LED LINE SMD W5.5 3R PRIME GEN. 5

MLP SC W5.5/280 G5
MLP SC W5.5/566 G5

LED LINE SMD W5.5 3R PRIME GEN. 5

MLP SC W5.5 G5

Typical Applications

Built-in luminaires/general illumination

- Office lighting
- Retail, corridor and shelf lighting
- Trunking lighting system
- Furniture lighting
- Backlighting for advertising

LED Line SMD W5.5 3R Prime Gen. 5

- **LONG SERVICE LIFE TIME: 93.000 H (L80, B10)**
- **HIGHLY EFFICIENT: UP TO 223 LM/W AT T_P = 50 °C**
- **LENGTH: 280 MM, 566 MM**
- **FLEXIBLE LIGHT DISTRIBUTION BY DIFFERENT OPTICS**

LIGHTING SOLUTIONS

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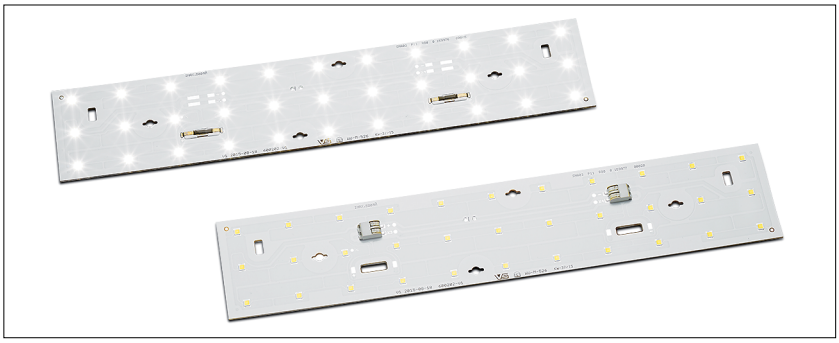
LED Line SMD W5.5 3R Prime Gen. 5

Technical Notes

- LED built-in module for integration into luminaires
- Dimensions:
  MLP SC W5.5/280: 280x55 mm
  MLP SC W5.5/566: 566x55 mm
- Driving current: 150 mA / 250 mA / 300 mA / 350 mA / 500 mA
- On-board push terminal system
- Beam angle: 120°
- Colour tolerance: 3-step MacAdam



Typical Light Distribution Curve

Data are available in .ldt format for download under www.vossloh-schwabe.com.

Suitable Optics

Please visit our homepage for details for suitable 3R optics W5.5:
www.vossloh-schwabe.com/en/products/optics-reflectors/linear-optics/linear-optics-3r-for-smd-w55

Electrical Characteristics – CRI > 80

at t_p = 50 °C

Type	No. of LEDs	Voltage DC (V) 150 mA V	250 mA V	300 mA V	350 mA V	500 mA V	Temperature Coefficient mV/K	Power consumption (W) 150 mA W	250 mA W	300 mA W	350 mA W	500 mA W
LED Line SMD W5.5 3R Prime Gen. 5 - L28												
MLP SC W5.5/280 x/33/yzz G5	33	29.4	30.0	30.2	30.5	31.2	-14.46	4.4	7.5	9.1	10.7	15.6
LED Line SMD W5.5 3R Prime Gen. 5 - L56												
MLP SC W5.5/566 x/66/yzz G5	66	58.8	59.9	60.4	60.9	62.4	-28.91	8.8	15.0	18.1	21.3	31.2

Voltage and power tolerance: ±10%
Use of external LED constant current driver required.

Maximum Ratings – CRI > 80

Exceeding the maximum ratings can lead to reduction of service life or destruction of the module.

