

## Linear LED modules 156x28mm DAISY-4X1

A linear solution for premium class indoor lighting. Optimized for LEDi's DAISY-4X1 optics.

### Product description

- Long life-time
- Built-in, constant current LED module
- Re-workable push-in terminals enabling easy connection
- Compliance and approval: CE, ENEC
- 2C - two connectors for series system, also recognized as a high voltage system - non-SELV
- Other CCT and CRI on request



The image shows version 2C. The number and type of connectors may vary depending on the type of module.

### LinLED CRI 80 G3

| Product name                                  | Ordering code  | Colour temperature [K] | Current nominal If nom [mA] | Luminous flux <sup>1</sup> φ [lm] | Useful luminous flux <sup>2</sup> [lm] | Voltage <sup>1</sup> Vf [V] | Power <sup>1</sup> P [W] | Efficacy <sup>1</sup> [lm/W] | Current minimum If min <sup>3</sup> [mA] | Current maximum If max [mA] | Energy Efficiency Class |
|---|----------------|------------------------|-----------------------------|-----------------------------------|--|-----------------------------|--------------------------|------------------------------|--|-----------------------------|-------------------------|
| LinLED 156x28mm 800lm 830 2C 12V DAISY-4X1 G3 | 1010 117 91146 | 3000                   | 400                         | 796                               | 825                                    | 11                          | 4.5                      | 177                          | 40                                       | 600                         | C                       |
| LinLED 156x28mm 800lm 840 2C 12V DAISY-4X1 G3 | 1010 117 91246 | 4000                   | 400                         | 831                               | 860                                    | 11                          | 4.5                      | 185                          | 40                                       | 600                         | C                       |

### LinLED CRI 80 G1

| Product name  | Ordering code  | Colour temperature [K] | Current nominal If nom [mA] | Luminous flux <sup>1</sup> φ [lm] | Useful luminous flux <sup>2</sup> [lm] | Voltage <sup>1</sup> Vf [V] | Power <sup>1</sup> P [W] | Efficacy <sup>1</sup> [lm/W] | Current minimum If min <sup>3</sup> [mA] | Current maximum If max [mA] | Energy Efficiency Class |
|---|----------------|------------------------|-----------------------------|-----------------------------------|--|-----------------------------|--------------------------|------------------------------|--|-----------------------------|-------------------------|
| LinLED 156x28mm 2x200lm 827-865 2x2C 12V DAISY-4X1 G1 | 1010 117 46746 | 2700                   | 110                         | 193                               | 199                                    | 12                          | 1.3                      | 151                          | 10                                       | 150                         | D                       |
|   |                | 6500                   | 110                         | 209                               | 215                                    | 12                          | 1.3                      | 163                          | 10                                       | 150                         |                         |
| LinLED 156x28mm 2x400lm 827-865 2x2C 12V DAISY-4X1 G1 | 1010 117 49846 | 2700                   | 220                         | 386                               | 398                                    | 12                          | 2.6                      | 151                          | 20                                       | 300                         | D                       |
|   |                | 6500                   | 220                         | 418                               | 430                                    | 12                          | 2.6                      | 163                          | 20                                       | 300                         |                         |
| LinLED 156x28mm 800lm 830 2C 12V DAISY-4X1 G1         | 1010 117 49946 | 3000                   | 440                         | 794                               | 819                                    | 12                          | 5.1                      | 155                          | 40                                       | 600                         | D                       |
| LinLED 156x28mm 800lm 840 2C 12V DAISY-4X1 G1         | 1010 117 50046 | 4000                   | 440                         | 835                               | 861                                    | 12                          | 5.1                      | 163                          | 40                                       | 600                         | D                       |

