

## Round LED modules 315mm

## 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 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 <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 |
|---------------------------------------|----------------|------------------------|-----------------------------|-----------------------------------|----------------------------------------|-----------------------------|--------------------------|------------------------------|------------------------------------------|-----------------------------|-------------------------|
| RdLED 315mm 4000lm 830 24V EMG Opt G2 | 1010 117 82846 | 3000                   | 1000                        | 3846                              | 3968                                   | 22                          | 22                       | 177                          | 160                                      | 3200                        | C                       |
| Emergency light                       |                |                        | 450                         | 215                               | 222                                    | 2.7                         | 1.2                      | 174                          | 60                                       | 1200                        |                         |
| RdLED 315mm 4000lm 840 24V EMG Opt G2 | 1010 117 82946 | 4000                   | 1000                        | 4166                              | 4298                                   | 22                          | 22                       | 192                          | 160                                      | 3200                        | C                       |
| Emergency light                       |                |                        | 450                         | 233                               | 240                                    | 2.7                         | 1.2                      | 188                          | 60                                       | 1200                        |                         |

## RdLED 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 |
|-------------------------------------------|----------------|------------------------|-----------------------------|-----------------------------------|----------------------------------------|-----------------------------|--------------------------|------------------------------|------------------------------------------|-----------------------------|-------------------------|
| RdLED 315mm 4000lm 927 24V EMG Opt G2     | 1010 117 42546 | 2700                   | 1150                        | 3550                              | 3679                                   | 23                          | 26                       | 136                          | 160                                      | 2400                        | E                       |
| Emergency light                           |                |                        | 450                         | 173                               | 179                                    | 2.9                         | 1.3                      | 134                          | 60                                       | 900                         |                         |
| RdLED 315mm 4000lm 927 24V EMG SSW Opt G2 | 1010 117 87146 |                        | 1150                        | 3550                              | 3679                                   | 23                          | 26                       | 136                          | 160                                      | 2400                        | E                       |
| Emergency light                           |                |                        | 450                         | 173                               | 179                                    | 2.9                         | 1.3                      | 134                          | 60                                       | 900                         |                         |
| RdLED 315mm 4000lm 930 24V EMG Opt G2     | 1010 117 42646 | 3000                   | 1150                        | 3813                              | 3951                                   | 23                          | 26                       | 146                          | 160                                      | 2400                        | D                       |
| Emergency light                           |                |                        | 450                         | 186                               | 193                                    | 2.9                         | 1.3                      | 144                          | 60                                       | 900                         |                         |
| RdLED 315mm 4000lm 930 24V EMG SSW Opt G2 | 1010 117 50946 |                        | 1150                        | 3813                              | 3951                                   | 23                          | 26                       | 146                          | 160                                      | 2400                        | D                       |
| Emergency light                           |                |                        | 450                         | 186                               | 193                                    | 2.9                         | 1.3                      | 144                          | 60                                       | 900                         |                         |
| RdLED 315mm 4000lm 940 24V EMG Opt G2     | 1010 117 42746 | 4000                   | 1150                        | 4075                              | 4224                                   | 23                          | 26                       | 156                          | 160                                      | 2400                        | D                       |
| Emergency light                           |                |                        | 450                         | 199                               | 206                                    | 2.9                         | 1.3                      | 154                          | 60                                       | 900                         |                         |
| RdLED 315mm 4000lm 940 24V EMG SSW Opt G2 | 1010 117 51046 |                        | 1150                        | 4075                              | 4224                                   | 23                          | 26                       | 156                          | 160                                      | 2400                        | D                       |
| Emergency light                           |                |                        | 450                         | 199                               | 206                                    | 2.9                         | 1.3                      | 154                          | 60                                       | 900                         |                         |

## RdLED 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 |
|-------------------------------------------|----------------|------------------------|-----------------------------|-----------------------------------|----------------------------------------|-----------------------------|--------------------------|------------------------------|------------------------------------------|-----------------------------|-------------------------|
| RdLED 315mm 4000lm 827-865 EMG 90V Opt G1 | 1010 127 19346 | 2700                   | 280                         | 3956                              | 4092                                   | 84                          | 24                       | 168                          | 40                                       | 600                         | D                       |
| Emergency light                           |                | 6500                   | 280                         | 4278                              | 4426                                   | 84                          | 24                       | 182                          | 40                                       | 600                         |                         |
|                                           |                | 6500                   | 280                         | 145                               | 150                                    | 2.7                         | 0.8                      | 189                          | 60                                       | 900                         |                         |

