LINEARlight FLEX Protect ECO

– LED modules for professional and industrial applications

Product family features

- Flexible and cuttable LED strip
- Luminous flux: up to 200 lm/m
- Type of protection: IP67
- Dimmable with PWM technology
- Fine White (3.5 SDCM)
- Salt mist proof

Product family benefits

- Large selection of light colors
- 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 with the optional CONNECTsystem
- Easy mounting on many smooth surfaces thanks to self-adhesive tape at the back

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Areas of application

- Decorative applications
- Wall integration
- Backlighting of complex structures
- Path lighting
- Signage
- Suitable for outdoor use

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Technical data

Electrical data

Product description	Nominal voltage	Type of current	Nominal wattage per meter	Rated wattage	Input voltage range	Accidental reverse input voltage protection up to
LFP200M -G3-BL-06	24.0 V	DC	4.1 W	24.50 W	23…25 V	25 V
LFP200M -G3-RE-06	24.0 V	DC	6.0 W	36.00 W	23…25 V	25 V
LFP200M -G3-GR-06	24.0 V	DC	4.1 W	24.50 W	23…25 V	25 V
LFP200M -G3-YE-06	24.0 V	DC	6.0 W	36.00 W	23…25 V	25 V
LF05E -Y1-P [1)]	24.0 V	DC	6.0 W	36.00 W	23…25 V	25 V

1) See product remark

Photometrical data

Product description	Light color LED	Nominal dominant wavelength	Luminous flux per meter	Total useful luminous flux	Luminous efficacy	Light color (designation)
LFP200M -G3-BL-06	Blue	467 nm	48 lm	290 lm	12 lm/W [2)]	Blue
LFP200M -G3-RE-06	Red	625 nm	140 lm	840 lm	23 lm/W [2)]	Red
LFP200M -G3-GR-06	Green	522 nm	157 lm	940 lm	38 lm/W [2)]	Green
LFP200M -G3-YE-06	Yellow	587 nm	140 lm	840 lm	23 lm/W [2)]	Yellow
LF05E -Y1-P [1)]	Yellow	587 nm	140 lm			Yellow

1) See product remark

2) For white color

Light technical data

Product description	LED pitch	Beam angle	Rated beam angle (half peak value)	Starting time	Warm-up time (60 %)
LFP200M -G3-BL-06	30.0 mm	120 °	120.00 °	< 0.5 s	0.00 s
LFP200M -G3-RE-06	30.0 mm	120 °	120.00 °	< 0.5 s	0.00 s
LFP200M -G3-GR-06	30.0 mm	120 °	120.00 °	< 0.5 s	0.00 s
LFP200M -G3-YE-06	30.0 mm	120 °	120.00 °	< 0.5 s	0.00 s
LF05E -Y1-P [1)]	30.0 mm	120 °			

1) See product remark

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LED module information

Product description	Number of LEDs per meter	Number of LEDs per smallest unit	Maximum operable length
LFP200M -G3-BL-06	33	5	6000 mm [2]
LFP200M -G3-RE-06	33	5	6000 mm [2]
LFP200M -G3-GR-06	33	5	6000 mm [2]
LFP200M -G3-YE-06	33	5	6000 mm [2]
LF05E -Y1-P [1]	33	5	6000 mm [2]

[1] See product remark

[2] Max. cumulative product length powering it from a single end

Dimensions & weight

Product description	Length	Length – smallest unit	Width	Height	Cable length	Product weight
LFP200M -G3-BL-06	6000 mm [2]	150.0 mm	11.0 mm	4.5 mm [3]	500.0	390.00 g
LFP200M -G3-RE-06	6000 mm [2]	150.0 mm	11.0 mm	4.5 mm [3]	500.0	390.00 g
LFP200M -G3-GR-06	6000 mm [2]	150.0 mm	11.0 mm	4.5 mm [3]	500.0	390.00 g
LFP200M -G3-YE-06	6000 mm [2]	150.0 mm	11.0 mm	4.5 mm [3]	500.0	390.00 g
LF05E -Y1-P [1]	6000 mm [2]	150.0 mm	11.0 mm	4.5 mm	500.0	500.00 g

[1] See product remark

[2] LED pitch 30 mm

[3] without tape

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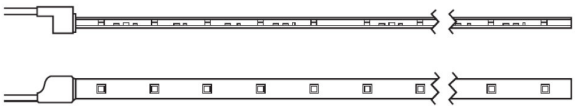
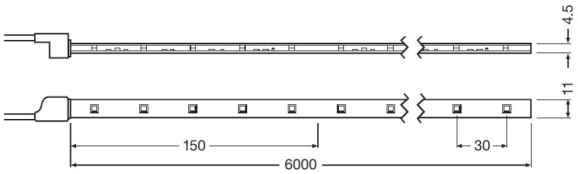
Product line drawing



