

PRODUCT DATASHEET

LFP2000 -G3-827-04

LINEARlight FLEX® Protect POWER 2000 | LED modules for professional and industrial applications



Areas of application

- Facade accent lighting
- Ceiling integration
- Wall integration
- Cove lighting
- Machine lighting
- Path lighting
- Suitable for outdoor use

Product benefits

- Color uniformity better than 2 SDCM on the entire LED strip and between strips
- High luminous flux
- Great design freedom thanks to flexibility and cuttability of module
- High-performance silicone for extremely long life and flexibility
- Simple connection thanks to premounted connectors
- Extraordinary design and high quality materials
- Toolless connection only if using the optional CONNECTsystem
- Easy mounting on many smooth surfaces thanks to self-adhesive tape at the back
- Outdoor use possible: UV and salt mist resistant (UV acc. to ISO 4892-2 - Method A, salt mist acc. to IEC 60068-2-52 severity 1)

Product features

- Flexible and cuttable LED strip



- Luminous flux: up to 2,000 lm/m
- Type of protection: IP67
- Dimmable with PWM technology

TECHNICAL DATA

Electrical data

| | |
|---------------------------|-----------|
| Nominal wattage | 80.55 W |
| Construction wattage | 80.55 W |
| Nominal wattage per meter | 17.9 W |
| Nominal voltage | 24 V |
| Input voltage range | 23...24 V |
| Reverse Voltage | 25 V |
| Type of current | DC |
| Nominal current | 3.36 A |

Photometrical data

| | |
|---|---------------------|
| Total useful luminous flux [PICOS] | 8550 lm |
| Luminous efficacy | 106 lm/W |
| Luminous flux | 8550 lm |
| Luminous flux per meter | 1900 lm |
| Color temperature | 2700 K |
| Color rendering index Ra | > 80 |
| Light color LED | White |
| Light color (designation) | 2700 K |
| Standard deviation of color matching | ≤4 sdc _m |
| Lumen main.fact.at end of nom.life time | 0.70 |

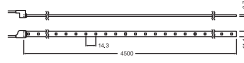
Light technical data

| | |
|------------------------------------|----------|
| Beam angle | 120 ° |
| Rated beam angle (half peak value) | 120.00 ° |
| Starting time | < 0.5 s |
| Warm-up time (60 %) | 0.00 s |

LED MODULE INFORMATION

| | |
|----------------------------------|-----|
| Number of LEDs per meter | 70 |
| Number of LEDs per module | 315 |
| Number of LEDs per smallest unit | 7 |

Dimensions & Weight



| | |
|---------------------------------|----------------------|
| Length | 4500 mm |
| Length – smallest unit | 100 mm |
| Cable length | 500.00 mm |
| Width | 11.00 mm |
| Height | 4.50 mm |
| Cable cross-section, input side | 0.34 mm ² |
| Conductor cross section | 0.34 mm ² |
| LED pitch | 14.3 mm |
| Product weight | 282.00 g |

Colors & materials

| | |
|----------------|----------|
| Cover material | Silicone |
|----------------|----------|

Temperatures & operating conditions

| | |
|--------------------------------------|----------------------------|
| Ambient temperature range | -20...+50 °C ¹⁾ |
| Maximum temperature at tc test point | 70 °C |
| Temperature range in operation | -20...70 °C ²⁾ |
| Performance temp. acc. to IEC 62717 | 55 °C ³⁾ |

1) Rated ambient temp. 25°C / Providing that temperature at Tc point is below max value during operation / Temperature ramping for environmental testing acc. to IEC 62717, 1K/min

2) Exceeding the maximum ratings will reduce expected life time or destroy the LED strip.

3) Tp rated. Tp point coincides with Tc point - marked on device

Lifespan

| | |
|----------------------------|---------|
| Nominal lamp life time | 60000 h |
| Number of switching cycles | >15000 |

Additional product data

| | |
|----------------|---|
| Product remark | Modules perfectly matched to OSRAM OPTOTRONIC® LED drivers (see relevant table) / For current photometric data and important safety, installation and application information, see www.osram.com/led-systems . / All the technical parameters apply to the entire module. In view of the complex manufacturing process for light emitting diodes, the typical values given above for the technical LED parameters are merely statistical values that do not necessarily correspond to the actual technical parameters of an individual product; individual products may vary from the typical values |
|----------------|---|

Capabilities

| | |
|-----------------------|------------------|
| Dimmable | Yes |
| Dimming interface | PWM |
| Type of installation | Surface mounting |
| Lowest bending radius | 50 mm |
| Self-adhesive | Yes |

Certificates & Standards

| | |
|--|---|
| Standards | CE; ENEC 10 VDE / EAC / UL Recognized component according UL 8750 |
| Type of protection | IP67 |
| Energy consumption | 89.00 kWh/1000h |
| Energy class of contained light source | F |

LOGISTICAL DATA

| | |
|------------------------------|--------------|
| Temperature range at storage | -40...+85 °C |
|------------------------------|--------------|

EQUIPMENT / ACCESSORIES







- Simplified connection with optional matching CONNECTsystem
- Quick installation with optional SLIM TRACK System
- Perfectly matched to OPTOTRONIC 24 V electronic control gears



