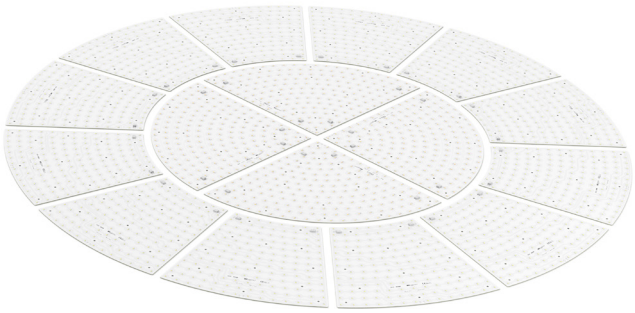
MST Your solutions

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

Round LED modules 1/4 800mm & 1/12 RING 820-1500mm

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 CJ 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[3] [mA]	Current maximum If max [mA]	Energy Efficiency Class
RdLED 1/4 800mm 3000lm 830 33V CJ G4	1010 147 88446	3000	530	3032	3109	29	15	197	160	3200	B
RdLED 1/12 RING 820-1500mm 2500lm 830 27V CJ G4	1010 147 88846		530	2480	2544	24	13	197	160	3200	C
RdLED 1/4 800mm 3000lm 840 33V CJ G4	1010 147 88546	4000	530	3153	3233	29	15	205	160	3200	B
RdLED 1/12 RING 820-1500mm 2500lm 840 27V CJ G4	1010 147 88946		530	2580	2646	24	13	205	160	3200	B

RdLED CRI 80 CN G3

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 2x3000lm 827-865 33V CN G3	1010 137 81646	2700	550	2885	2985	29	16	180	160	2400	C
		6500	550	3130	3239	29	16	195	160	2400	
RdLED 1/12 RING 820-1500mm 2x2500lm 827-865 27V CN G3	1010 137 81746	2700	550	2360	2443	24	13	180	160	2400	C
		6500	550	2561	2650	24	13	195	160	2400	
RdLED 1/4 800mm 3000lm 830 33V CN G3	1010 147 87846	3000	550	3007	3112	29	16	188	160	2400	C
RdLED 1/12 RING 820-1500mm 2500lm 830 27V CN G3	1010 147 88246		550	2461	2546	24	13	188	160	2400	C
RdLED 1/4 800mm 3000lm 840 33V CN G3	1010 147 87946	4000	550	3173	3283	29	16	198	160	2400	B
RdLED 1/12 RING 820-1500mm 2500lm 840 27V CN G3	1010 147 88346		550	2596	2686	24	13	198	160	2400	B

RdLED CRI 90 EH1.1 G3

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 927 33V EH1.1 G3	1010 127 12146	2700	560	2949	3038	30	17	174	160	2400	C
RdLED 1/12 RING 820-1500mm 2500lm 927 27V EH1.1 G3	1010 137 58646		560	2413	2486	25	14	174	160	2400	C
RdLED 1/4 800mm 3000lm 930 33V EH1.1 G3	1010 117 46446	3000	560	2949	3038	30	17	174	160	2400	C
RdLED 1/12 RING 820-1500mm 2500lm 930 27V EH1.1 G3	1010 137 52946		560	2413	2486	25	14	174	160	2400	C
RdLED 1/4 800mm 3000lm 940 33V EH1.1 G3	1010 117 30946	4000	560	3133	3228	30	17	185	160	2400	C
RdLED 1/12 RING 820-1500mm 2500lm 940 27V EH1.1 G3	1010 147 87746		560	2563	2641	25	14	185	160	2400	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%

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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-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	RdLED 1/4 800mm	RdLED 1/12 RING 820-1500mm
Classification acc. to IEC 62031		built-in	built-in
Working voltage	[Vdc]	400	350
Beam angle	[deg]	120	120
Initial color consistency	[SDCM]	3	3
Photobiological safety		RG1 unlimited	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
IP rating	No IP rating

Lumen maintenance

for LE G5, LG G2, LA G3

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	>100 000	>100 000
	55°C	>100 000	>100 000	>100 000	>100 000	>100 000	>100 000
	65°C	>100 000	>100 000	>100 000	>100 000	>100 000	>100 000
	75°C	>100 000	>100 000	>100 000	>100 000	>100 000	98 000
	85°C	>100 000	>100 000	>100 000	>100 000	81 000	73 000
If max	45°C	>100 000	>100 000	92 000	87 000	45 000	42 000
	55°C	>100 000	>100 000	92 000	87 000	45 000	42 000
	65°C	>100 000	>100 000	92 000	87 000	45 000	42 000
	75°C	>100 000	>100 000	92 000	87 000	45 000	42 000
	85°C	>100 000	>100 000	92 000	87 000	45 000	42 000

