

## Linear LED modules 550lm/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 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 140x20mm 275lm 830 2C 9V Opt G3	1010 117 83746	3000	175	256	264	8.0	1.4	182	30	600	C
LinLED 280x20mm 550lm 830 2C 18V Opt G3	1010 117 83846		175	511	527	16	2.8	182	30	600	C
LinLED 560x20mm 1100lm 830 2C 36V Opt G3	1010 117 83946		175	1022	1054	32	5.6	182	30	600	C
LinLED 140x20mm 275lm 840 2C 9V Opt G3	1010 117 84046	4000	175	281	290	8.0	1.4	200	30	600	B
LinLED 280x20mm 550lm 840 2C 18V Opt G3	1010 117 84146		175	562	580	16	2.8	200	30	600	B
LinLED 560x20mm 1100lm 840 2C 36V Opt G3	1010 117 84246		175	1124	1159	32	5.6	200	30	600	B
LinLED 560x20mm 1100lm 850 2C 36V Opt G3	1010 127 53246	5000	175	1068	1102	32	5.6	190	30	600	C

### LinLED CRI 80 Optimum G2

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 140x20mm 275lm 830 2C 9V Opt G2	1010 117 31046	3000	185	263	272	8.4	1.6	169	30	450	D
LinLED 280x20mm 550lm 830 2C 18V Opt G2	1010 117 31446		185	526	545	17	3.1	169	30	450	C
LinLED 560x20mm 1100lm 830 2C 36V Opt G2	1010 117 32046		185	1053	1089	34	6.2	169	30	450	C
LinLED 140x20mm 275lm 840 2C 9V Opt G2	1010 117 31146	4000	185	277	286	8.4	1.6	177	30	450	C
LinLED 280x20mm 550lm 840 2C 18V Opt G2	1010 117 31546		185	553	572	17	3.1	177	30	450	C
LinLED 560x20mm 1100lm 840 2C 36V Opt G2	1010 117 32146		185	1106	1144	34	6.2	177	30	450	C

### LinLED CRI 90 Optimum G2

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 140x20mm 275lm 927 2C 9V Opt G2	1010 117 33846	2700	210	241	250	8.5	1.8	135	30	450	E
LinLED 280x20mm 550lm 927 2C 18V Opt G2	1010 117 34746		210	482	499	17	3.6	135	30	450	E
LinLED 560x20mm 1100lm 927 2C 36V Opt G2	1010 117 35046		210	964	999	34	7.1	135	30	450	E
LinLED 140x20mm 275lm 930 2C 9V Opt G2	1010 117 33946	3000	210	259	268	8.5	1.8	145	30	450	D
LinLED 280x20mm 550lm 930 2C 18V Opt G2	1010 117 34846		210	518	536	17	3.6	145	30	450	D
LinLED 560x20mm 1100lm 930 2C 36V Opt G2	1010 117 35146		210	1035	1073	34	7.1	145	30	450	D
LinLED 140x20mm 275lm 940 2C 9V Opt G2	1010 117 34046	4000	210	277	287	8.5	1.8	155	30	450	D
LinLED 280x20mm 550lm 940 2C 18V Opt G2	1010 117 34946		210	553	573	17	3.6	155	30	450	D
LinLED 560x20mm 1100lm 940 2C 36V Opt G2	1010 117 35246		210	1107	1147	34	7.1	155	30	450	D

### LinLED CRI 80 Basic 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 140x20mm 275lm 830 2C 9V Bsc G1	1010 117 36446	3000	210	262	284	8.5	1.8	147	30	450	D
LinLED 280x20mm 550lm 830 2C 18V Bsc G1	1010 117 36846		210	524	568	17	3.6	147	30	450	D
LinLED 560x20mm 1100lm 830 2C 36V Bsc G1	1010 117 37446		210	1048	1137	34	7.1	147	30	450	D
LinLED 140x20mm 275lm 840 2C 9V Bsc G1	1010 117 36546	4000	210	275	300	8.5	1.8	155	30	450	D
LinLED 280x20mm 550lm 840 2C 18V Bsc G1	1010 117 36946		210	551	600	17	3.6	155	30	450	D
LinLED 560x20mm 1100lm 840 2C 36V Bsc G1	1010 117 37546		210	1102	1140	34	7.1	155	30	450	D

