

Linear LED modules 1100lm 24V per 1ft 2C

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
- Available CCT from 2200K to 6500K and CRI 80, 90



LinLED CRI 80 Optimum G5

| Product name | Ordering code | Colour temperature [K] | Current nominal If nom [mA] | Luminous flux ¹ φ [lm] | Useful luminous flux ² [lm] | Voltage ¹ Vf [V] | Power ¹ P [W] | Efficacy ¹ [lm/W] | Current minimum If min ² [mA] | Current maximum If max [mA] | Energy Efficiency Class | |
|--|----------------|------------------------|-----------------------------|-----------------------------------|--|-----------------------------|--------------------------|------------------------------|--|-----------------------------|-------------------------|---|
| LinLED 70x20mm 275lm 830 2C 6V Opt G5 | 1010 127 89146 | 3000 | 260 | 266 | 273 | 5.4 | 1.4 | 191 | 40 | 1000 | C | |
| LinLED 140x20mm 550lm 830 2C 12V Opt G5 | 1010 127 89246 | | 260 | 532 | 546 | 11 | 2.8 | 191 | 40 | 1000 | C | |
| LinLED 280x20mm 1100lm 830 2C 24V Opt G5 | 1010 127 89346 | | 260 | 1064 | 1092 | 21 | 5.6 | 191 | 40 | 1000 | C | |
| LinLED 560x20mm 2200lm 830 2C 48V Opt G5 | 1010 127 89446 | | 260 | 2128 | 2183 | 43 | 11 | 191 | 40 | 1000 | C | |
| LinLED 70x20mm 275lm 840 2C 6V Opt G5 | 1010 127 89546 | | 4000 | 260 | 284 | 291 | 5.4 | 1.4 | 204 | 40 | 1000 | B |
| LinLED 140x20mm 550lm 840 2C 12V Opt G5 | 1010 127 89646 | | | 260 | 567 | 582 | 11 | 2.8 | 204 | 40 | 1000 | B |
| LinLED 280x20mm 1100lm 840 2C 24V Opt G5 | 1010 127 89746 | 260 | | 1135 | 1164 | 21 | 5.6 | 204 | 40 | 1000 | B | |
| LinLED 560x20mm 2200lm 840 2C 48V Opt G5 | 1010 127 89846 | 260 | | 2270 | 2329 | 43 | 11 | 204 | 40 | 1000 | B | |

LinLED CRI 80 Optimum G4

| Product name | Ordering code | Colour temperature [K] | Current nominal If nom [mA] | Luminous flux ¹ φ [lm] | Useful luminous flux ² [lm] | Voltage ¹ Vf [V] | Power ¹ P [W] | Efficacy ¹ [lm/W] | Current minimum If min ² [mA] | Current maximum If max [mA] | Energy Efficiency Class | |
|--|----------------|------------------------|-----------------------------|-----------------------------------|--|-----------------------------|--------------------------|------------------------------|--|-----------------------------|-------------------------|---|
| LinLED 70x20mm 275lm 830 2C 6V Opt G4 | 1010 127 96546 | 3000 | 270 | 267 | 274 | 5.4 | 1.5 | 182 | 40 | 1000 | C | |
| LinLED 140x20mm 550lm 830 2C 12V Opt G4 | 1010 127 96646 | | 270 | 534 | 548 | 11 | 2.9 | 182 | 40 | 1000 | C | |
| LinLED 280x20mm 1100lm 830 2C 24V Opt G4 | 1010 127 96746 | | 270 | 1069 | 1096 | 22 | 5.9 | 182 | 40 | 1000 | C | |
| LinLED 560x20mm 2200lm 830 2C 48V Opt G4 | 1010 127 96846 | | 270 | 2137 | 2191 | 44 | 12 | 182 | 40 | 1000 | C | |
| LinLED 70x20mm 275lm 840 2C 6V Opt G4 | 1010 127 96946 | | 4000 | 270 | 286 | 293 | 5.4 | 1.5 | 194 | 40 | 1000 | C |
| LinLED 140x20mm 550lm 840 2C 12V Opt G4 | 1010 127 97046 | | | 270 | 571 | 586 | 11 | 2.9 | 194 | 40 | 1000 | B |
| LinLED 280x20mm 1100lm 840 2C 24V Opt G4 | 1010 127 97146 | 270 | | 1142 | 1171 | 22 | 5.9 | 194 | 40 | 1000 | B | |
| LinLED 560x20mm 2200lm 840 2C 48V Opt G4 | 1010 127 97246 | 270 | | 2284 | 2343 | 44 | 12 | 194 | 40 | 1000 | B | |