Type	Operating current (mA)	Operation temperature range at t_c point °C min.	°C max.	Storage temperature range °C min.	°C max.	Max. allowed repetitive peak current for frequencies ≥ 100 Hz (mA)
All types	500	–20	+80	–20	+70	600

Operating Life – CRI > 80

L80/B10

in hours at measured temperature at t_p point

Type	150 mA 40 °C	50 °C	80 °C	250 mA 40 °C	50 °C	80 °C	300 mA 40 °C	50 °C	80 °C	350 mA 40 °C	50 °C	80 °C	500 mA 40 °C	50 °C	80 °C
All Types	83.000	83.000	78.000	83.000	83.000	78.000	83.000	83.000	78.000	83.000	83.000	78.000	83.000	82.000	78.000

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Optical Characteristics – CRI > 80

at t_p = 50 °C; without secondary optics

Type	Ref. No. Connection "x" Top (T)	Bottom (B)	Colour	Correl. colour temp.* K	Luminous flux** (lm) and efficiency (lm/W) at 150 mA typ. lm	typ. lm/W	250 mA typ. lm	typ. lm/W	300 mA typ. lm	typ. lm/W	350 mA typ. lm	typ. lm/W	500 mA typ. lm	typ. lm/W	Photometric Code mA
LED Line SMD W5.5 3R Prime Gen. 5 - L28															
MLP SC W5.5/280 x/33/827 G5	**on req.**	**on req.**	WW	2700	875	198	1410	188	1675	185	1940	182	2710	174	827/359
MLP SC W5.5/280 x/33/830 G5	**574850**	**574854**	WW	3000	945	214	1530	204	1815	200	2105	197	2940	188	830/359
MLP SC W5.5/280 x/33/835 G5	**on req.**	**on req.**	NW	3500	945	214	1530	204	1815	200	2105	197	2940	188	835/359
MLP SC W5.5/280 x/33/840 G5	**574851**	**574855**	NW	4000	980	223	1590	212	1885	208	2185	205	3050	196	840/359
MLP SC W5.5/280 x/33/850 G5	**574852**	**574856**	CW	5000	980	223	1590	212	1885	208	2185	205	3050	196	850/369
MLP SC W5.5/280 x/33/865 G5	**574853**	**574857**	CW	6500	945	214	1530	204	1815	200	2105	197	2940	188	865/369
LED Line SMD W5.5 3R Prime Gen. 5 - L56															
MLP SC W5.5/566 x/66/827 G5	**on req.**	**on req.**	WW	2700	1745	198	2825	188	3355	185	3885	182	5425	174	827/359
MLP SC W5.5/566 x/66/830 G5	**574858**	**574863**	WW	3000	1890	214	3060	204	3630	200	4210	197	5875	188	830/359
MLP SC W5.5/566 x/66/835 G5	**574859**	**on req.**	NW	3500	1890	214	3060	204	3630	200	4210	197	5875	188	835/359
MLP SC W5.5/566 x/66/840 G5	**574860**	**574864**	NW	4000	1965	223	3180	212	3770	208	4370	205	6100	196	840/359
MLP SC W5.5/566 x/66/850 G5	**574861**	**574865**	CW	5000	1965	223	3180	212	3770	208	4370	205	6100	196	850/369
MLP SC W5.5/566 x/66/865 G5	**574862**	**574866**	CW	6500	1890	214	3060	204	3630	200	4210	197	5875	188	865/369

* Colour tolerance: 3-step McAdams | ** Production tolerance of luminous flux and efficiency: ±10%

Minimum order quantity (packaging unit): 24 pcs.

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Electrical Characteristics – CRI > 90

at t_p = 50 °C

Type	No. of LEDs	Voltage DC (V) 150 mA V	250 mA V	300 mA V	350 mA V	500 mA V	Temperature Coefficient mV/K	Power consumption (W) 150 mA W	250 mA W	300 mA W	350 mA W	500 mA W
LED Line SMD W5.5 3R Prime Gen. 5 - L28												
MLP SC W5.5/280 x/33/yzz G5	33	29.0	29.5	29.8	30.0	30.6	-9.90	4.3	7.4	8.9	10.5	15.3
LED Line SMD W5.5 3R Prime Gen. 5 - L56												
MLP SC W5.5/566 x/66/yzz G5	66	58.0	59.1	59.5	60.0	61.2	-19.80	8.7	14.8	17.9	21.0	30.6

Voltage and power tolerance: ±10%
Use of external LED constant current driver required.

Maximum Ratings – CRI > 90

Exceeding the maximum ratings can lead to reduction of service life or destruction of the module.

