

## PRODUCT DATASHEET

### LF05CA -RGB3-P

LINEARlight Colormix Flex Protect | Flexible colored / color change LED modules



#### Areas of application

- Facade accent lighting
- Effect lighting in architecture
- Edge coupling
- Path lighting
- Suitable for outdoor use

#### Product benefits

- Uniform color changing
- 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

#### Product features

- Flexible and cuttable LED strip with inline multichip RGB LEDs
- RGB: binning on white point (RGB mix)
- Type of protection: IP67



- Dimmable with PWM technology
- Salt mist proof

## TECHNICAL DATA

### Electrical data

Nominal wattage	72 W
Construction wattage	72.00 W
Nominal wattage per meter	18 W
Nominal voltage	24 V
Input voltage range	23...25 V
Reverse Voltage	25 V
Type of current	DC
Nominal current	3000.000 mA

### Photometrical data

Luminous efficacy	24 lm/W
Luminous flux	1740 lm
Luminous flux per meter	435 lm
Color rendering index Ra	> 80
Light color LED	RGB <sup>1)</sup>
Light color (designation)	RGB
Lumen main.fact.at end of nom.life time	0.70
Nominal dominant wavelength	625 nm / 525 nm / 465 nm <sup>2</sup>

<sup>1)</sup> Binning on white (RGB mix)

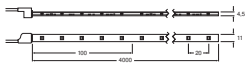
### Light technical data

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	50
Number of LEDs per module	200
Number of LEDs per smallest unit	5

### Dimensions & Weight



Length	4000 mm <sup>1)</sup>
Length – smallest unit	100 mm
Cable length	500.000
Width	11.10 mm
Height	4.80 mm
Cable cross-section, input side	0.34 mm <sup>2</sup>
Conductor cross section	0.34 mm <sup>2</sup>
LED pitch	20,0 mm
Product weight	241.00 g

1) LED pitch 20 mm

Colors & materials

Cover material	Silicone
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Temperatures & operating conditions

Ambient temperature range	-20...+50 °C <sup>1)</sup>
Maximum temperature at tc test point	75 °C
Temperature range in operation	-30...75 °C <sup>2)</sup>
Performance temp. acc. to IEC 62717	40 °C <sup>3)</sup>

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) At the T<sub>c</sub> point  
3) Tp rated. Tp point coincides with Tc point - marked on device

Lifespan

Number of switching cycles	> 15000
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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 <a href="http://www.osram.com/led-systems">www.osram.com/led-systems</a> . / 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
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Capabilities

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




Certificates & Standards



Standards	CE / EAC / UL Recognized component according UL 8750
Type of protection	IP67
Energy consumption	79.20 kWh/1000h
Energy class of contained light source	G

LOGISTICAL DATA

Temperature range at storage	-40...+85 °C
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Accessories Optional

Product image	Product name	EAN
	LF-CLIP -FIXTURE PROTECT	4008321644749
	LF-LTS -2100	4008321978981
	LF -4PIN Protect	4008321977076

Product image	Product name	EAN
	LF -ENDCAP Protect	4008321977106
	LF -4CONN Protect	4008321977090

## 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 (H<sub>2</sub>S) causes accelerated corrosion which leads to shortened lifetime or premature failure. Sources of H<sub>2</sub>S may be rubber, foam rubber, soft-foam tapes, rubber-based sealing, natural sources (e.g. sulfur springs), etc. To avoid H<sub>2</sub>S 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<sub>c</sub>-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<sub>c</sub>-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
	Declarations of conformity	485801_EC-DoC LF05CA-CE-P
	Declarations of conformity	Manufacturer declaration LF05CA/CE-P
Photometric and lighting design files		Document name
	LDT file (Eulumdat)	327871_LINEARlight Colormix Flex Protect LF05CA-RGB3-P
	Light distribution curve type polar	327423_LINEARlight Flex

## LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4008321977205	Folding box 1	353 mm x 39 mm x 349 mm	711.50 g	4.80 dm <sup>3</sup>
4008321977212	Shipping box 8	366 mm x 286 mm x 365 mm	6078.00 g	38.21 dm <sup>3</sup>

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.