

## Linear LED modules 3-Row

A linear solution for premium class indoor lighting. Optimized for LEDiL's FLORENCE-3R-IP, FLORENCE2-3R optics.

### Product description

- Long life-time
- Built-in, constant current LED module
- Re-workable push-in terminals enabling easy connection
- Compliance and approval: CE
- Available CCT from 2700K to 6500K and CRI 70, 80, 90



### 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 280x55mm 1100lm 830 3x11 33V Opt G2	1010 117 82246	3000	195	1090	1129	30	5.9	184	30	450	C
LinLED 280x55mm 1100lm 840 3x11 33V Opt G2	1010 117 82346	4000	195	1137	1178	30	5.9	192	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 280x55mm 1100lm 927 3x11 33V Opt G2	1010 127 08446	2700	225	1032	1069	31	6.9	150	30	450	D
LinLED 280x55mm 1100lm 930 3x11 33V Opt G2	1010 127 08546	3000	225	1068	1107	31	6.9	156	30	450	D
LinLED 280x55mm 1100lm 940 3x11 33V Opt G2	1010 127 08646	4000	225	1141	1182	31	6.9	166	30	450	D

### LinLED CRI 80 Optimum 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 280x55mm 2000lm 830 3x11 33V Opt G1	1010 117 54846	3000	350	1890	1928	31	11	172	30	1050	C
LinLED 566x55mm 4000lm 830 3x22 66V Opt G1	1010 117 73546		350	3779	3856	63	22	172	30	1050	C
LinLED 566x55mm 4000lm 830 3x22 33V Opt G1	1010 117 73346		700	3779	3856	31	22	172	60	2100	C
LinLED 280x55mm 2000lm 840 3x11 33V Opt G1	1010 117 54946	4000	350	2001	2041	31	11	182	30	1050	C
LinLED 566x55mm 4000lm 840 3x22 66V Opt G1	1010 117 73646		350	4002	4083	63	22	182	30	1050	C
LinLED 566x55mm 4000lm 840 3x22 33V Opt G1	1010 117 73446		700	4002	4083	31	22	182	60	2100	C

### LinLED CRI 90 Optimum 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 280x55mm 2000lm 930 3x11 33V Opt G1	1010 117 95646	3000	450	1914	1972	32	14	134	30	1050	E
LinLED 280x55mm 2000lm 940 3x11 33V Opt G1	1010 117 90346	4000	450	2053	2115	32	14	144	30	1050	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%

### Temperature & humidity

Specification item	Unit	Value
T <sub>p</sub>	[°C]	45
T <sub>p</sub> rated	[°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</sub> rated - Maximum operating temperature to which the rated performance characteristics are declared

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

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### Technical data

Specification item	Unit	Value
Classification acc. to IEC 62031		built-in
Working voltage	[Vdc]	350
Beam angle	[deg]	120
Initial color coordinates		Acc. to CIE 1931
Photobiological safety		RG1 unlimited

### Color coordinates

According to CIE 1931

Specification item	CIEx	CIEy
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	No
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 G2

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	72 000	62 000
	55°C	>102 000	>102 000	>102 000	>102 000	72 000	62 000
	65°C	>102 000	>102 000	>102 000	>102 000	70 000	61 000
	75°C	>102 000	>102 000	>102 000	>102 000	69 000	60 000
	85°C	>102 000	>102 000	>102 000	>102 000	68 000	60 000
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 80

for LinLED CRI 80 Optimum G1

Forward current	Tp temp.	L70 [h]		L80 [h]		L90 [h]	
		B50	B10	B50	B10	B50	B10
If nom	45°C	>54 000	>54 000	>54 000	>54 000	>54 000	>54 000
	55°C	>54 000	>54 000	>54 000	>54 000	>54 000	>54 000
	65°C	>54 000	>54 000	>54 000	>54 000	>54 000	>54 000
If max	45°C	>54 000	>54 000	>54 000	>54 000	>54 000	50 000
	55°C	>54 000	>54 000	>54 000	>54 000	>54 000	45 000
	65°C	>54 000	>54 000	>54 000	>54 000	52 000	42 000