Type	Operating current (mA)	Operation temperature range at t_c point °C min.	°C max.	Storage temperature range °C min.	°C max.	Max. allowed repetitive peak current for frequencies ≥ 100 Hz (mA)
All types	500	–20	+80	–20	+70	1440

Operating Life – CRI > 90

L80/B10

in hours at measured temperature at t_p point

Type	150 mA 40 °C	50 °C	80 °C	250 mA 40 °C	50 °C	80 °C	300 mA 40 °C	50 °C	80 °C	350 mA 40 °C	50 °C	80 °C	500 mA 40 °C	50 °C	80 °C
All Types	93.000	93.000	93.000	93.000	93.000	93.000	93.000	93.000	93.000	93.000	93.000	93.000	93.000	93.000	93.000

Optical Characteristics – CRI > 90

at t_p = 50 °C; without secondary optics

Type	Ref. No. Connection "x" Top (T)	Bottom (B)	Colour	Correl. colour temp.* K	Luminous flux** (lm) and efficiency (lm/W) at 150 mA typ. lm	typ. lm/W	250 mA typ. lm	typ. lm/W	300 mA typ. lm	typ. lm/W	350 mA typ. lm	typ. lm/W	500 mA typ. lm	typ. lm/W	Photometric Code mA
LED Line SMD W5.5 3R Prime Gen. 5															
MLP SC W5.5/280 x/33/927 G5	**574867**	**on req.**	WW	2700	825	190	1370	186	1640	184	1905	181	2675	175	927/359
MLP SC W5.5/280 x/33/930 G5	**574868**	**574872**	WW	3000	825	190	1370	186	1640	184	1905	181	2675	175	930/359
MLP SC W5.5/280 x/33/935 G5	**on req.**	**574873**	NW	3500	825	190	1370	186	1640	184	1905	181	2675	175	935/359
MLP SC W5.5/280 x/33/940 G5	**574869**	**574874**	NW	4000	880	203	1465	198	1750	196	2035	194	2860	187	940/359
MLP SC W5.5/280 x/33/950 G5	**574870**	**574875**	CW	5000	880	203	1465	198	1750	196	2035	194	2860	187	950/359
MLP SC W5.5/280 x/33/965 G5	**574871**	**574876**	CW	6500	825	190	1370	186	1640	184	1905	181	2675	175	965/359
LED Line SMD W5.5 3R Prime Gen. 5															
MLP SC W5.5/566 x/66/927 G5	**on req.**	**on req.**	WW	2700	1650	190	2740	186	3280	184	3810	181	5345	175	927/359
MLP SC W5.5/566 x/66/930 G5	**574878**	**574882**	WW	3000	1650	190	2740	186	3280	184	3810	181	5345	175	930/359
MLP SC W5.5/566 x/66/935 G5	**on req.**	**on req.**	NW	3500	1650	190	2740	186	3280	184	3810	181	5345	175	935/359
MLP SC W5.5/566 x/66/940 G5	**574879**	**574883**	NW	4000	1765	203	2930	198	3505	196	4070	194	5715	187	940/359
MLP SC W5.5/566 x/66/950 G5	**574880**	**574884**	CW	5000	1765	203	2930	198	3505	196	4070	194	5715	187	950/359
MLP SC W5.5/566 x/66/965 G5	**574881**	**574885**	CW	6500	1650	190	2740	186	3280	184	3810	181	5345	175	965/359

* Colour tolerance: 3-step McAdams | ** Production tolerance of luminous flux and efficiency: ±10%
Minimum order quantity (packaging unit): 24 pcs.

