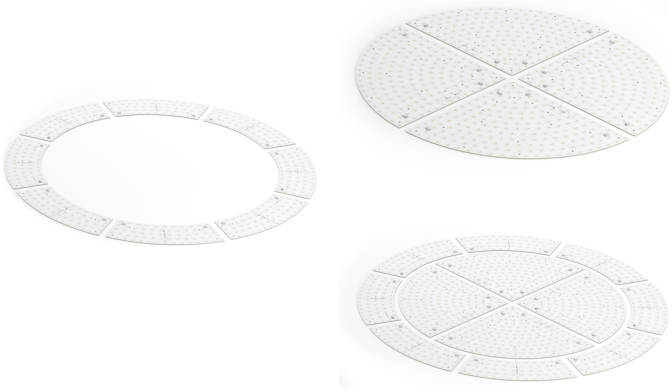
MST Your solutions

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

Round LED modules 1/4 800mm & Ring 1/8 820-1080mm

Product description

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



RdLED 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
RdLED 1/4 800mm 3000lm 830 33V Opt G2	1010 117 87846	3000	540	2893	2984	29	16	185	160	2500	C
RdLED 1/4 800mm 3000lm 840 33V Opt G2	1010 117 87946	4000	540	3134	3232	29	16	200	160	2500	B

RdLED CRI 80 Optimum

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
RdLED 1/4 800mm 3000lm 830 33V Optimum	1010 117 23246	3000	560	2885	3152	30	17	170	160	2560	C
RdLED Ring 1/8 820-1080mm 1100lm 830 24V Optimum	1010 117 23446		280	1049	1146	22	6.2	170	80	1280	C
RdLED 1/4 800mm 3000lm 840 33V Optimum	1010 117 23346	4000	560	3032	3311	30	17	178	160	2560	C
RdLED Ring 1/8 820-1080mm 1100lm 840 24V Optimum	1010 117 23546		280	1103	1204	22	6.2	178	80	1280	C

RdLED CRI 90 Optimum

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
RdLED 1/4 800mm 3000lm 930 33V Optimum	1010 117 46446	3000	600	2831	2964	30	18	157	160	2400	D
RdLED Ring 1/8 820-1080mm 1100lm 930 24V Optimum	1010 127 07146		300	1040	1078	22	6.6	158	80	1200	D
RdLED 1/4 800mm 3000lm 940 33V Optimum	1010 117 30946	4000	600	3027	3169	30	18	167	160	2400	C
RdLED Ring 1/8 820-1080mm 1100lm 940 24V Optimum	1010 127 07246		300	1112	1152	22	6.6	169	80	1200	C

[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

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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 consistency	[SDCM]	3
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	Yes
CE	Yes
RoHS	Yes
REACH	Yes
Zhaga	No
IP rating	No IP rating

Lumen maintenance

RdLED CRI 80

only for RdLED CRI 80 Optimum

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	80 000	70 000
	55°C	>102 000	>102 000	>102 000	>102 000	80 000	70 000
	65°C	>102 000	>102 000	>102 000	>102 000	78 000	70 000
	75°C	>102 000	>102 000	>102 000	>102 000	78 000	69 000
	85°C	>102 000	>102 000	>102 000	>102 000	77 000	69 000
If max	45°C	>72 000	>72 000	>72 000	>72 000	48 000	36 000
	55°C	>72 000	>72 000	>72 000	>72 000	48 000	36 000
	65°C	>72 000	>72 000	>72 000	>72 000	48 000	36 000
	75°C	>72 000	>72 000	>72 000	69 000	45 000	33 000
	85°C	>72 000	>72 000	>72 000	67 000	42 000	33 000

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

RdLED CRI 80

only for RdLED CRI 80 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	46 000	44 000
	65°C	>60 000	>60 000	>60 000	>60 000	36 000	31 000
	85°C	>60 000	>60 000	>60 000	>60 000	31 000	25 000

reported data based on LM80 LED data 10 000h

RdLED CRI 90

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
	65°C	>60 000	>60 000	>60 000	>60 000	>60 000	>60 000
	85°C	>60 000	>60 000	>60 000	>60 000	49 000	43 000
If max	45°C	>60 000	>60 000	52 000	49 000	29 000	28 000
	65°C	>60 000	>60 000	47 000	44 000	25 000	24 000
	85°C	>60 000	58 000	41 000	38 000	22 000	19 000