LinLED CRI 80 Optimum G3.1

| Product name | Ordering code | Colour temperature [K] | Current nominal If nom [mA] | Luminous flux ¹ φ [lm] | Useful luminous flux ² [lm] | Voltage ¹ Vf [V] | Power ¹ P [W] | Efficacy ¹ [lm/W] | Current minimum If min ² [mA] | Current maximum If max [mA] | Energy Efficiency Class |
|--|----------------|------------------------|-----------------------------|-----------------------------------|--|-----------------------------|--------------------------|------------------------------|--|-----------------------------|-------------------------|
| LinLED 70x20mm 275lm 840 2C 6V Opt G3.1 | 1010 127 79646 | 4000 | 280 | 296 | 300 | 5.5 | 1.5 | 191 | 40 | 600 | C |
| LinLED 140x20mm 550lm 840 2C 12V Opt G3.1 | 1010 127 79746 | | 280 | 592 | 600 | 11 | 3.1 | 191 | 40 | 600 | C |
| LinLED 280x20mm 1100lm 840 2C 24V Opt G3.1 | 1010 127 79846 | | 280 | 1183 | 1199 | 22 | 6.2 | 191 | 40 | 600 | C |
| LinLED 560x20mm 2200lm 840 2C 48V Opt G3.1 | 1010 127 79946 | | 280 | 2366 | 2398 | 44 | 12 | 191 | 40 | 600 | C |

LinLED CRI 90 Optimum G3.1

| Product name | Ordering code | Colour temperature [K] | Current nominal If nom [mA] | Luminous flux ¹ φ [lm] | Useful luminous flux ² [lm] | Voltage ¹ Vf [V] | Power ¹ P [W] | Efficacy ¹ [lm/W] | Current minimum If min ² [mA] | Current maximum If max [mA] | Energy Efficiency Class | |
|--|----------------|------------------------|-----------------------------|-----------------------------------|--|-----------------------------|--------------------------|------------------------------|--|-----------------------------|-------------------------|---|
| LinLED 70x20mm 275lm 930 2C 6V Opt G3.1 | 1010 127 81446 | 3000 | 330 | 284 | 294 | 5.6 | 1.8 | 154 | 40 | 600 | D | |
| LinLED 140x20mm 550lm 930 2C 12V Opt G3.1 | 1010 127 81546 | | 330 | 567 | 588 | 11 | 3.7 | 154 | 40 | 600 | D | |
| LinLED 280x20mm 1100lm 930 2C 24V Opt G3.1 | 1010 127 81646 | | 330 | 1135 | 1176 | 22 | 7.4 | 154 | 40 | 600 | D | |
| LinLED 560x20mm 2200lm 930 2C 48V Opt G3.1 | 1010 127 81746 | | 330 | 2270 | 2352 | 45 | 15 | 154 | 40 | 600 | D | |
| LinLED 70x20mm 275lm 940 2C 6V Opt G3.1 | 1010 127 81846 | | 4000 | 330 | 303 | 314 | 5.6 | 1.8 | 165 | 40 | 600 | C |
| LinLED 140x20mm 550lm 940 2C 12V Opt G3.1 | 1010 127 81946 | | | 330 | 606 | 628 | 11 | 3.7 | 165 | 40 | 600 | D |
| LinLED 280x20mm 1100lm 940 2C 24V Opt G3.1 | 1010 127 82046 | 330 | | 1212 | 1256 | 22 | 7.4 | 165 | 40 | 600 | D | |
| LinLED 560x20mm 2200lm 940 2C 48V Opt G3.1 | 1010 127 82146 | 330 | | 2423 | 2511 | 45 | 15 | 165 | 40 | 600 | D | |