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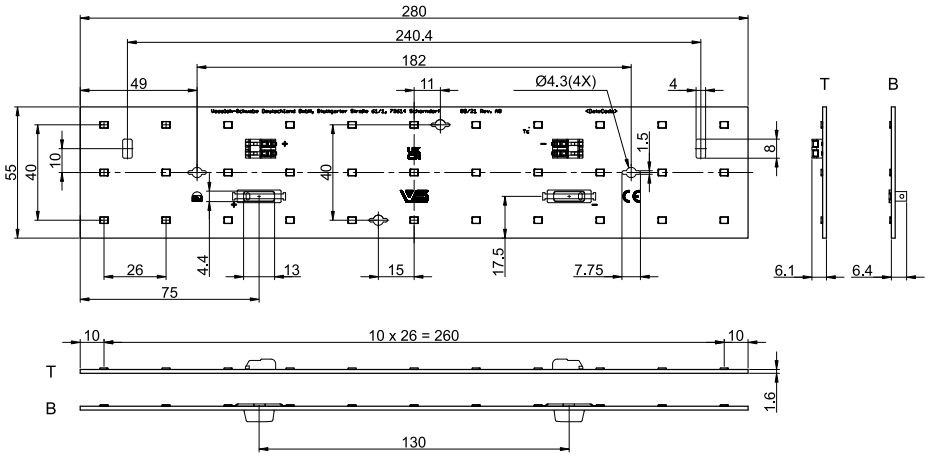
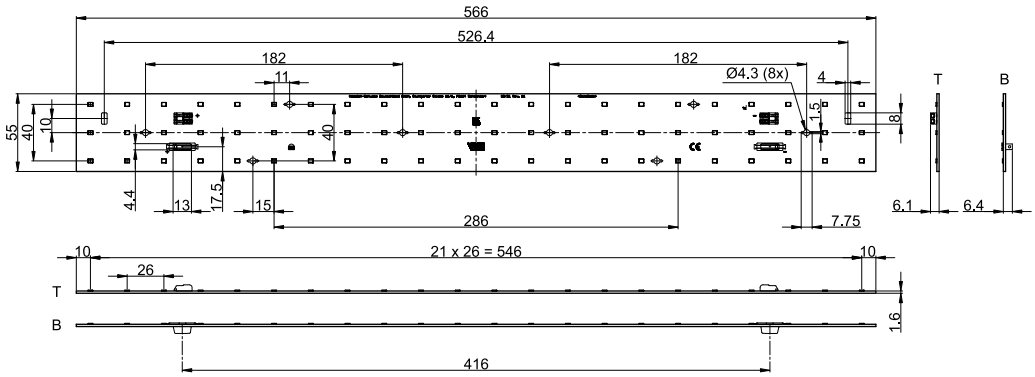
Mechanical Dimensions

T = Top Connection
B = Bottom Connection

MLP SC W5.5/280 x/33/yzz G5



MLP SC W5.5/566 x/66/yzz G5



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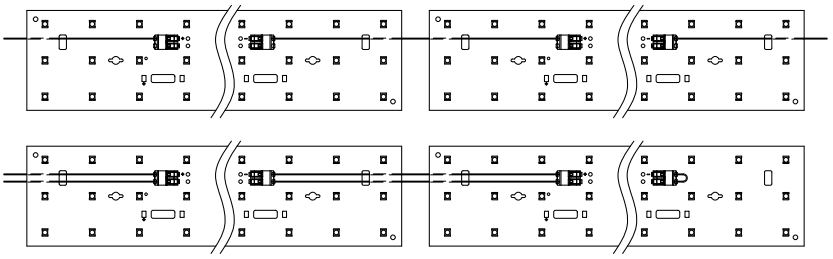
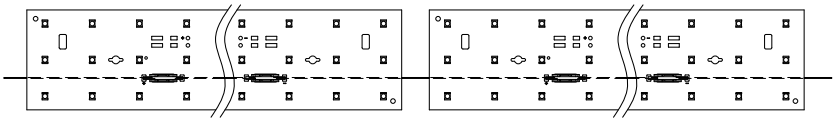
Connection Examples

- The number of modules that can be connected in series depends on the available output voltage of the LED driver.
- The clearance and creepage distances are designed for working voltages up to 700 V DC (basic insulation) and 300 V DC (reinforced insulation).
- Max. diameter of screw head (M4): 8 mm
- The modules are connected in series in both wiring examples.

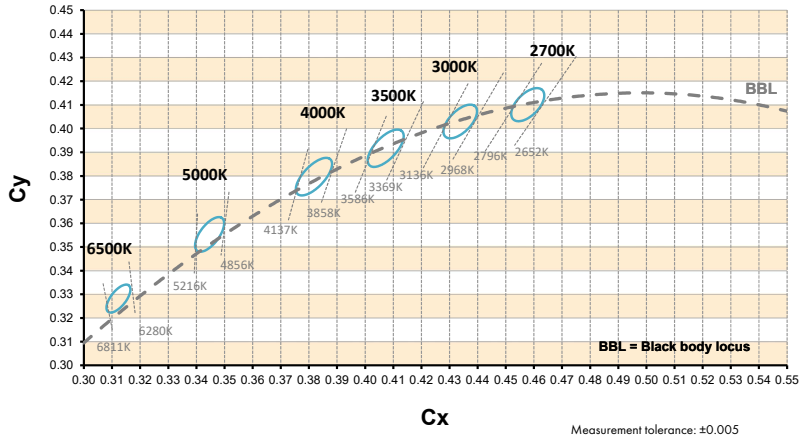


For top connection (T)