<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%

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### Temperature & humidity

Specification item	Unit	Value
Tp	[°C]	45
Tp rated	[°C]	65
Tc	[°C]	85
Relative humidity (non-condensing)	[%]	5 ... 85
Storage ambient temperature	[°C]	-25 ... +85
Storage relative humidity (non-condensing)	[%]	5 ... 85

Tp - Temperature related to the performance parameters of the LED modules  
Tp rated - Maximum operating temperature to which the rated performance characteristics are declared  
Tc - 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 <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	Comply with Book 7
IP rating	No IP rating

### Lumen maintenance

### LinLED CRI 80

for LinLED CRI 80 Optimum G3

Forward current	Tp 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	45 000	41 000
	65°C	>60 000	>60 000	>60 000	>60 000	35 000	30 000
	85°C	>60 000	>60 000	>60 000	>60 000	30 000	25 000

reported data based on LM80 LED data 10 000h)

### LinLED CRI 80

for LinLED CRI 80 Optimum G2 & LinLED CRI 80 Basic G1

Forward current	Tp 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	71 000	61 000
	55°C	>72 000	>72 000	>72 000	>72 000	71 000	61 000
	65°C	>72 000	>72 000	>72 000	>72 000	69 000	60 000
	75°C	>72 000	>72 000	>72 000	>72 000	68 000	59 000
	85°C	>72 000	>72 000	>72 000	>72 000	67 000	58 000
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	>72 000	43 000	34 000

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

### LinLED CRI 90

for LinLED CRI 90 Optimum G2

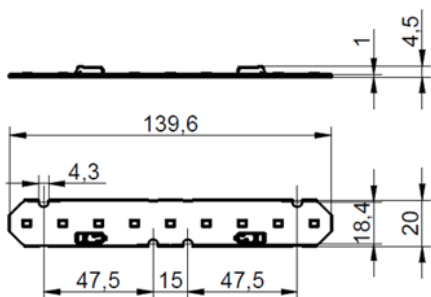
Forward current	Tp temp.	L70 [h]		L80 [h]		L90 [h]	
		B50	B10	B50	B10	B50	B10
If nom	45°C	>60 000	>60 000	>60 000	>60 000	>60 000	>60 000
	55°C	>60 000	>60 000	>60 000	>60 000	55 000	54 000
	65°C	>60 000	>60 000	>60 000	>60 000	43 000	38 000
If max	45°C	>60 000	>60 000	52 000	49 000	29 000	28 000
	55°C	>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

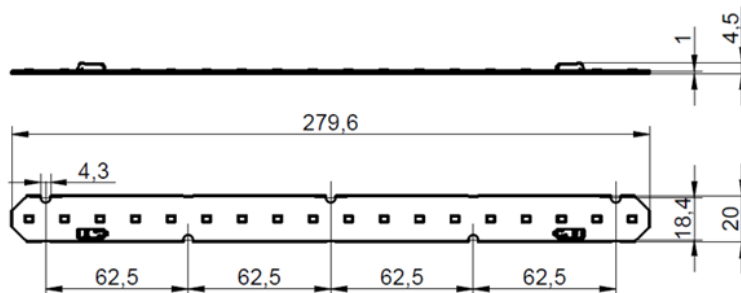
## Linear LED modules 550lm/1ft 2C

### Dimensions

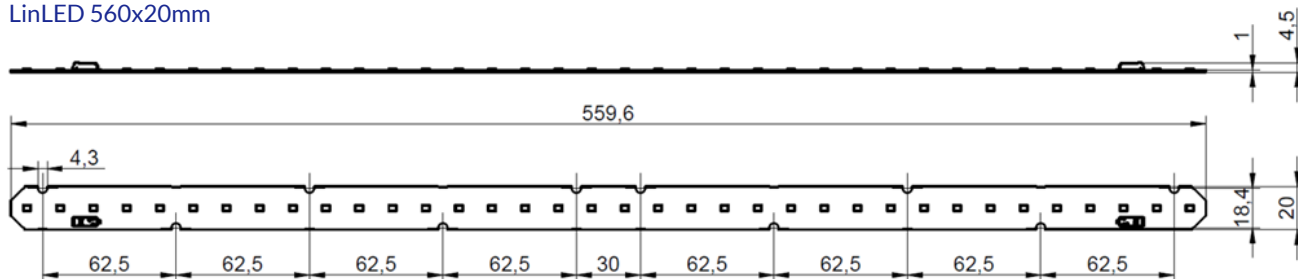
LinLED 140x20mm



LinLED 280x20mm



LinLED 560x20mm



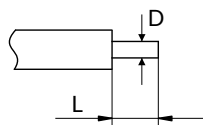
### Mounting

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.