Calculated data based on LM80 LED data (12 000h)

for CJ G4, CN G3

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	89 000	88 000
	75°C	>102 000	>102 000	>102 000	>102 000	75 000	74 000
	85°C	>102 000	>102 000	>102 000	>102 000	64 000	63 000
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	97 000	96 000
	65°C	>102 000	>102 000	>102 000	>102 000	82 000	81 000
	75°C	>102 000	>102 000	>102 000	>102 000	69 000	68 000
	85°C	>102 000	>102 000	>102 000	>102 000	59 000	58 000

Reported data based on LM80 LED data (17 000h)

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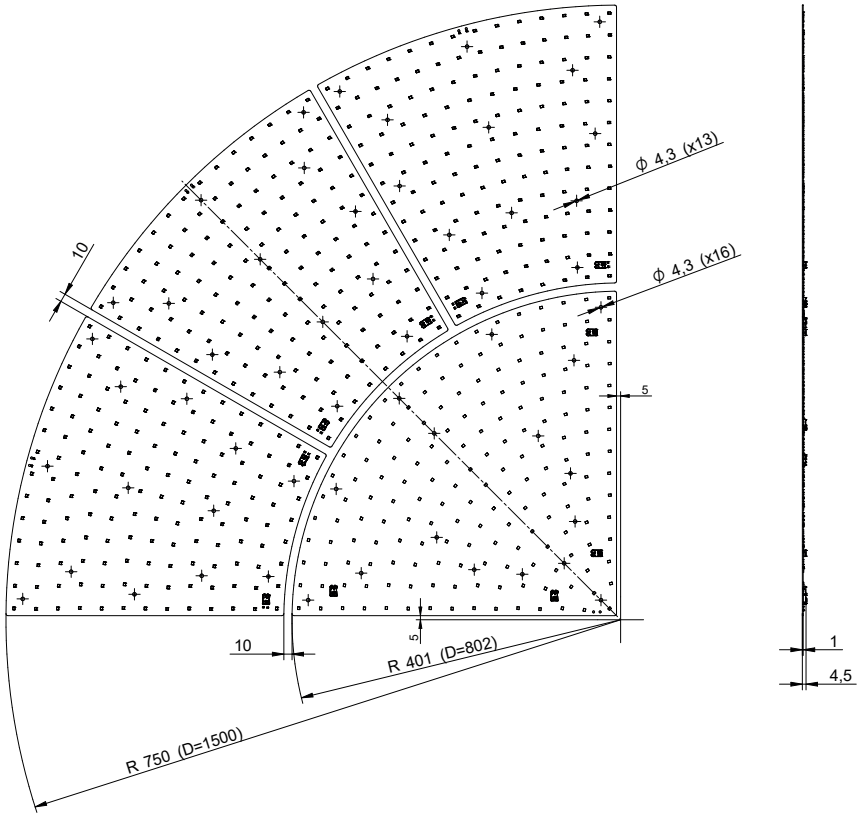
Lumen maintenance

for EH1.1 G3

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	>72 000	>72 000
	55°C	>72 000	>72 000	>72 000	>72 000	>72 000	>72 000
	65°C	>72 000	>72 000	>72 000	>72 000	>72 000	>72 000
	75°C	>72 000	>72 000	>72 000	>72 000	>72 000	>72 000
	85°C	>72 000	>72 000	>72 000	>72 000	>72 000	>72 000
If max	45°C	>72 000	>72 000	67 000	62 000	30 000	29 000
	55°C	>72 000	>72 000	66 000	61 000	30 000	28 000
	65°C	>72 000	>72 000	65 000	60 000	29 000	27 000
	75°C	>72 000	>72 000	65 000	59 000	29 000	26 000
	85°C	>72 000	>72 000	64 000	58 000	28 000	26 000

Calculated data based on LM80 LED data (12 000h)

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.

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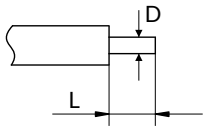
Wiring

Wire cross section and strip length:



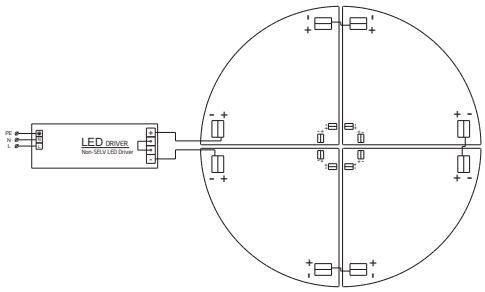
D - wire cross section (solid and flexible wires)	Min	Max
	0.2mm²	0.75mm²
	AWG 24	AWG 18