LFP200M -G3-BL-06, LFP200M -G3-RE-06, LFP200M -G3-GR-06, LFP200M -G3-YE-06



LF05E -Y1-P

Colors & materials

Product description	Cover material	Body material
LFP200M -G3-BL-06	Silicone	Silicone
LFP200M -G3-RE-06	Silicone	Silicone
LFP200M -G3-GR-06	Silicone	Silicone
LFP200M -G3-YE-06	Silicone	Silicone
LF05E -Y1-P [1)]	Silicone	Silicone

[1)] See product remark

Temperatures & operating conditions

Product description	Performance temp. acc. to IEC 62717	Temperature range in operation at Tc point	Ambient temperature range	Temperature range at storage
LFP200M -G3-BL-06	35 °C	-20…70 °C [2)]	-20…+50 °C [3)]	-40…+85 °C
LFP200M -G3-RE-06	35 °C	-20…70 °C [2)]	-20…+50 °C [3)]	-40…+85 °C
LFP200M -G3-GR-06	35 °C	-20…70 °C [2)]	-20…+50 °C [3)]	-40…+85 °C
LFP200M -G3-YE-06	35 °C	-20…70 °C [2)]	-20…+50 °C [3)]	-40…+85 °C
LF05E -Y1-P [1)]	40 °C	-30…75 °C [2)]	-20…+50 °C [3)]	-40…+85 °C

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1) See product remark

2) At the T_c point

3) 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

Lifespan

Product description	Rated lamp life time	Nominal lamp life time
LFP200M -G3-BL-06	50000 h 2)	50000 h
LFP200M -G3-RE-06	50000 h 2)	50000 h
LFP200M -G3-GR-06	50000 h 2)	50000 h
LFP200M -G3-YE-06	50000 h 2)	50000 h
LF05E -Y1-P 1)	50000 h 2)	50000 h

1) See product remark

2) L70/B50 at T_c 40 °C

Additional product data

Product description	Predecessor EAN	Successor EAN
LFP200M -G3-BL-06	4008321616913	
LFP200M -G3-RE-06	4008321616937	
LFP200M -G3-GR-06	4008321616951	
LFP200M -G3-YE-06	4008321616975	
LF05E -Y1-P 1)		4052899500587

1) See product remark

Capabilities

Product description	Lowest bending radius
LFP200M -G3-BL-06	50 mm
LFP200M -G3-RE-06	50 mm
LFP200M -G3-GR-06	50 mm
LFP200M -G3-YE-06	50 mm
LF05E -Y1-P 1)	20 mm

1) See product remark

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Certificates & standards

Product description	Energy consumption	Standards	Type of protection
LFP200M -G3-BL-06	27 kWh/1000h	CE/EAC/UL Recognized component according UL 8750	IP67
LFP200M -G3-RE-06	40 kWh/1000h	CE/EAC/UL Recognized component according UL 8750	IP67
LFP200M -G3-GR-06	27 kWh/1000h	CE/EAC/UL Recognized component according UL 8750	IP67
LFP200M -G3-YE-06	40 kWh/1000h	CE/EAC/UL Recognized component according UL 8750	IP67
LF05E -Y1-P [1)]		Acc. to EN 60598-1	IP67

[1)] See product remark

Logistical data

Product description	Commodity code
LFP200M -G3-BL-06	940540399000
LFP200M -G3-RE-06	940540399000
LFP200M -G3-GR-06	940540399000
LFP200M -G3-YE-06	940540399000
LF05E -Y1-P [1)]	940540399000

[1)] See product remark

Environmental information

Product description	Date of Declaration	Primary Article Identifier	Candidate List Substance 1
LFP200M -G3-BL-06	30-12-2021	4052899500525	No declarable substances contained
LFP200M -G3-RE-06	30-12-2021	4052899500549	No declarable substances contained
LFP200M -G3-GR-06	30-12-2021	4052899500563	No declarable substances contained
LFP200M -G3-YE-06	30-12-2021	4052899500587	No declarable substances contained
LF05E -Y1-P [1)]	30-12-2021	4008321616975	No declarable substances contained

Product description	CAS No. of substance 1	Declaration No. in SCIP database
LFP200M -G3-BL-06	No CAS	No declarable substances contained

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Product family datasheet

Product description	CAS No. of substance 1	Declaration No. in SCIP database
LFP200M -G3-RE-06	No CAS	No declarable substances contained
LFP200M -G3-GR-06	No CAS	No declarable substances contained
LFP200M -G3-YE-06	No CAS	No declarable substances contained
LF05E -Y1-P [1)]	No CAS	No declarable substances contained

[1)] See product remark

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 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

Equipment / Accessories

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

Application advice

For more detailed application information and graphics please see product datasheet.