reported data based on LM80 LED data 9 000h

### LinLED CRI 80

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	>72 000	>72 000	>72 000	>72 000	70 000	59 000
	55°C	>72 000	>72 000	>72 000	>72 000	70 000	59 000
	65°C	>72 000	>72 000	>72 000	>72 000	68 000	58 000
	75°C	>72 000	>72 000	>72 000	>72 000	66 000	57 000
	85°C	>72 000	>72 000	>72 000	>72 000	65 000	57 000
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

for LinLED CRI 90 Optimum G1

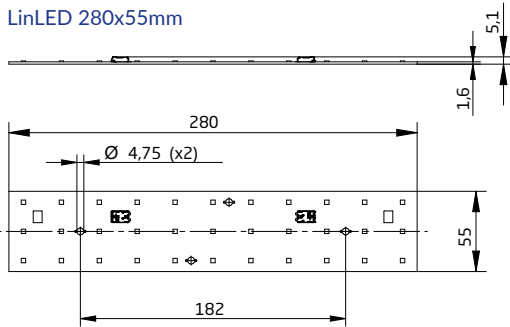
Forward current	Tp temp.	L70 [h]		L80 [h]		L90 [h]	
		B50	B10	B50	B10	B50	B10
If nom	45°C	>54 000	>54 000	>54 000	>54 000	>54 000	>54 000
	55°C	>54 000	>54 000	>54 000	>54 000	>54 000	>54 000
	65°C	>54 000	>54 000	>54 000	>54 000	>54 000	>54 000
If max	45°C	>54 000	>54 000	>54 000	>54 000	>54 000	50 000
	55°C	>54 000	>54 000	>54 000	>54 000	>54 000	45 000
	65°C	>54 000	>54 000	>54 000	>54 000	52 000	42 000

reported data based on LM80 LED data 9 000h

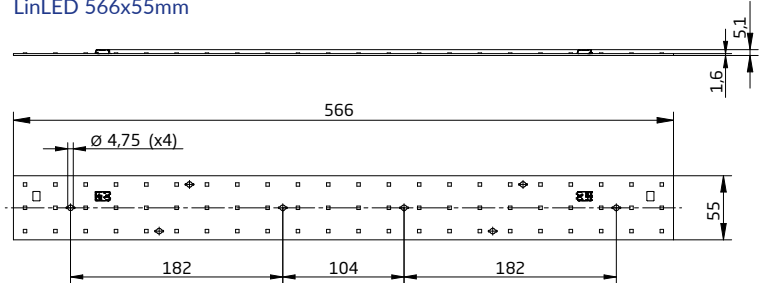
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### Dimensions

LinLED 280x55mm



LinLED 566x55mm



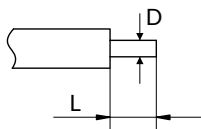
### Mounting

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

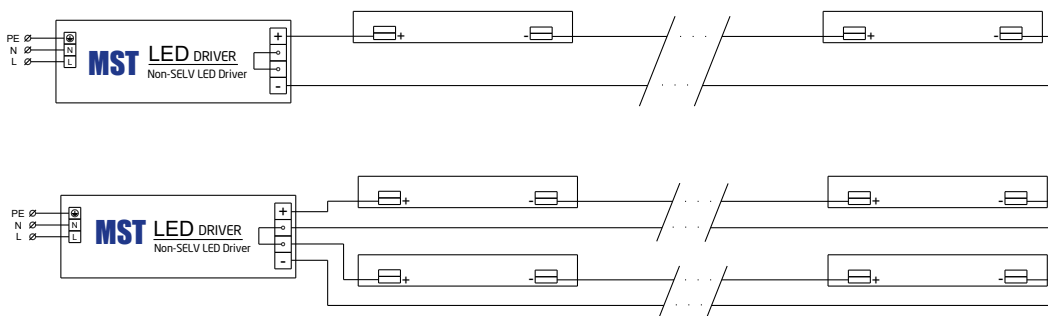
Opening for the release of wires from the top with release pin Electroterminal art. 881 167 884:



### Connections

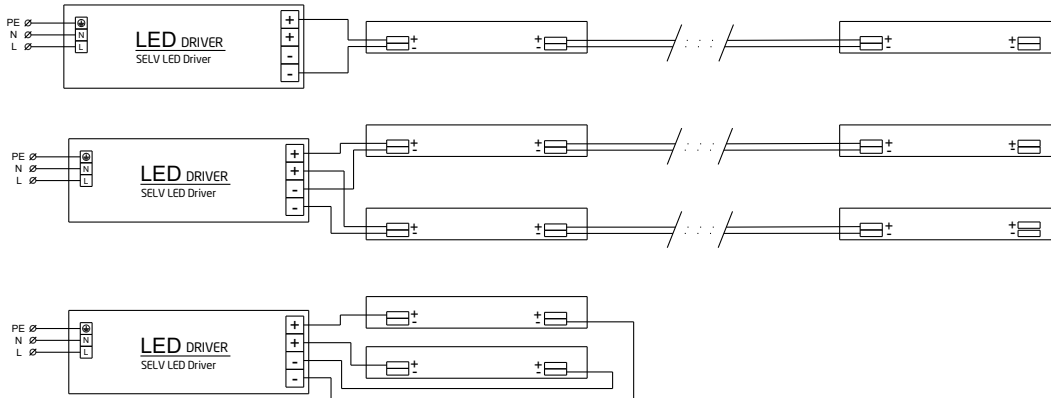
Max number of modules	Unit	Series	Parallel
LinLED 280x55mm ... 33V ...	[pcs]	10	6
LinLED 566x55mm ... 66V ...	[pcs]	5	3
LinLED 566x55mm ... 33V ...	[pcs]	5	3

### Wiring for series connection system



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### Wiring for parallel connection system



To prevent irregular luminous intensity in parallel connection use only LED modules from the same V-code group. V-code (e.g. "A", "B", "AB") is printed on the LED module and box label. Naming is not adequate to efficacy or luminous flux.

### 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.

### 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.

### Ordering codes

Product name	Ordering code	Pieces per box	Pieces per pallet	Box dimensions [mm]
LinLED 280x55mm 1100lm 830 3x11 33V Opt G2	1010 117 82246	60	6480	298 x 238 x 88
LinLED 280x55mm 1100lm 840 3x11 33V Opt G2	1010 117 82346	60	6480	298 x 238 x 88
LinLED 280x55mm 1100lm 927 3x11 33V Opt G2	1010 127 08446	60	6480	298 x 238 x 88
LinLED 280x55mm 1100lm 930 3x11 33V Opt G2	1010 127 08546	60	6480	298 x 238 x 88
LinLED 280x55mm 1100lm 940 3x11 33V Opt G2	1010 127 08646	60	6480	298 x 238 x 88
LinLED 280x55mm 2000lm 830 3x11 33V Opt G1	1010 117 54846	60	6480	298 x 238 x 88
LinLED 566x55mm 4000lm 830 3x22 66V Opt G1	1010 117 73546	50	2000	594 x 303 x 58
LinLED 566x55mm 4000lm 830 3x22 33V Opt G1	1010 117 73346	50	2000	594 x 303 x 58
LinLED 280x55mm 2000lm 840 3x11 33V Opt G1	1010 117 54946	60	6480	298 x 238 x 88
LinLED 566x55mm 4000lm 840 3x22 66V Opt G1	1010 117 73646	50	2000	594 x 303 x 58
LinLED 566x55mm 4000lm 840 3x22 33V Opt G1	1010 117 73446	50	2000	594 x 303 x 58
LinLED 280x55mm 2000lm 930 3x11 33V Opt G1	1010 117 95646	60	6480	298 x 238 x 88
LinLED 280x55mm 2000lm 940 3x11 33V Opt G1	1010 117 90346	60	6480	298 x 238 x 88