### LinLED CRI 90 G1

| Product name  | Ordering code  | Colour temperature [K] | Current nominal If nom [mA] | Luminous flux <sup>1</sup> φ [lm] | Useful luminous flux <sup>2</sup> [lm] | Voltage <sup>1</sup> Vf [V] | Power <sup>1</sup> P [W] | Efficacy <sup>1</sup> [lm/W] | Current minimum If min <sup>3</sup> [mA] | Current maximum If max [mA] | Energy Efficiency Class |
|---|----------------|------------------------|-----------------------------|-----------------------------------|--|-----------------------------|--------------------------|------------------------------|--|-----------------------------|-------------------------|
| LinLED 156x28mm 2x400lm 927-965 2x2C 12V DAISY-4X1 G1 | 1010 117 65446 | 2700                   | 260                         | 373                               | 386                                    | 12                          | 3.1                      | 119                          | 20                                       | 300                         | E                       |
|   |                | 6500                   | 260                         | 428                               | 444                                    | 12                          | 3.1                      | 137                          | 20                                       | 300                         |                         |
| LinLED 156x28mm 800lm 930 2C 12V DAISY-4X1 G1         | 1010 127 07046 | 3000                   | 485                         | 754                               | 781                                    | 12                          | 5.8                      | 130                          | 40                                       | 600                         | E                       |
| LinLED 156x28mm 800lm 940 2C 12V DAISY-4X1 G1         | 1010 117 75446 | 4000                   | 485                         | 806                               | 835                                    | 12                          | 5.8                      | 139                          | 40                                       | 600                         | E                       |

<sup>1</sup>At nominal current and T<sub>p</sub>

<sup>2</sup>At nominal current and 25°C

<sup>3</sup>It is recommended not to operate below minimum current in order to avoid un-even brightness

Tolerance range for optical and electrical ±10%

### Temperature & humidity

| Specification item                         | Unit | Value       |
|--|------|-------------|
| T <sub>p</sub>                             | [°C] | 45          |
| T <sub>p rated</sub>                       | [°C] | 65          |
| T <sub>c</sub>                             | [°C] | 85          |
| Relative humidity (non-condensing)         | [%]  | 5 ... 85    |
| Storage ambient temperature                | [°C] | -25 ... +85 |
| Storage relative humidity (non-condensing) | [%]  | 5 ... 85    |

T<sub>p</sub> - Temperature related to the performance parameters of the LED modules

T<sub>p rated</sub> - Maximum operating temperature to which the rated performance characteristics are declared

T<sub>c</sub> - Highest permissible value for safe operation

## Linear LED modules 156x28mm DAISY-4X1

### Technical data

| Specification item               | Unit   | Value         |
|----------------------------------|--------|---------------|
| Classification acc. to IEC 62031 |        | built-in      |
| Working voltage                  | [Vdc]  | 120           |
| Beam angle                       | [deg]  | 120           |
| Initial color consistency        | [SDCM] | 3             |
| Photobiological safety           |        | RG1 unlimited |

### Color coordinates

According to CIE 1931

| Specification item | CIE <sub>x</sub> | CIE <sub>y</sub> |
|--------------------|------------------|------------------|
| 2700K              | 0.4578           | 0.4101           |
| 3000K              | 0.4338           | 0.4030           |
| 4000K              | 0.3818           | 0.3797           |
| 6500K              | 0.3123           | 0.3282           |

### Certificates & standards

| Specification item | Compliant    |
|--------------------|--------------|
| ENEC               | Yes          |
| CE                 | Yes          |
| RoHS               | Yes          |
| REACH              | Yes          |
| Zhaga              | No           |
| IP rating          | No IP rating |

### Lumen maintenance

#### LinLED CRI 80

| Forward current | T <sub>p</sub> temp. | L70 [h] |         | L80 [h] |         | L90 [h] |        |
|-----------------|----------------------|---------|---------|---------|---------|---------|--------|
|                 |                      | B50     | B10     | B50     | B10     | B50     | B10    |
| If nom          | 45°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 61 000  | 50 000 |
|                 | 55°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 61 000  | 50 000 |
|                 | 65°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 58 000  | 48 000 |
|                 | 75°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 56 000  | 47 000 |
|                 | 85°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 55 000  | 46 000 |
| If max          | 45°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 51 000  | 39 000 |
|                 | 55°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 51 000  | 39 000 |
|                 | 65°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 48 000  | 37 000 |
|                 | 75°C                 | >72 000 | >72 000 | >72 000 | >72 000 | 45 000  | 35 000 |
|                 | 85°C                 | >72 000 | >72 000 | >72 000 | 69 000  | 43 000  | 34 000 |

reported data based on LM80 LED data (@65mA 17000h / @160mA & 200mA 12000h)