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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 reduces the expected lifetime or even destroy the LED module. The temperature of the LED module must be measured at the Tc-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 Tc-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.

Sales and Technical Support

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Sales and Technical Support www.osram.com

Country specific information

Product description	Product code	METEL code	SEG-No.	STK number	UK Org
LF05E -Y1-P	4008321616975	OSRLF05EY1P	-	4031366	-
LF05E -Y1-P	4008321616975	OSRLF05EY1P	-	4031366	-

Download Data

	File
	Brochures Light is freedom of design (EN)
	Certificates UL Certificate
	Declarations of conformity Manufacturers Decalration LFP200M G3
	Declarations of conformity Declaration of Conformity LFP200M G3
	Eulumdat Eulumdat LFP200M-G3-BL-06
	IES data IES LFP200M-G3-BL-06
	Eulumdat Eulumdat LFP200M-G3-RE-06
	IES data IES LFP200M-G3-RE-06
	Eulumdat Eulumdat LFP200M-G3-GR-06
	IES data IES LFP200M-G3-GR-06
	Eulumdat Eulumdat LFP200M-G3-YE-06
	IES data IES LFP200M-G3-YE-06
	Product Datasheet 335840_LINEARlight Flex Protect LF05E-P (EN)
	Declarations of conformity 466011_EC-DoC LF05A-E-P
	Eulumdat 327796_LINEARlight FLEX PROTECT LF05E-Y1-P

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Ecodesign regulation information:

ul>This product is considered to be a "containing product" in the sense of Regulations (EU) 2019/2020 and (EU) 2019/2015.
The contained light source is intended for use in applications requiring high-quality coloured light.
Tolerances of the reported values, are according to LED Modules Performance standard IEC/EN 62717.
In general, the replacement of the contained light sources without permanent damage to the product with the use of common available tools is possible in the final application when they can be dismantled from the installation environment and substituted for the necessary number of light sources restoring its full electrical/mechanical/thermal/optical functionality by means of a professional installer.
In the contrary, and limited to the LINEARlight Flex Diffuse, LINEARlight Rigid Finesse, GINO LED Flex Diffuse and LUMINENT Milky product families, the contained light source is an integrated part of the containing product and its removal can only be done by causing a permanent damage to the containing product due to its tight mechanical, electrical, optical, thermal interaction and/or environmental protection with or from the containing product. Therefore, a replacement of the light source with the use of common available tools is not justified.
Dismantling of light sources from containing products at end of life: Containing products with light sources which are scalable in length can be cut to the length of the contained light source and if applicable mechanically detached from protective and/or optical covers. Containing products shall be separated from building material and/or from other additional mounting accessories by means of a professional installer.
Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899500525	LFP200M -G3-BL-06	Shipping carton box 8	365 mm x 286 mm x 366 mm	38.21 dm^3	7338.00 g
4052899500549	LFP200M -G3-RE-06	Shipping carton box 8	365 mm x 286 mm x 366 mm	38.21 dm^3	7338.00 g
4052899500563	LFP200M -G3-GR-06	Shipping carton box 8	365 mm x 286 mm x 366 mm	38.21 dm^3	7338.00 g
4052899500587	LFP200M -G3-YE-06	Shipping carton box 8	365 mm x 286 mm x 366 mm	38.21 dm^3	7338.00 g
4008321616975	LF05E -Y1-P	Shipping carton box 8	365 mm x 286 mm x 366 mm	38.21 dm^3	8150.00 g

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.

Accessories Optional

Product description	Accessory name	Accessory code
LF05E -Y1-P	LF -2PIN Protect	4062172016513

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LF05E -Y1-P	LF -2CONN Protect	4062172016476
LF05E -Y1-P	LF -ENDCAP Protect	4062172016438
LF05E -Y1-P	LF-CLIP -FIXTURE PROTECT	4008321644749
LF05E -Y1-P	LF-LTS -2100	4008321978981

Disclaimer

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

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