## RdLED CRI 80 Optimum

| 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 |  |
|--------------------------------------------|----------------|------------------------|-----------------------------|-----------------------------------|----------------------------------------|-----------------------------|--------------------------|------------------------------|------------------------------------------|-----------------------------|-------------------------|--|
| RdLED 315mm 4000lm 827-865 EMG 36V Optimum | 1010 117 27846 | 2700                   | 700                         | 3839                              | 3958                                   | 34                          | 24                       | 162                          | 100                                      | 1500                        | D                       |  |
| Emergency light                            |                | 6500                   | 700                         | 4157                              | 4286                                   | 34                          | 24                       | 175                          | 100                                      | 1500                        |                         |  |
|                                            |                | 6500                   | 450                         | 222                               | 229                                    | 2.8                         | 1.3                      | 174                          | 60                                       | 900                         |                         |  |
| RdLED 315mm 4000lm 830 EMG 24V Optimum     | 1010 117 22346 | 3000                   | 1050                        | 4085                              | 4227                                   | 22                          | 23                       | 175                          | 160                                      | 2400                        | C                       |  |
| Emergency light                            |                |                        | 450                         | 217                               | 219                                    | 2.9                         | 1.3                      | 172                          | 60                                       | 900                         |                         |  |
|                                            |                |                        | 1050                        | 4085                              | 4227                                   | 22                          | 23                       | 175                          | 160                                      | 2400                        |                         |  |
| RdLED 315mm 4000lm 830 EMG SSW 24V Optimum | 1010 117 22546 | 3000                   | 450                         | 217                               | 219                                    | 2.8                         | 1.3                      | 172                          | 60                                       | 900                         | C                       |  |
| Emergency light                            |                |                        | 1050                        | 4291                              | 4440                                   | 22                          | 23                       | 183                          | 160                                      | 2400                        |                         |  |
|                                            |                |                        | 450                         | 228                               | 236                                    | 2.8                         | 1.3                      | 181                          | 60                                       | 900                         |                         |  |
| RdLED 315mm 4000lm 840 EMG 24V Optimum     | 1010 117 22446 | 4000                   | 1050                        | 4291                              | 4440                                   | 22                          | 23                       | 183                          | 160                                      | 2400                        | C                       |  |
| Emergency light                            |                |                        | 450                         | 228                               | 236                                    | 2.8                         | 1.3                      | 181                          | 60                                       | 900                         |                         |  |
|                                            |                |                        | 1050                        | 4291                              | 4440                                   | 22                          | 23                       | 183                          | 160                                      | 2400                        |                         |  |
| RdLED 315mm 4000lm 840 EMG SSW 24V Optimum | 1010 117 22646 | 4000                   | 450                         | 228                               | 236                                    | 2.8                         | 1.3                      | 181                          | 60                                       | 900                         | C                       |  |
| Emergency light                            |                |                        | 450                         | 228                               | 236                                    | 2.8                         | 1.3                      | 181                          | 60                                       | 900                         |                         |  |

<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%

Data is subject to change without notice. More information at: [www.mst.pl](http://www.mst.pl) | Date: 14.03.2022

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## Temperature &amp; 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      |
| 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 | CIE <sub>x</sub> | CIE <sub>y</sub> |
|--------------------|------------------|------------------|
| 2700K              | 0.4578           | 0.4101           |
| 3000K              | 0.4338           | 0.4030           |
| 4000K              | 0.3818           | 0.3797           |
| 6500K              | 0.3123           | 0.3282           |

## Certificates &amp; standards

| Specification item | Compliant    |
|--------------------|--------------|
| ENEC               | No           |
| 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     | >72 000 | >72 000 | >72 000 | >72 000 | 71 000  | 61 000 |
|                 | 55°C     | >72 000 | >72 000 | >72 000 | >72 000 | 71 000  | 61 000 |
|                 | 65°C     | >72 000 | >72 000 | >72 000 | >72 000 | 69 000  | 60 000 |
|                 | 75°C     | >72 000 | >72 000 | >72 000 | >72 000 | 68 000  | 59 000 |
|                 | 85°C     | >72 000 | >72 000 | >72 000 | >72 000 | 67 000  | 58 000 |
| 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 &amp; 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 | 51 000  | 50 000  |
| If max          | 85°C     | >60 000 | >60 000 | >60 000 | >60 000 | 41 000  | 36 000  |
|                 | 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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### RdLED CRI 80