#### LinLED CRI 90

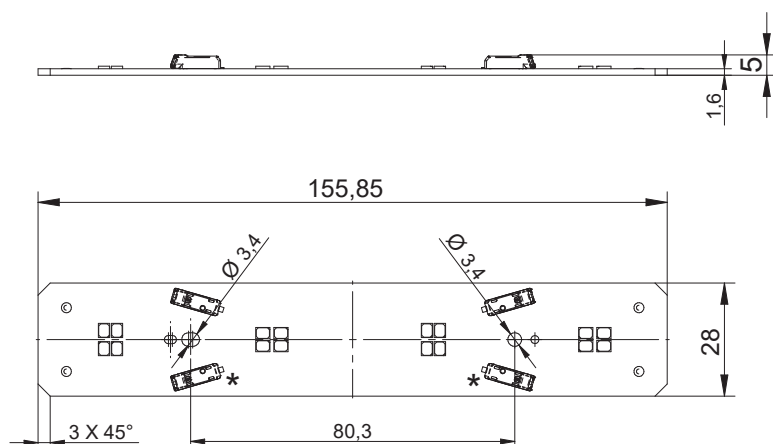
| Forward current | T <sub>p</sub> temp. | L70 [h] |         | L80 [h] |         | L90 [h] |        |
|-----------------|----------------------|---------|---------|---------|---------|---------|--------|
|                 |                      | B50     | B10     | B50     | B10     | B50     | B10    |
| If nom          | 45°C                 | >60 000 | >60 000 | >60 000 | >60 000 | 38 000  | 37 000 |
|                 | 55°C                 | >60 000 | >60 000 | >60 000 | 58 000  | 32 000  | 30 000 |
| If max          | 65°C                 | >60 000 | >60 000 | 52 000  | 48 000  | 26 000  | 24 000 |
|                 | 45°C                 | >60 000 | >60 000 | 52 000  | 49 000  | 29 000  | 28 000 |
|                 | 55°C                 | >60 000 | >60 000 | 47 000  | 44 000  | 25 000  | 24 000 |
|                 | 65°C                 | >60 000 | 58 000  | 41 000  | 38 000  | 22 000  | 19 000 |

reported data based on LM80 LED data (10 000h)

## Linear LED modules 156x28mm DAISY-4X1

### Dimensions

| Product name  | Ordering code  | Connectors (*) |
|---|----------------|----------------|
| LinLED 156x28mm 800lm 830 2C 12V DAISY-4X1 G3         | 1010 117 91146 | No             |
| LinLED 156x28mm 800lm 840 2C 12V DAISY-4X1 G3         | 1010 117 91246 | No             |
| LinLED 156x28mm 2x200lm 827-865 2x2C 12V DAISY-4X1 G1 | 1010 117 46746 | Yes            |
| LinLED 156x28mm 2x400lm 827-865 2x2C 12V DAISY-4X1 G1 | 1010 117 49846 | Yes            |
| LinLED 156x28mm 800lm 830 2C 12V DAISY-4X1 G1         | 1010 117 49946 | No             |
| LinLED 156x28mm 800lm 840 2C 12V DAISY-4X1 G1         | 1010 117 50046 | No             |
| LinLED 156x28mm 2x400lm 927-965 2x2C 12V DAISY-4X1 G1 | 1010 117 65446 | Yes            |
| LinLED 156x28mm 800lm 930 2C 12V DAISY-4X1 G1         | 1010 127 07046 | No             |
| LinLED 156x28mm 800lm 940 2C 12V DAISY-4X1 G1         | 1010 117 75446 | No             |



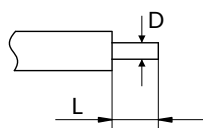
### Mounting

LED Modules cannot be exposed to tensile or compressive stresses. For this purpose it is necessary that the modules are assembled to a flat surface by only rounded head screws. Additionally plastic flat washer should be used to ensure creepage distance between screw's head and surface of the pcb. Max. torque for fixing: 0,5Nm.

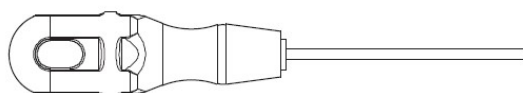
LED modules are sensitive to electrostatic discharge (ESD). Follow safety regulations according to IEC 61340-5-1.

