

Round LED modules 220mm

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 2200K 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* φ [lm]	Voltage* Vf [V]	Power* P [W]	Efficacy* [lm/W]	Current maximum If max [mA]
RdLED 220mm 1500lm 830 24V EMG Opt G2	1010 117 87646	3000	370	1436	21	7.9	181	1200
Emergency light			450	211	2.8	1.3	166	600
RdLED 220mm 1500lm 840 24V EMG Opt G2	1010 117 87746	4000	370	1556	21	7.9	196	1200
Emergency light			450	229	2.8	1.3	180	600

RdLED CRI 90 Optimum G2

Product name	Ordering code	Colour temperature [K]	Current nominal If nom [mA]	Luminous flux* φ [lm]	Voltage* Vf [V]	Power* P [W]	Efficacy* [lm/W]	Current maximum If max [mA]
RdLED 220mm 1500lm 927 24V EMG Opt G2	1010 117 42246	2700	420	1325	22	9.3	143	1200
Emergency light			520	186	2.9	1.6	119	600
RdLED 220mm 1500lm 927 24V EMG SSW Opt G2	1010 117 75846	2700	420	1325	22	9.3	143	1200
Emergency light			520	186	3.0	1.6	119	600
RdLED 220mm 1500lm 930 24V EMG Opt G2	1010 117 42346	3000	420	1423	22	9.3	153	1200
Emergency light			520	200	2.9	1.6	128	600
RdLED 220mm 1500lm 930 24V EMG SSW Opt G2	1010 117 50746	3000	420	1423	22	9.3	153	1200
Emergency light			520	200	3.0	1.6	128	600
RdLED 220mm 1500lm 940 24V EMG Opt G2	1010 117 42446	4000	420	1505	22	9.3	162	1200
Emergency light			520	212	2.9	1.6	136	600
RdLED 220mm 1500lm 940 24V EMG SSW Opt G2	1010 117 50846	4000	420	1521	22	9.3	164	1200
Emergency light			420	178	3.0	1.2	143	600

RdLED CRI 80 Optimum

Product name	Ordering code	Colour temperature [K]	Current nominal If nom [mA]	Luminous flux* φ [lm]	Voltage* Vf [V]	Power* P [W]	Efficacy* [lm/W]	Current maximum If max [mA]
RdLED 220mm 1500lm 827-865 EMG 24V Optimum	1010 117 23046	2700	400	1486	22	8.8	167	1200
Emergency light		6500	400	1609	22	8.8	181	1200
		6500	400	192	3.0	1.1	166	600
RdLED 220mm 1500lm 830 EMG 24V Optimum	1010 117 21946	3000	380	1501	22	8.3	180	1200
Emergency light			380	180	2.8	1.1	166	600
			380	1501	22	8.3	180	1200
RdLED 220mm 1500lm 830 EMG SSW 24V Optimum	1010 117 22146	3000	380	180	2.8	1.1	166	600
Emergency light			380	180	2.8	1.1	166	600
			380	1501	22	8.3	180	1200
RdLED 220mm 1500lm 840 EMG 24V Optimum	1010 117 22046	4000	380	1576	22	8.3	189	1200
Emergency light			380	189	2.8	1.1	174	600
			380	1576	22	8.3	189	1200
RdLED 220mm 1500lm 840 EMG SSW 24V Optimum	1010 117 22246	4000	380	189	2.8	1.1	174	600
Emergency light			380	189	2.8	1.1	174	600

*At nominal current and T_p

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
Energy Efficiency Class		A++
Working voltage	[Vdc]	60
Beam angle	[deg]	120
Initial color consistency	[SDCM]	3
Initial color coordinates		Acc. to CIE 1931
Photobiological safety		RG1 unlimited

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

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	76 000	67 000
	55°C	>102 000	>102 000	>102 000	>102 000	76 000	67 000
	65°C	>102 000	>102 000	>102 000	>102 000	75 000	66 000
	75°C	>102 000	>102 000	>102 000	>102 000	74 000	65 000
	85°C	>102 000	>102 000	>102 000	>102 000	73 000	65 000
If max	45°C	>72 000	>72 000	>72 000	>72 000	49 000	37 000
	55°C	>72 000	>72 000	>72 000	>72 000	49 000	37 000
	65°C	>72 000	>72 000	>72 000	>72 000	49 000	36 000
	75°C	>72 000	>72 000	>72 000	>72 000	45 000	34 000
	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 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	58 000	57 000
	85°C	>60 000	>60 000	>60 000	>60 000	46 000	40 000
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