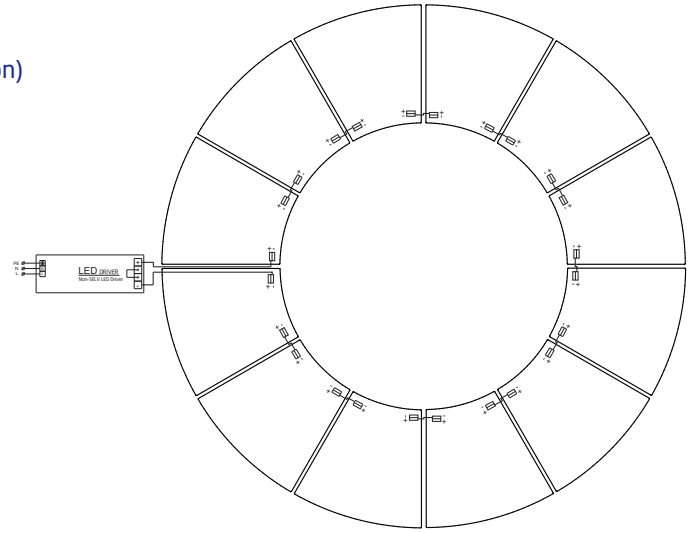
L - strip length	Min	Max
	8mm	9mm

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

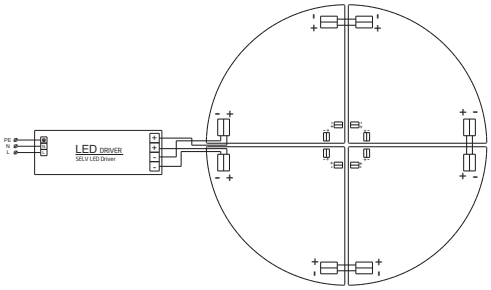
Connections

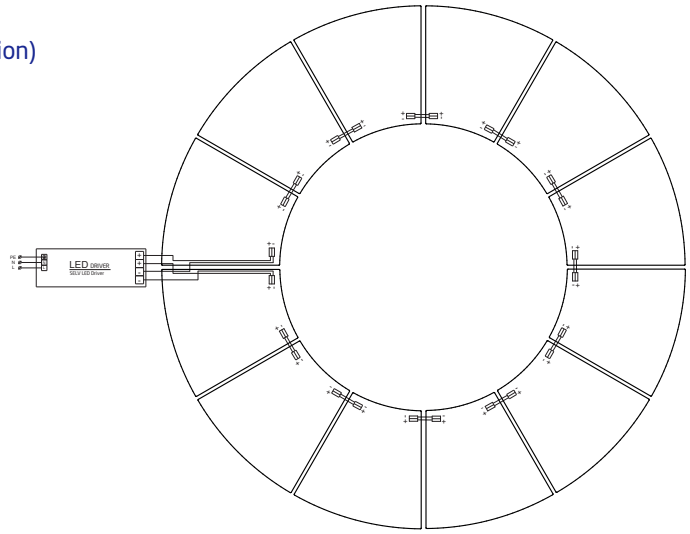
Wiring for series connection system (Single CCT version)





Wiring for parallel connection system (Single CCT version)





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.