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LinLED CRI 80 Optimum G2

| Product name | Ordering code | Colour temperature [K] | Current nominal If nom [mA] | Luminous flux ¹ φ [lm] | Useful luminous flux ² [lm] | Voltage ¹ Vf [V] | Power ¹ P [W] | Efficacy ¹ [lm/W] | Current minimum If min ³ [mA] | Current maximum If max [mA] | Energy Efficiency Class |
|--|----------------|------------------------|-----------------------------|-----------------------------------|--|-----------------------------|--------------------------|------------------------------|--|-----------------------------|-------------------------|
| LinLED 70x20mm 275lm 830 2C 6V Opt G2 | 1010 127 19946 | 3000 | 280 | 271 | 281 | 5.6 | 1.6 | 175 | 40 | 600 | C |
| LinLED 140x20mm 550lm 830 2C 12V Opt G2 | 1010 117 94046 | | 280 | 543 | 562 | 11 | 3.2 | 172 | 40 | 600 | C |
| LinLED 280x20mm 1100lm 830 2C 24V Opt G2 | 1010 117 44046 | | 280 | 1086 | 1124 | 23 | 6.3 | 172 | 40 | 600 | C |
| LinLED 560x20mm 2200lm 830 2C 48V Opt G2 | 1010 117 44246 | | 280 | 2172 | 2247 | 45 | 13 | 172 | 40 | 600 | C |
| LinLED 70x20mm 275lm 840 2C 6V Opt G2 | 1010 127 20046 | 4000 | 280 | 285 | 295 | 5.6 | 1.6 | 180 | 40 | 600 | C |
| LinLED 140x20mm 550lm 840 2C 12V Opt G2 | 1010 117 94146 | | 280 | 570 | 590 | 11 | 3.2 | 180 | 40 | 600 | C |
| LinLED 280x20mm 1100lm 840 2C 24V Opt G2 | 1010 117 44146 | | 280 | 1141 | 1180 | 23 | 6.3 | 180 | 40 | 600 | C |
| LinLED 560x20mm 2200lm 840 2C 48V Opt G2 | 1010 117 44346 | | 280 | 2281 | 2360 | 45 | 13 | 180 | 40 | 600 | C |

¹At nominal current and T_p

²At nominal current and 25°C

³It 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 _p | [°C] | 45 |
| T _p rated | [°C] | 65 |
| T _c | [°C] | 85 |
| Relative humidity (non-condensing) | [%] | 5 ... 85 |
| Storage ambient temperature | [°C] | -25 ... +85 |
| Storage relative humidity (non-condensing) | [%] | 5 ... 85 |

T_p - Temperature related to the performance parameters of the LED modules

T_p rated - Maximum operating temperature to which the rated performance characteristics are declared

T_c - Highest permissible value for safe operation

Technical data

| Specification item | Unit | Value |
|----------------------------------|--------|---------------|
| Classification acc. to IEC 62031 | | built-in |
| Working voltage | [Vdc] | 350 |
| Beam angle | [deg] | 120 |
| Initial color consistency | [SDCM] | 3 |
| Photobiological safety | | RG1 unlimited |

Color coordinates

According to CIE 1931

| Specification item | CIE _x | CIE _y |
|--------------------|------------------|------------------|
| 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 |
| IP rating | No IP rating |

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Lumen maintenance

LinLED CRI 80

for LinLED G2 & G3.1

| Forward current | Tp temp. | L70 [h] | | L80 [h] | | L90 [h] | |
|-----------------|----------|----------|----------|----------|----------|---------|--------|
| | | B50 | B10 | B50 | B10 | B50 | B10 |
| If nom | 45°C | >100 000 | >100 000 | >100 000 | >100 000 | 68 000 | 57 000 |
| | 55°C | >100 000 | >100 000 | >100 000 | >100 000 | 68 000 | 57 000 |
| | 65°C | >100 000 | >100 000 | >100 000 | >100 000 | 66 000 | 56 000 |
| | 75°C | >100 000 | >100 000 | >100 000 | >100 000 | 64 000 | 55 000 |
| | 85°C | >100 000 | >100 000 | >100 000 | >100 000 | 63 000 | 54 000 |
| If max | 45°C | >100 000 | >100 000 | >100 000 | >100 000 | 51 000 | 39 000 |
| | 55°C | >100 000 | >100 000 | >100 000 | >100 000 | 51 000 | 39 000 |
| | 65°C | >100 000 | >100 000 | >100 000 | >100 000 | 48 000 | 37 000 |
| | 75°C | >100 000 | >100 000 | >100 000 | >100 000 | 45 000 | 35 000 |
| | 85°C | >100 000 | >100 000 | >100 000 | 69 000 | 43 000 | 34 000 |

