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MST Sp. z o.o. Sp. k.
Chrobrego 8, 11-400 Kętrzyn, Poland
www.mst.pl

Linear LED modules Tunable White

Product description

- Long life-time
- Built-in, constant current LED module
- Re-workable push-in terminals enabling easy connection
- Compliance and approval: CE
- 4C - four connectors for parallel system, also recognized as a low voltage system - SELV
- Available CCT from 2700K to 6500K and CRI 80, 90

LinLED CRI 80 Optimum G1

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 280x24mm 2x1000lm 827-865 2x4C 42V Opt G1	1010 117 89046	2700	150	986	1020	40	6.0	165	20	300	C
		6500	150	1066	1103	40	6.0	179	20	300	
LinLED 560x24mm 2x2000lm 827-865 2x4C 42V Opt G1	1010 117 89146	2700	300	1971	2040	40	12	165	40	600	C
		6500	300	2132	2206	40	12	179	40	600	

LinLED CRI 90 Optimum G1

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 280x24mm 2x1000lm 927-965 2x4C 42V Opt G1	1010 127 13946	2700	200	1040	1078	42	8.3	125	20	300	E
		6500	200	1194	1238	42	8.3	144	20	300	
LinLED 560x24mm 2x2000lm 927-965 2x4C 42V Opt G1	1010 127 14046	2700	400	2081	2157	42	17	125	40	600	E
		6500	400	2389	2476	42	17	144	40	600	

[1]At nominal current and Tp
[2]At nominal current and 25°C
[3]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
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-condesing)	[%]	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]	60
Beam angle	[deg]	120
Initial color consistency	[SDCM]	3
Photobiological safety		RG1 unlimited

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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 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	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

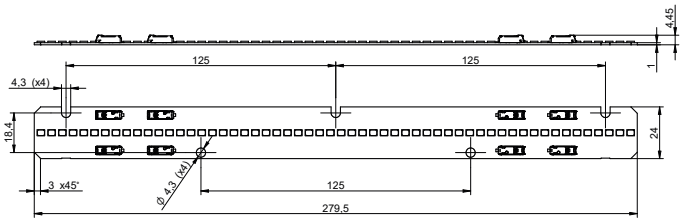
for LinLED CRI 90 Optimum G1

Forward current	Tp temp.	L70 [h]		L80 [h]		L90 [h]	
		B50	B10	B50	B10	B50	B10
If nom	45°C	>60 000	>60 000	>60 000	>60 000	52 000	50 000
	55°C	>60 000	>60 000	>60 000	>60 000	42 000	41 000
	65°C	>60 000	>60 000	>60 000	>60 000	34 000	30 000
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

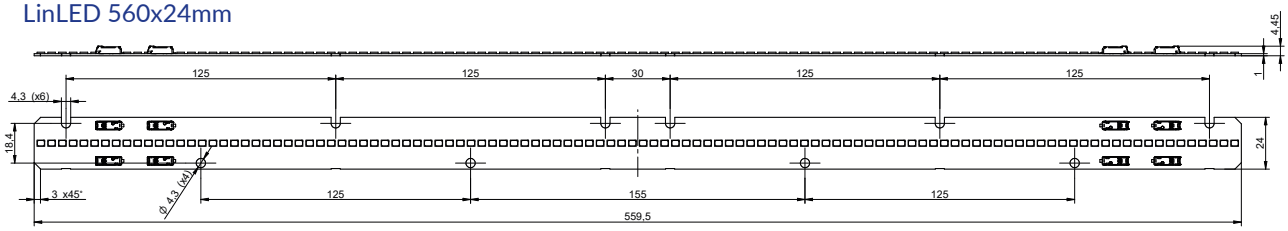
reported data based on LM80 LED data 10 000h

Dimensions

LinLED 280x24mm



LinLED 560x24mm



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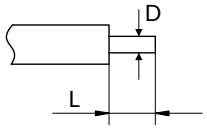
Mounting

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 creepeage 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
	0.2mm²	0.75mm²
	AWG 24	AWG 18

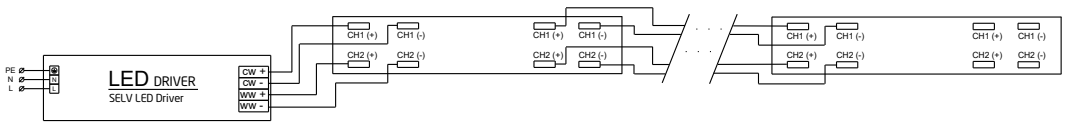
L - strip length	Min	Max
	8mm	9mm

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 280x24mm...	[pcs]	-	4
LinLED 560x24mm...	[pcs]	-	2

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.

Ordering codes

Product name	Ordering code	Pieces per box	Pieces per pallet	Box dimensions [mm]
LinLED 280x24mm 2x1000lm 827-865 2x4C 42V Opt G1	1010 117 89046	135	14580	298 x 238 x 88
LinLED 560x24mm 2x2000lm 827-865 2x4C 42V Opt G1	1010 117 89146	132	5280	594 x 303 x 58
LinLED 280x24mm 2x1000lm 927-965 2x4C 42V Opt G1	1010 127 13946	135	14580	298 x 238 x 88
LinLED 560x24mm 2x2000lm 927-965 2x4C 42V Opt G1	1010 127 14046	132	5280	594 x 303 x 58