable at Tc nominal where luminous flux is above 90% of claimed.

For details see Design in Guide on [www.philips.com/oem](http://www.philips.com/oem).

## Lumen maintenance

| Operation point | Lumen maintenance<br>x 1000 hours | L70 |     |     |
|-----------------|-----------------------------------|-----|-----|-----|
|                 |                                   | B50 | B20 | B10 |
|                 | Tc 55°C                           | >50 | >50 | >50 |
|                 | Tc 65°C                           | >50 | >50 | >50 |
|                 | Tc 75°C                           | >50 | >50 | >50 |

## Lifetime

| Parameter      | Value  | Unit  |
|----------------|--------|-------|
| C10 at Tc life | >50000 | hours |
| M70F50 nominal | >50000 | hours |
| M70F50 life    | >50000 | hours |

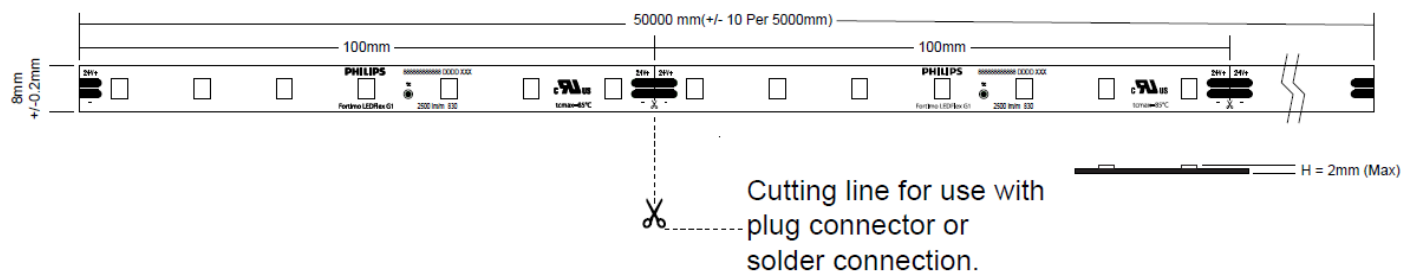
Switching cycles in accordance to EU 1194/2012: >15000

## Mechanical characteristics

Fortimo LEDFlex 50m 2000lm/m 830 C10 G1

Fortimo LEDFlex 50m 2000lm/m 840 C10 G1

| Parameter    | Min | Typ   | Max | Unit |
|--------------|-----|-------|-----|------|
| Length       |     | 50000 |     | mm   |
| Width        | 7.8 | 8     | 8.2 | mm   |
| Height       |     |       | 2   | mm   |
| Product mass |     | 700   |     | gram |



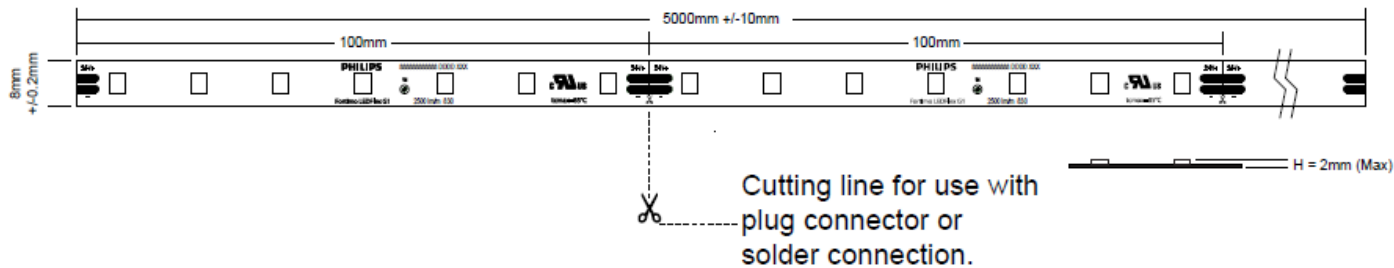
Fortimo LEDFlex 5m 2000lm/m 830 C10 G1

Fortimo LEDFlex 5m 2000lm/m 840 C10 G1

Fortimo LEDFlex 5m 2000lm/m 827 C10 G1

Fortimo LEDFlex 5m 2000lm/m 865 C10 G1

| Parameter    | Min | Typ  | Max | Unit |
|--------------|-----|------|-----|------|
| Length       |     | 5000 |     | mm   |
| Width        | 7.8 | 8    | 8.2 | mm   |
| Height       |     |      | 2   | mm   |
| Product mass |     | 70   |     | gram |



## Absolute ratings

| Parameter                              | Min | Max  | Unit |
|----------------------------------------|-----|------|------|
| Current through the LED module (I-max) |     | 5000 | mA   |
| Case temperature (Tc-max)              |     | 85   | °C   |
| ESD (direct contact)                   | 8   |      | kV   |
| ESD (air)                              | 15  |      | kV   |
| Ambient temperature                    | -20 | 50   | °C   |
| Storage temperature                    | -30 | 85   | °C   |

## Application information

### Certificates and Standards

CB  
CE  
ENEC  
ENEC+  
CQC

### Application

|                        |                                                                 |
|------------------------|-----------------------------------------------------------------|
| IP rating              | no IP-rating                                                    |
| Overheating protection | No protection                                                   |
| Luminaire class        | IEC class I, II and III. SELV input only, constant voltage 24V. |
| Dimming                | Yes                                                             |

Built-in applications only. Dimming by pulse width modulation.



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