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

LinLED CRI 80

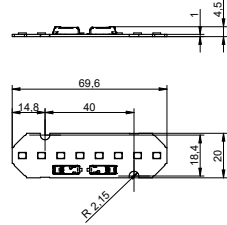
for LinLED CRI 80 Optimum G4 & G5

| Forward current | Tp temp. | L70 [h] | | L80 [h] | | L90 [h] | |
|-----------------|----------|----------|----------|----------|----------|----------|----------|
| | | B50 | B10 | B50 | B10 | B50 | B10 |
| If nom | 45°C | >102 000 | >102 000 | >102 000 | >102 000 | >102 000 | >102 000 |
| | 55°C | >102 000 | >102 000 | >102 000 | >102 000 | >102 000 | >102 000 |
| | 65°C | >102 000 | >102 000 | >102 000 | >102 000 | 87 000 | 86 000 |
| | 75°C | >102 000 | >102 000 | >102 000 | >102 000 | 74 000 | 73 000 |
| | 85°C | >102 000 | >102 000 | >102 000 | >102 000 | 63 000 | 62 000 |
| If max | 45°C | >102 000 | >102 000 | >102 000 | >102 000 | >102 000 | >102 000 |
| | 55°C | >102 000 | >102 000 | >102 000 | >102 000 | 93 000 | 92 000 |
| | 65°C | >102 000 | >102 000 | >102 000 | >102 000 | 79 000 | 78 000 |
| | 75°C | >102 000 | >102 000 | >102 000 | >102 000 | 67 000 | 66 000 |
| | 85°C | >102 000 | >102 000 | >102 000 | >102 000 | 57 000 | 56 000 |

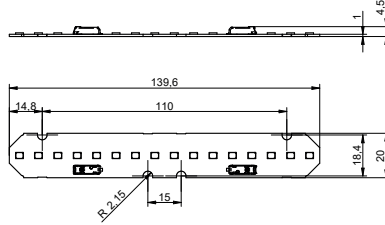
Reported data based on LM80 LED data 12000h

Dimensions

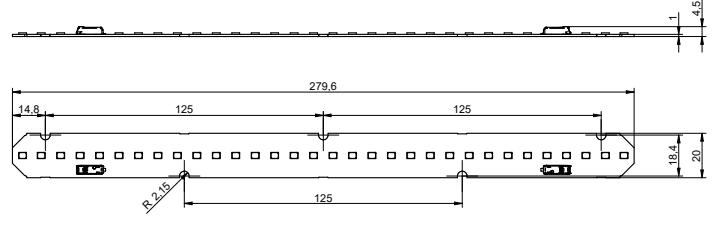
LinLED 70x20mm



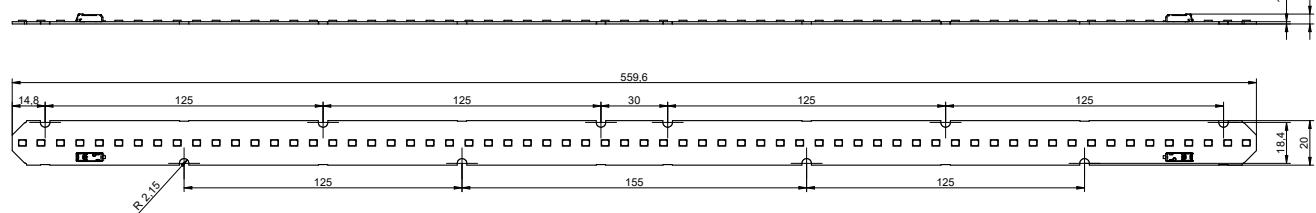
LinLED 140x20mm



LinLED 280x20mm



LinLED 560x20mm



Mounting

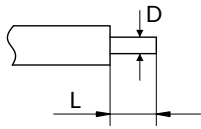
LED Modules cannot be exposed to tensile or compressive stresses. For this purpose it is necessary that the modules are assembled to a flat surface by only rounded head screws. Additionally plastic flat washer should be used to ensure creepage distance between screw's head and surface of the pcb. Max.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

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

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Wiring

Wire cross section and strip length:



| D - wire cross section (solid and flexible wires) | Min | Max |
|--|--------------------|---------------------|
| | 0.2mm ² | 0.75mm ² |
| | AWG 24 | AWG 18 |

| L - strip length | Min | Max |
|------------------|-----|-----|
| | 8mm | 9mm |

Opening for the release of wires from the top with release pin Electroterminal art. 881 167 884:

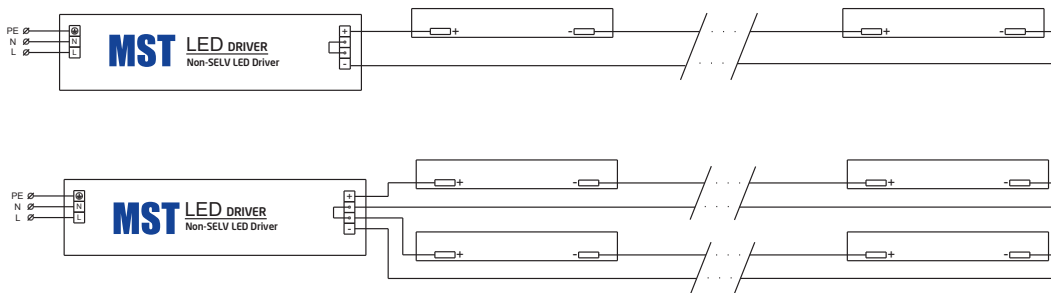


Connections

| Max number of modules | Unit | Series | Parallel |
|-----------------------|-------|--------|----------|
| LinLED 70x20mm | [pcs] | 53 | - |
| LinLED 140x20mm | [pcs] | 27 | - |
| LinLED 280x20mm | [pcs] | 13 | - |
| LinLED 560x20mm | [pcs] | 6 | - |

You can combine different lengths of LED modules so that the maximum length does not exceed 3780mm

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.

Linear LED modules 1100lm 24V per 1ft 2C

Ordering codes

| Product name | Ordering code | Pieces per box | Pieces per pallet | Box dimensions [mm] |
|--|----------------|----------------|-------------------|---------------------|
| LinLED 70x20mm 275lm 830 2C 6V Opt G5 | 1010 127 89146 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 550lm 830 2C 12V Opt G5 | 1010 127 89246 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 830 2C 24V Opt G5 | 1010 127 89346 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 830 2C 48V Opt G5 | 1010 127 89446 | 204 | 12240 | 603 x 266 x 83 |
| LinLED 70x20mm 275lm 840 2C 6V Opt G5 | 1010 127 89546 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 550lm 840 2C 12V Opt G5 | 1010 127 89646 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 840 2C 24V Opt G5 | 1010 127 89746 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 840 2C 48V Opt G5 | 1010 127 89846 | 204 | 12240 | 603 x 266 x 83 |
| LinLED 70x20mm 275lm 830 2C 6V Opt G4 | 1010 127 96546 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 550lm 830 2C 12V Opt G4 | 1010 127 96646 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 830 2C 24V Opt G4 | 1010 127 96746 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 830 2C 48V Opt G4 | 1010 127 96846 | 204 | 12240 | 603 x 266 x 83 |
| LinLED 70x20mm 275lm 840 2C 6V Opt G4 | 1010 127 96946 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 550lm 840 2C 12V Opt G4 | 1010 127 97046 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 840 2C 24V Opt G4 | 1010 127 97146 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 840 2C 48V Opt G4 | 1010 127 97246 | 204 | 12240 | 603 x 266 x 83 |
| LinLED 70x20mm 275lm 840 2C 6V Opt G3.1 | 1010 127 79646 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 550lm 840 2C 12V Opt G3.1 | 1010 127 79746 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 840 2C 24V Opt G3.1 | 1010 127 79846 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 840 2C 48V Opt G3.1 | 1010 127 79946 | 204 | 12240 | 603 x 266 x 83 |
| LinLED 70x20mm 275lm 930 2C 6V Opt G3.1 | 1010 127 81446 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 550lm 930 2C 12V Opt G3.1 | 1010 127 81546 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 930 2C 24V Opt G3.1 | 1010 127 81646 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 930 2C 48V Opt G3.1 | 1010 127 81746 | 204 | 12240 | 603 x 266 x 83 |
| LinLED 70x20mm 275lm 940 2C 6V Opt G3.1 | 1010 127 81846 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 550lm 940 2C 12V Opt G3.1 | 1010 127 81946 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 940 2C 24V Opt G3.1 | 1010 127 82046 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 940 2C 48V Opt G3.1 | 1010 127 82146 | 204 | 12240 | 603 x 266 x 83 |
| LinLED 70x20mm 275lm 830 2C 6V Opt G2 | 1010 127 19946 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 5500lm 830 2C 12V Opt G2 | 1010 117 94046 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 830 2C 24V Opt G2 | 1010 117 44046 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 830 2C 48V Opt G2 | 1010 117 44246 | 204 | 12240 | 603 x 266 x 83 |
| LinLED 70x20mm 275lm 840 2C 6V Opt G2 | 1010 127 20046 | 432 | 103680 | 150 x 266 x 83 |
| LinLED 140x20mm 5500lm 840 2C 12V Opt G2 | 1010 117 94146 | 154 | 29260 | 248 x 175 x 66 |
| LinLED 280x20mm 1100lm 840 2C 24V Opt G2 | 1010 117 44146 | 204 | 24480 | 300 x 266 x 83 |
| LinLED 560x20mm 2200lm 840 2C 48V Opt G2 | 1010 117 44346 | 204 | 12240 | 603 x 266 x 83 |