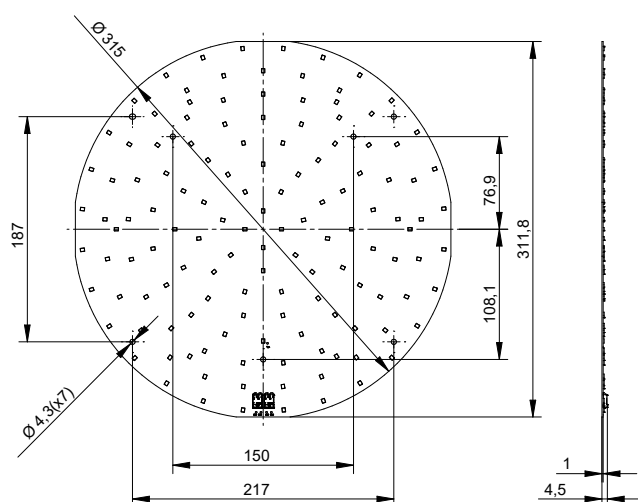
for RdLED CRI 80 Optimum G2

| 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 | 45 000  | 41 000 |
|                 | 65°C     | >60 000 | >60 000 | >60 000 | >60 000 | 35 000  | 30 000 |
|                 | 85°C     | >60 000 | >60 000 | >60 000 | >60 000 | 30 000  | 25 000 |

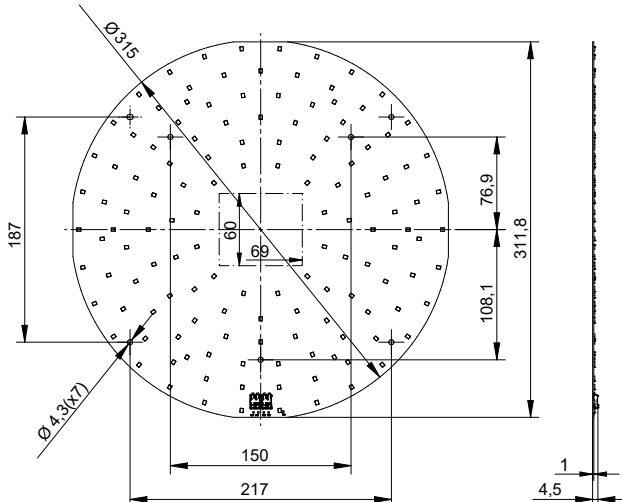
reported data based on LM80 LED data 10 000h

### Dimensions

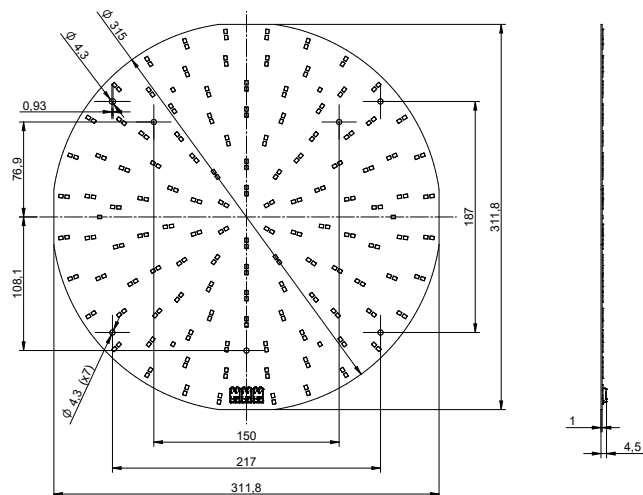
RdLED 315mm



RdLED 315mm SSW



RdLED 315mm TW



### Mounting

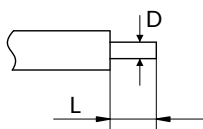
LED Modules cannot be exposed to tensile or compressive stresses. For this purpose it is necessary that the modules are assembled to a flat surface by only rounded head screws. Additionally plastic flat washer should be used to ensure creepage distance between screw's head and surface of the pcb. Max. torque for fixing: 0,5Nm.