For bottom connection (B)

Bins



Measurement tolerance: ±0.005
Integral measurement over entire module

Linear LED Constant Current Drivers

Please visit our homepage for details for suitable
LED constant current drivers: www.vossloh-schwabe.com

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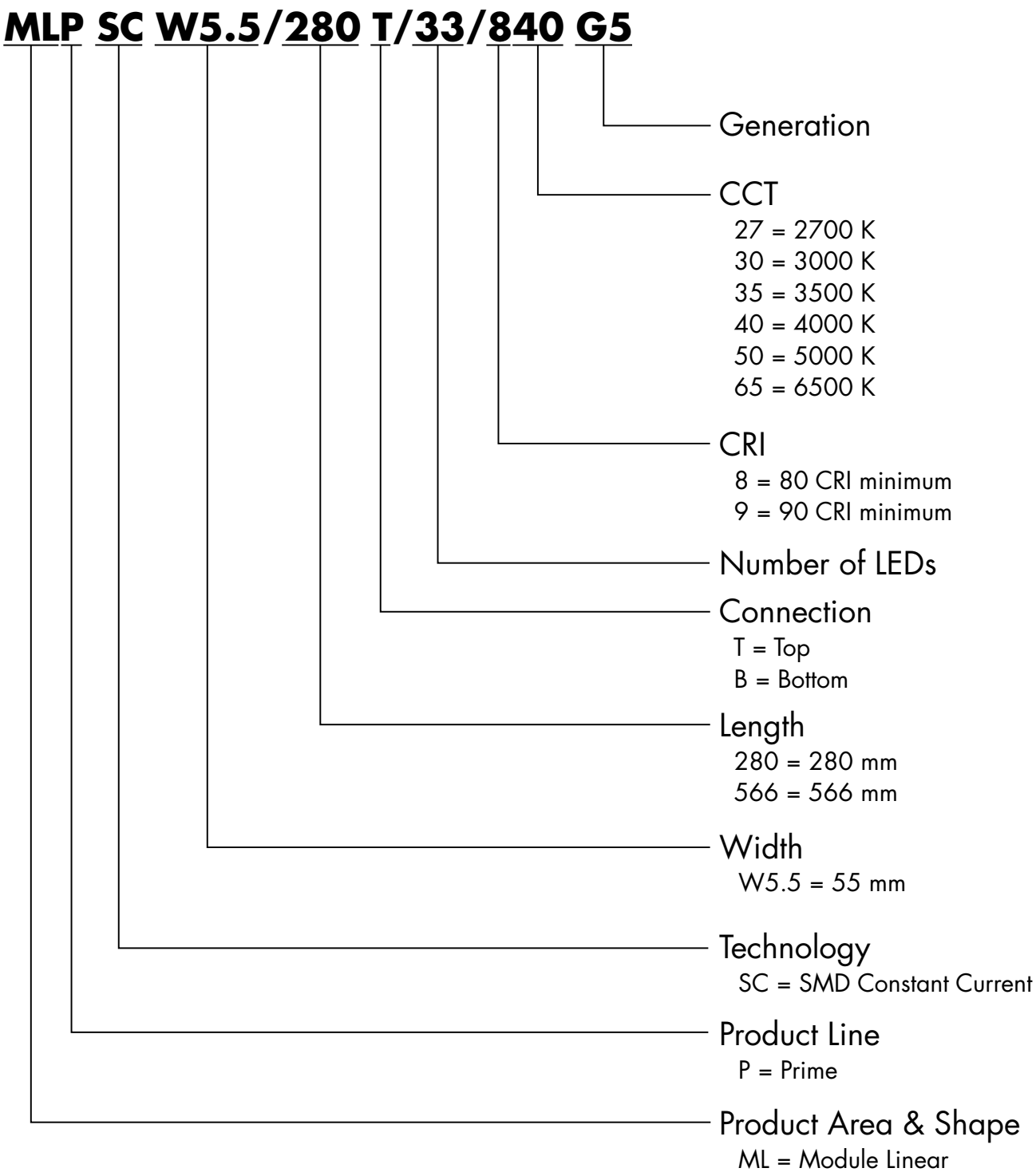
Nomenclature example