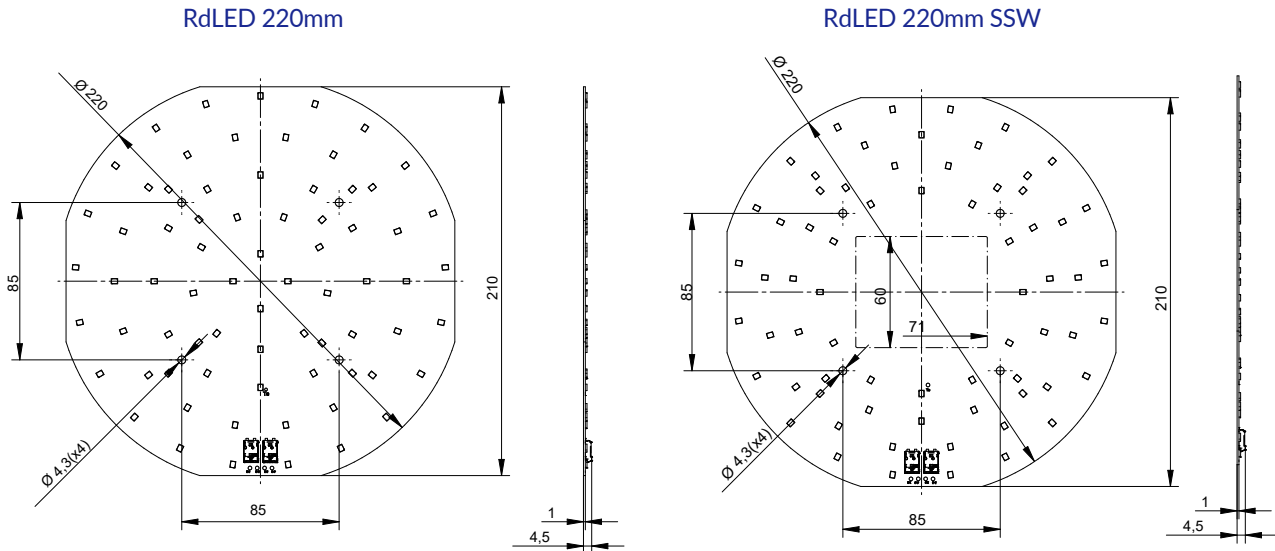
RdLED CRI 80

Forward current	Tp temp.	L70 [h]		L80 [h]		L90 [h]	
		Optimum G2 B50	B10	B50	B10	B50	B10
If nom	45°C	>60 000	>60 000	>60 000	>60 000	46 000	42 000
	65°C	>60 000	>60 000	>60 000	>60 000	36 000	30 000
	85°C	>60 000	>60 000	>60 000	>60 000	31 000	25 000
If max	45°C	>60 000	>60 000	>60 000	>60 000	40 000	32 000
	65°C	>60 000	>60 000	>60 000	>60 000	30 000	27 000
	85°C	>60 000	>60 000	>60 000	55 000	25 000	25 000

reported data based on LM80 LED data 10 000h

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Dimensions



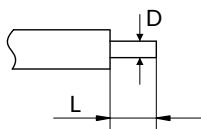
Mounting

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 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 ²	0.75mm ²
	AWG 24	AWG 18

L - strip length	Min	Max
	8mm	9mm

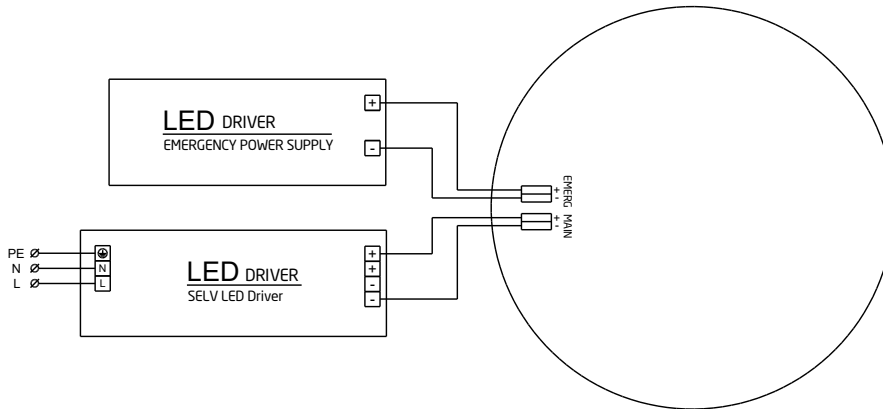
Opening for the release of wires from the top with release pin Electroterminal art. 881 167 884:



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Connections

Wiring for parallel connection system



Ordering codes

Product name	Ordering code	Pieces per box	Pieces per pallet	Box dimensions [mm]
RdLED 220mm 1500lm 830 24V EMG Opt G2	1010 117 87646	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 840 24V EMG Opt G2	1010 117 87746	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 927 24V EMG Opt G2	1010 117 42246	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 927 24V EMG SSW Opt G2	1010 117 75846	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 930 24V EMG Opt G2	1010 117 42346	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 930 24V EMG SSW Opt G2	1010 117 50746	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 940 24V EMG Opt G2	1010 117 42446	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 940 24V EMG SSW Opt G2	1010 117 50846	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 827-865 EMG 24V Optimum	1010 117 23046	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 830 EMG 24V Optimum	1010 117 21946	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 830 EMG SSW 24V Optimum	1010 117 22146	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 840 EMG 24V Optimum	1010 117 22046	20	2100	238 x 238 x 91
RdLED 220mm 1500lm 840 EMG SSW 24V Optimum	1010 117 22246	20	2100	238 x 238 x 91