### Wiring

Wire cross section and strip length:



Opening for the release of wires with contact opening tool AVX art. 06-9296-7001-01-000:



| D - wire cross section<br>(solid and flexible wires) | Min                 | Max                |
|--|---------------------|--------------------|
|  | 0.13mm <sup>2</sup> | 0.8mm <sup>2</sup> |
|  | AWG 26              | AWG 18             |

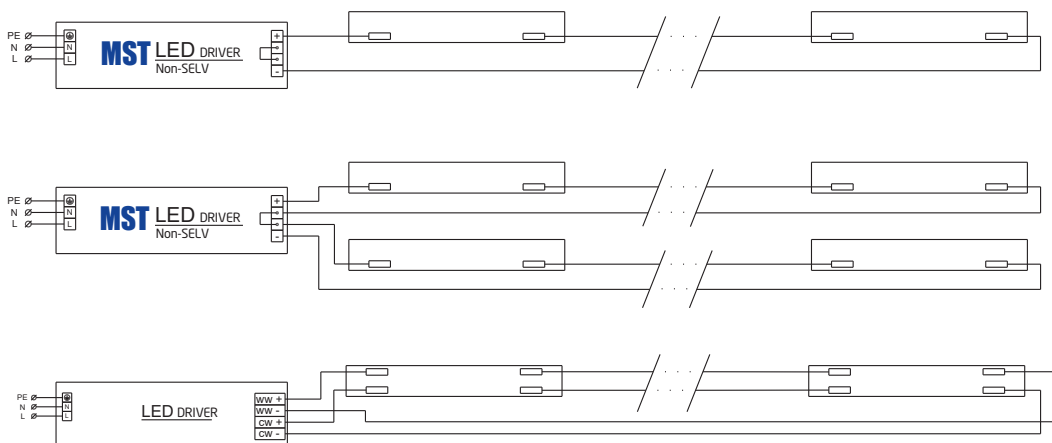
| L - strip length | Min | Max |
|------------------|-----|-----|
|                  | 4mm | 5mm |

## Linear LED modules 156x28mm DAISY-4X1

### Connections

| Max number of modules | Unit  | Series | Parallel |
|-----------------------|-------|--------|----------|
| LinLED 156x28mm...    | [pcs] | 10     | -        |

#### Wiring for series connection system (2C)



### Energy Label / EPREL database

To obtain Energy Label for this product visit <https://eprel.ec.europa.eu/> and enter model identifier

Model identifier consists of 10 digits XXXX XXX XXX. It is printed directly on the LED module or on product label. This is the number you can see in EPREL database.

Ordering code consist of 12 digits XXXX XXX XXX46. Additional last two digits means packaging of the product.

### Ordering codes

| Product name  | Ordering code  | Pieces per box | Pieces per pallet | Box dimensions [mm] |
|---|----------------|----------------|-------------------|---------------------|
| LinLED 156x28mm 800lm 830 2C 12V DAISY-4X1 G3         | 1010 117 91146 | 85             | 20400             | 150 x 266 x 83      |
| LinLED 156x28mm 800lm 840 2C 12V DAISY-4X1 G3         | 1010 117 91246 | 85             | 20400             | 150 x 266 x 83      |
| LinLED 156x28mm 2x200lm 827-865 2x2C 12V DAISY-4X1 G1 | 1010 117 46746 | 85             | 20400             | 150 x 266 x 83      |
| LinLED 156x28mm 2x400lm 827-865 2x2C 12V DAISY-4X1 G1 | 1010 117 49846 | 85             | 20400             | 150 x 266 x 83      |
| LinLED 156x28mm 800lm 830 2C 12V DAISY-4X1 G1         | 1010 117 49946 | 85             | 20400             | 150 x 266 x 83      |
| LinLED 156x28mm 800lm 840 2C 12V DAISY-4X1 G1         | 1010 117 50046 | 85             | 20400             | 150 x 266 x 83      |
| LinLED 156x28mm 2x400lm 927-965 2x2C 12V DAISY-4X1 G1 | 1010 117 65446 | 85             | 20400             | 150 x 266 x 83      |
| LinLED 156x28mm 800lm 930 2C 12V DAISY-4X1 G1         | 1010 127 07046 | 85             | 20400             | 150 x 266 x 83      |
| LinLED 156x28mm 800lm 940 2C 12V DAISY-4X1 G1         | 1010 117 75446 | 85             | 20400             | 150 x 266 x 83      |