LED modules are sensitive to electrostatic discharge (ESD). Follow safety regulations according to IEC 61340-5-1.

## Round LED modules 315mm

### Wiring

Wire cross section and strip length:



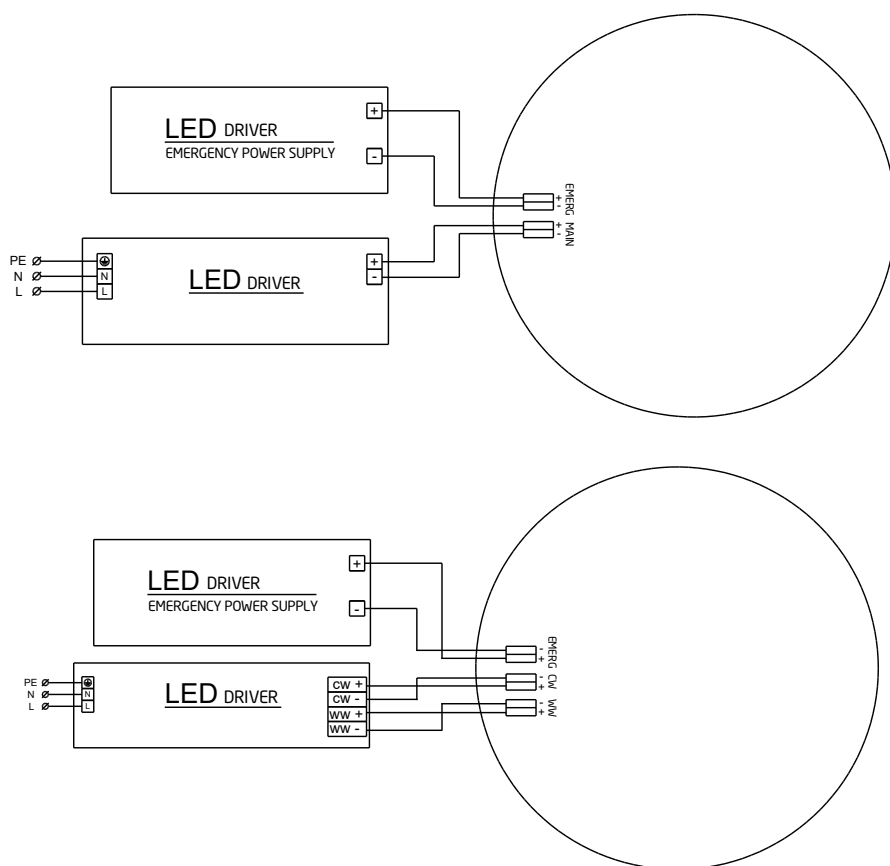
| D - wire cross section<br>(solid and flexible wires) | Min                | Max                 |
|------------------------------------------------------|--------------------|---------------------|
|                                                      | 0.2mm <sup>2</sup> | 0.75mm <sup>2</sup> |
|                                                      | 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



### 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.

## Round LED modules 315mm

## Ordering codes

| Product name                               | Ordering code  | Pieces per box | Pieces per pallet | Box dimensions [mm] |
|--------------------------------------------|----------------|----------------|-------------------|---------------------|
| RdLED 315mm 4000lm 830 24V EMG Opt G2      | 1010 117 82846 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 840 24V EMG Opt G2      | 1010 117 82946 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 927 24V EMG Opt G2      | 1010 117 42546 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 927 24V EMG SSW Opt G2  | 1010 117 87146 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 930 24V EMG Opt G2      | 1010 117 42646 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 930 24V EMG SSW Opt G2  | 1010 117 50946 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 940 24V EMG Opt G2      | 1010 117 42746 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 940 24V EMG SSW Opt G2  | 1010 117 51046 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 827-865 EMG 90V Opt G1  | 1010 127 19346 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 827-865 EMG 24V Optimum | 1010 117 27846 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 830 EMG 24V Optimum     | 1010 117 22346 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 830 EMG SSW 24V Optimum | 1010 117 22546 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 840 EMG 24V Optimum     | 1010 117 22446 | 20             | 840               | 333 x 333 x 91      |
| RdLED 315mm 4000lm 840 EMG SSW 24V Optimum | 1010 117 22646 | 20             | 840               | 333 x 333 x 91      |