ADDITIONAL PRODUCT INFORMATION

- Some LED modules are equipped with a self-adhesive tape for attaching the LED module to suitable materials, such as aluminum profiles, which must be clean and free of oil or silicone coatings, as well as other dirt/dust particles. The adhesive tape is intended for single use and if removed may damage the material to which it is stuck and the LED module itself, which must then be scrapped. Use the adhesive tape when the installation material temperature is in the 18 °C...35 °C range. Complete adhesion takes up to 72 h.
- LED modules are designed for static installations in accordance with IPC 6013C – Use A. Take material vibrations, repetitive torsion, and elongation/compression into account.
- If the operating environment covers a broad temperature range (e.g. outdoor applications) and the operating length is longer than 2 m, the use of adequate mounting surfaces is required. The use of an additional thicker adhesive tape between LED module and mounting surface is also recommended in order to absorb the stress of any mismatch in expansion. Assure enough space for module expansion with increasing temperature.

- The manufacturer is not responsible for damage due to chemical corrosion. The user must provide suitable protection against corrosive agents such as moisture and condensation and any other harmful elements/compounds. Make certain to avoid corrosive atmospheres. According to the current state of LED technology, hydrogen sulfide (H₂S) causes accelerated corrosion which leads to shortened lifetime or premature failure. Sources of H₂S may be rubber, foam rubber, soft-foam tapes, rubber-based sealing, natural sources (e.g. sulfur springs), etc. To avoid H₂S from sulfur-vulcanized rubber use silicon-based materials or peroxide-crosslinked rubber instead. Follow the recommendations in the material datasheet of the rubber supplier.
- IP00 LED modules, as manufactured, have no conformal coating and therefore offer no inherent protection against corrosion. Conformal coating treatment is possible, however materials must be selected properly in order to avoid product damage or impaired performance; the user must also completely seal the cut parts (ends/edges).
- For applications involving exposure to humidity and dust the module must be protected by a fixture or housing with a suitable IP protection class.
- Consult OSRAM Technical Service for further advice.
- Only a qualified electrician may install the module.
- Handle with care and ensure that there is no mechanical product damage, including damage to invisible internal electronics parts.
- Exceeding maximum operating and storage temperature ratings can reduce the expected lifetime or even destroy the LED module. The temperature of the LED module must be measured at the T_c-point in accordance with EN 60598-1 under steady-state conditions, considering the worst case; drive all channels at 100 % power. Refer to the product drawing for the exact location of the T_c-point.
- Exceeding the maximum ratings for the operating voltage causes hazardous overload and will likely destroy the LED module.
- Installation of LED modules and connection to the power supply must comply with all applicable electrical and safety standards.
- Observe correct polarity and wiring diagrams! Incorrect polarity or wrong wiring can cause unpredictable permanent damage or even failure of the product.
- Never exceed the maximum operable length, including daisy-chaining connections.
- Always ensure electrical isolation between the LED module and the mounting surface, especially in the vicinity of connections or cut ends.
- IP00 LED modules are ESD-sensitive; take adequate precautions during installation and operation of the products.
- Use only SELV LED drivers in accordance with applicable lighting standards and LED module ratings. In order to safely operate OSRAM LED modules it is necessary to supply them with an electronically stabilized power supply providing protection against short circuits, overload and overheating. To simplify the approval process of the luminaire/installation, the electronic power supplies control gear for LED modules must bear the CE and ENEC marking. In Europe the Declarations of Conformity must include at least the following standards: EN 61347-2-13, EN 55015, EN 61547 and EN 61000-3-2. ENEC certification will be based on EN 61347-2-13 and EN 62384. OSRAM OPTOTRONIC LED drivers comply with all relevant standards and guarantee safe operation; see the relevant brochure for more detailed information about OSRAM OPTOTRONIC.
- Avoid installations in rural and urban areas with high industrial activity and heavy traffic (higher than class than 4C1 according IEC 60721-3) and as well as installation in spa, areas with chlorine atmosphere, direct exposure to blown sand.

DOWNLOAD DATA

| Documents and certificates | | Document name |
|--|--|----------------------------------|
|  | User instruction / safety instructions | LINEARlight FLEX Protect POWER |
|  | Declarations of conformity | Declaration of conformity |
|  | Declarations of conformity | Manufacturer declaration |
|  | Certificates | ENEC10_VDE Certificate |
|  | Certificates | UL Certificate |
|  | Certificates | VDE ENEC+ Certificate LFP2000-G3 |

| Photometric and lighting design files | | Document name |
|--|---------------------|-------------------------|
|  | IES file (IES) | IES LFP2000-G3-827 |
|  | LDT file (Eulumdat) | Eulumdat LFP2000-G3-827 |

LOGISTICAL DATA

| Product code | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4052899481152 | Folding box 1 | 353 mm x 349 mm x 32 mm | 434.00 g | 3.94 dm ³ |
| 4052899481169 | Shipping box 8 | 365 mm x 286 mm x 366 mm | 6474.00 g | 38.21 dm ³ |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.