### Wiring

Wire cross section and strip length:



D - wire cross section (solid and flexible wires)	Min	Max
	0.2mm <sup>2</sup>	0.75mm <sup>2</sup>
	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:

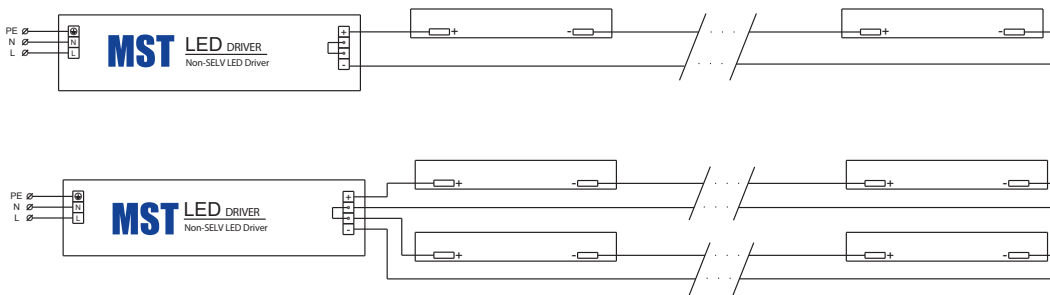


## Linear LED modules 550lm/1ft 2C

### Connections

Max number of modules	Unit	Series	Parallel
LinLED 140x20mm	[pcs]	37	-
LinLED 280x20mm	[pcs]	18	-
LinLED 560x20mm	[pcs]	9	-

#### 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 140x20mm 275lm 830 2C 9V Opt G3	1010 117 83746	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 830 2C 18V Opt G3	1010 117 83846	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 830 2C 36V Opt G3	1010 117 83946	192	11520	603 x 266 x 83
LinLED 140x20mm 275lm 840 2C 9V Opt G3	1010 117 84046	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 840 2C 18V Opt G3	1010 117 84146	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 840 2C 36V Opt G3	1010 117 84246	192	11520	603 x 266 x 83
LinLED 560x20mm 1100lm 850 2C 36V Opt G3	1010 127 53246	192	11520	603 x 266 x 83
LinLED 140x20mm 275lm 830 2C 9V Opt G2	1010 117 31046	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 830 2C 18V Opt G2	1010 117 31446	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 830 2C 36V Opt G2	1010 117 32046	192	11520	603 x 266 x 83
LinLED 140x20mm 275lm 840 2C 9V Opt G2	1010 117 31146	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 840 2C 18V Opt G2	1010 117 31546	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 840 2C 36V Opt G2	1010 117 32146	192	11520	603 x 266 x 83
LinLED 140x20mm 275lm 927 2C 9V Opt G2	1010 117 33846	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 927 2C 18V Opt G2	1010 117 34746	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 927 2C 36V Opt G2	1010 117 35046	192	11520	603 x 266 x 83
LinLED 140x20mm 275lm 930 2C 9V Opt G2	1010 117 33946	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 930 2C 18V Opt G2	1010 117 34846	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 930 2C 36V Opt G2	1010 117 35146	192	11520	603 x 266 x 83
LinLED 140x20mm 275lm 940 2C 9V Opt G2	1010 117 34046	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 940 2C 18V Opt G2	1010 117 34946	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 940 2C 36V Opt G2	1010 117 35246	192	11520	603 x 266 x 83
LinLED 140x20mm 275lm 830 2C 9V Bsc G1	1010 117 36446	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 830 2C 18V Bsc G1	1010 117 36846	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 830 2C 36V Bsc G1	1010 117 37446	192	11520	603 x 266 x 83
LinLED 140x20mm 275lm 840 2C 9V Bsc G1	1010 117 36546	132	30096	248 x 175 x 66
LinLED 280x20mm 550lm 840 2C 18V Bsc G1	1010 117 36946	192	23040	300 x 266 x 83
LinLED 560x20mm 1100lm 840 2C 36V Bsc G1	1010 117 37546	192	11520	603 x 266 x 83