reported data based on LM80 LED data 10 000h

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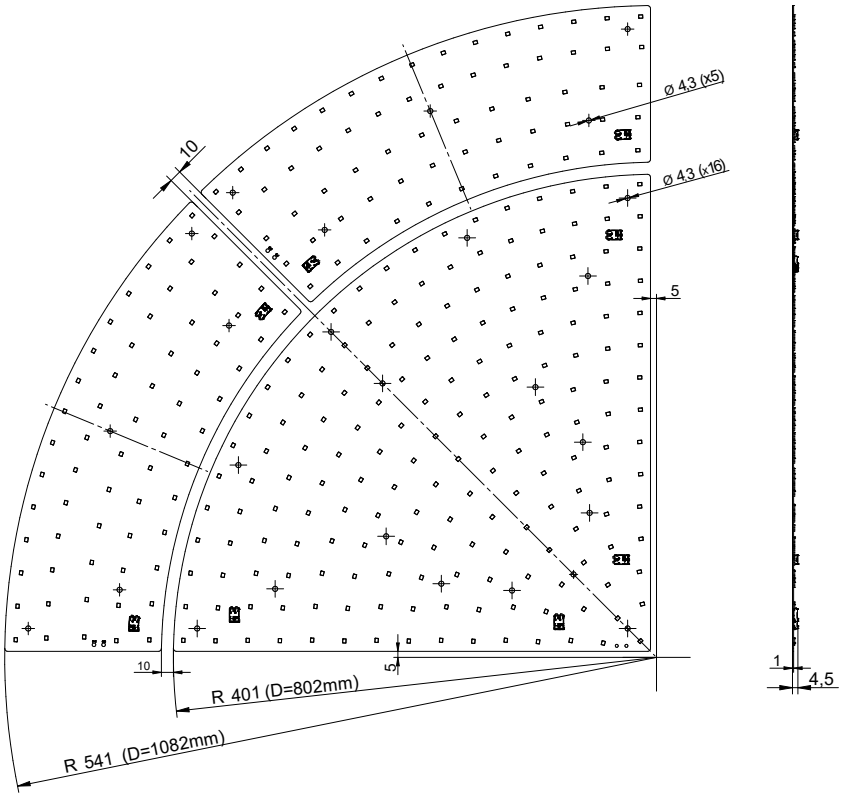
Dimensions



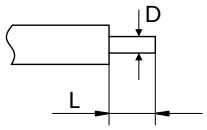
Mounting

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:

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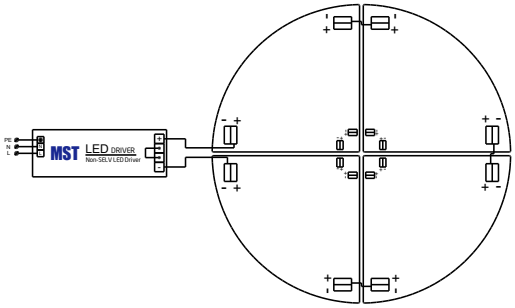
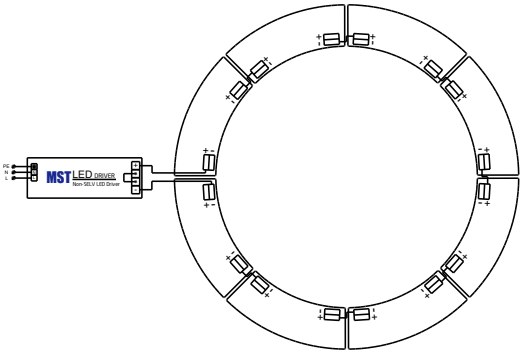
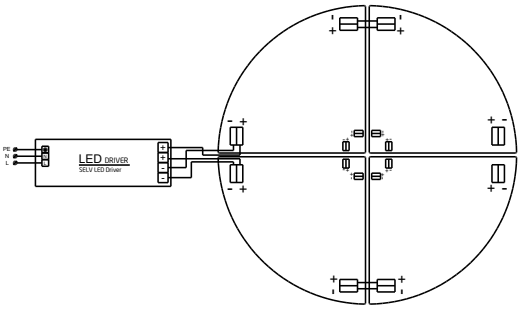
Connections

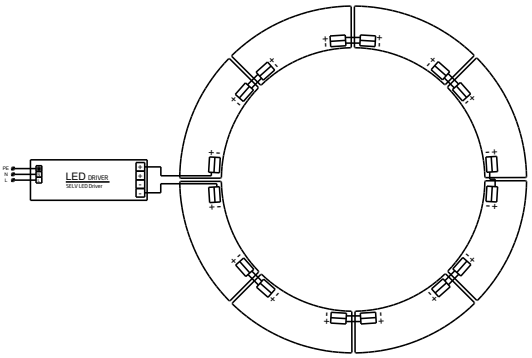
Wiring for series connection system





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]
RdLED 1/4 800mm 3000lm 830 33V Opt G2	1010 117 87846	12	336	413 x 413 x 58
RdLED 1/4 800mm 3000lm 840 33V Opt G2	1010 117 87946	12	336	413 x 413 x 58
RdLED 1/4 800mm 3000lm 830 33V Optimum	1010 117 23246	12	336	413 x 413 x 58
RdLED Ring 1/8 820-1080mm 1100lm 830 24V Optimum	1010 117 23446	24	672	413 x 413 x 58
RdLED 1/4 800mm 3000lm 840 33V Optimum	1010 117 23346	12	336	413 x 413 x 58
RdLED Ring 1/8 820-1080mm 1100lm 840 24V Optimum	1010 117 23546	24	672	413 x 413 x 58
RdLED 1/4 800mm 3000lm 930 33V Optimum	1010 117 46446	12	336	413 x 413 x 58
RdLED Ring 1/8 820-1080mm 1100lm 930 24V Optimum	1010 127 07146	24	672	413 x 413 x 58
RdLED 1/4 800mm 3000lm 940 33V Optimum	1010 117 30946	12	336	413 x 413 x 58
RdLED Ring 1/8 820-1080mm 1100lm 940 24V Optimum	1010 127 07246	24	672	413 x 413 x 58