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Assembly and Safety Information

Installation must be carried out under observation of the relevant regulations and standards. The LED modules are designed for operation within a casing or luminaire. Installation must be carried out in a voltage-free state (i.e. disconnection from the mains). The following advice must be observed; non-observance can result in the destruction of the LED assembly modules, fire and/or other hazards.

- Consider safety regulations acc. EN 60598 in the luminair design, especially when the operating LED driver is not galvanic isolated.
  - In mode of operation regard to sufficient isolation.
  - Live parts must not be touched in operation mode. Danger in life!!!

- ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED modules. See VS's application notes on ESD protection.
- Adequate anti-static electricity measures, including the use of conductive shoes, ionizers, work bench grounding, wrist straps, flooring and stools should be used.
- LED assembly modules must not be subjected to any undue mechanical stress, e. g.:
  - do not treat as bulk cargo
  - avoid shear and compressive forces during handling and installation
  - do not damage circuit paths
  - avoid any pressure on the light emitting surface
- Safe operation only possible by the use of external constant current sources ($I_{max.}$ see table "Electrical Characteristics").
- Operation only with power supply units that feature the following protection:
  - Short-circuit protection
  - Overload protection
  - Overheating protection
- The module can be fixed with M4 screws. Fixation only with flat or cylinder head screws (M4) /countersank screws)
  Max. torque: 1.2 Nm (M4)
- Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- For interconnection the LED modules is equipped with push-in terminals (WAGO 2060 for top side connection and WAGO 2070 for bottom side connection).
- Safety regulations acc. to EN 60598 (or further standards) has to be observed if the maximum output voltage exceed the permitted touchable value.
- The following points must be observed when connecting LED modules in parallel:
  - All LED strings that are wired in parallel must contain the same number of LEDs (symmetrical loading).
  - Owing to differing forward biases, there can be a difference of up to 10% in brightness between modules connected in parallel.
- To ensure problem-free operation, the specified maximum temperature at the t_p point (see "Operating Life") must be observed (and measured in accordance with EN 60598-1). To satisfy this point, it may be necessary to put measures in place to ensure any heat is dissipated from the PCB to the environment.
- In the event of outdoor applications or applications in damp locations, care must be taken to protect LED assembly modules against humidity, splashes and jets of water. Any corrosion damage resulting from humidity or contact with condensation will not be recognised as a defect or manufacturing fault. LED assembly modules are not specially protected against foreign bodies or dust. Depending on the type of application, further protection must be ensured to prevent dust and foreign bodies from entering.
- Due to the manufacturing process, the PCBs of the LED assembly modules can have sharp edges and corners. Care must therefore be taken during handling and installation to avoid injury.
- For optimal load of used constant current driver the modules can only be connected in series. The quantity of LED modules is limited by the sum of forward voltage and the capacity of used constant current driver. Safety regulations acc. to EN 60598 has to be observed if the sum of forward voltage exceed the permitted touchable value.
- Operating LED modules in the presence of certain chemical substances or in chemically enriched (aggressive) environments can impair module functionality or even cause total module failure. Detailed information can be found in our "Chemical Incompatibility" PDF on our website www.vossloh-schwabe.com
- The photobiological safety of the LED modules must be classified into risk groups in accordance with EN 62471: 2008.
  Rating in accordance with IEC / TR 62778: risk group 1

Applied Standards

EN 62031
LED modules for general lighting – Safety specifications

EN 62471
Photobiological safety of lamps and lamp systems

EN 62471-7
Photobiological safety of lamps and lamp systems - Part 7: Light sources and luminaires primarily emitting visible radiation

Product Guarantee

- 5 years
- The conditions for the Product Guarantee of the Vossloh-Schwabe Group shall apply as published on our homepage (www.vossloh-schwabe.com). We will be happy to send you these conditions upon request.

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