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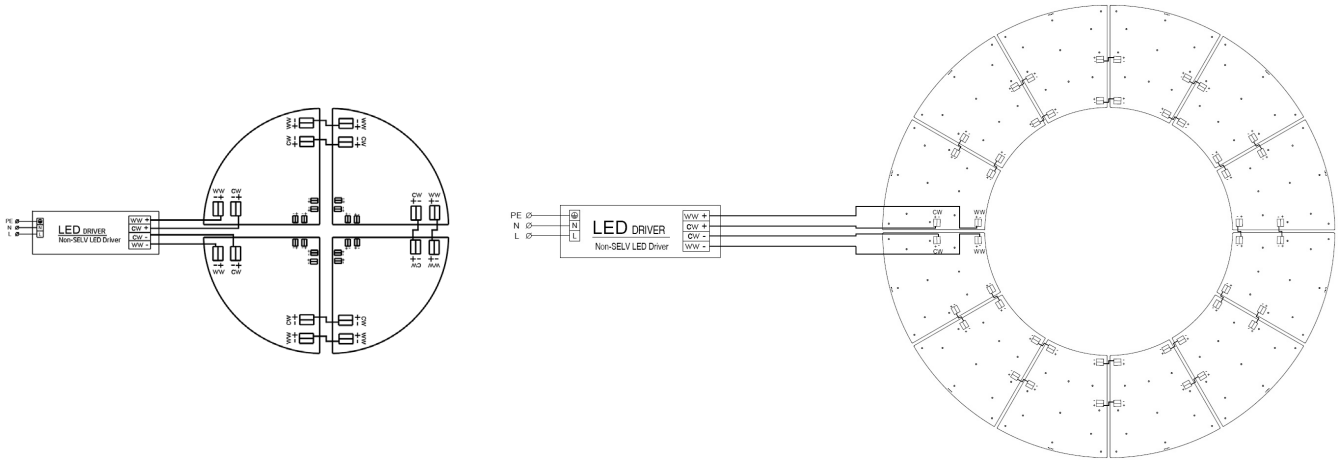
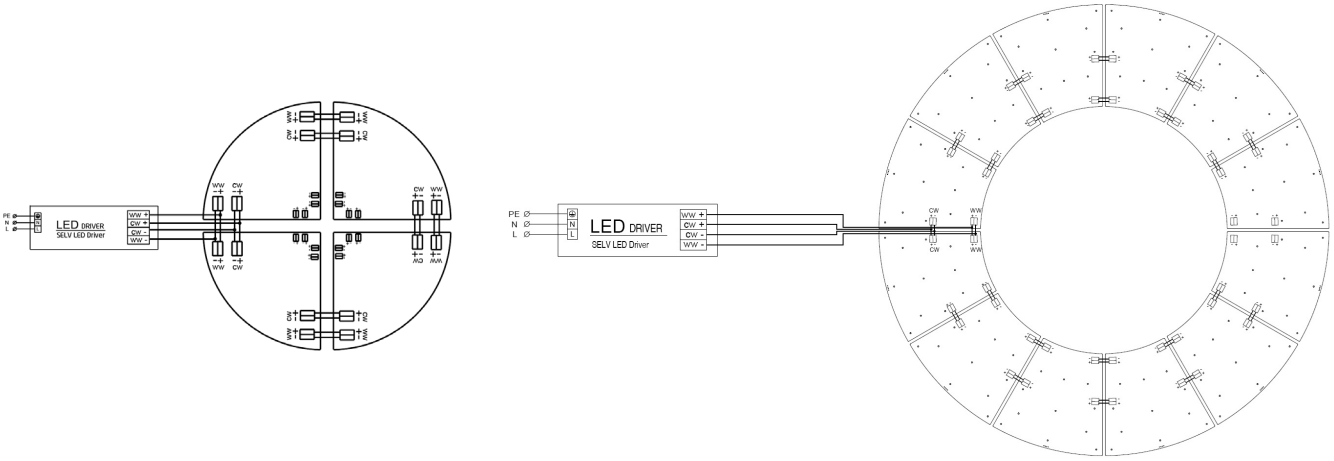
Connections

Wiring for series connection system (TW version)



Wiring for parallel connection system (TW version)



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.

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Ordering codes

Product name	Ordering code	Pieces per box	Pieces per pallet	Box dimensions [mm]
RdLED 1/4 800mm 3000lm 830 33V CJ G4	1010 147 88446	12	336	441 x 441 x 58
RdLED 1/12 RING 820-1500mm 2500lm 830 27V CJ G4	1010 147 88846	12	336	441 x 441 x 58
RdLED 1/4 800mm 3000lm 840 33V CJ G4	1010 147 88546	12	336	441 x 441 x 58
RdLED 1/12 RING 820-1500mm 2500lm 840 27V CJ G4	1010 147 88946	12	336	441 x 441 x 58
RdLED 1/4 800mm 2x3000lm 827-865 33V CN G3	1010 137 81646	12	336	441 x 441 x 58
RdLED 1/12 RING 820-1500mm 2x2500lm 827-865 27V CN G3	1010 137 81746	12	336	441 x 441 x 58
RdLED 1/4 800mm 3000lm 830 33V CN G3	1010 147 87846	12	336	441 x 441 x 58
RdLED 1/12 RING 820-1500mm 2500lm 830 27V CN G3	1010 147 88246	12	336	441 x 441 x 58
RdLED 1/4 800mm 3000lm 840 33V CN G3	1010 147 87946	12	336	441 x 441 x 58
RdLED 1/12 RING 820-1500mm 2500lm 840 27V CN G3	1010 147 88346	12	336	441 x 441 x 58
RdLED 1/4 800mm 3000lm 927 33V EH1.1 G3	1010 127 12146	12	336	441 x 441 x 58
RdLED 1/12 RING 820-1500mm 2500lm 927 27V EH1.1 G3	1010 137 58646	12	336	441 x 441 x 58
RdLED 1/4 800mm 3000lm 930 33V EH1.1 G3	1010 117 46446	12	336	441 x 441 x 58
RdLED 1/12 RING 820-1500mm 2500lm 930 27V EH1.1 G3	1010 137 52946	12	336	441 x 441 x 58
RdLED 1/4 800mm 3000lm 940 33V EH1.1 G3	1010 117 30946	12	336	441 x 441 x 58
RdLED 1/12 RING 820-1500mm 2500lm 940 27V EH1.1 G3	1010 147 87746	12	336	441 x 441 x 58