

LED LINE SMD KIT 3R GEN. 3

WU-M-526-S (280 MM)

WU-M-536-S (566 MM)



LED LINE SMD KIT 3R GEN. 3

WU-M-526-S / WU-M-536-S

Typical Applications

Built-in luminaires/general illumination

- Office lighting
- Retail, corridor and shelf lighting
- T5/T8 replacement as built-in module
- Furniture lighting
- Backlighting for advertising



LED SMD Kit 3R Gen. 3

- **LONG SERVICE LIFE TIME: 50,000 H (L80, B10)**
- **HIGHLY EFFICIENT: UP TO 195 LM/W AT $T_p = 50^\circ\text{C}$**
- **LENGTH: 280 MM, 566 MM**
- **FLEXIBLE LIGHT DISTRIBUTION
BY DIFFERENT OPTICS**
- **ZHAGA-COMPLIANT HOLE DISTANCE**



LED Line SMD Kit 3R Gen. 3

Technical Notes

- LED built-in module for integration into luminaires
- Dimensions:
WU-M-526-S: 280x55 mm
WU-M-536-S: 566x55 mm
- Driving current: 150 mA / 200 mA / 350 mA / 500 mA / 700 mA
- On-board push terminal system
- Colour tolerance: 3-step MacAdam
- Beam angle: 120°



Electrical Characteristics

at $t_p = 50^\circ\text{C}$

Type	No. of LEDs	Voltage DC (V)					Power consumption (W)				
		150 mA	200 mA	350 mA	500 mA	700 mA	150 mA	200 mA	350 mA	500 mA	700 mA
		V	V	V	V	V	W	W	W	W	W
WU-M-526-S	33	29.8	30.2	31.2	32.2	33.3	4.46	6.03	10.92	16.08	23.32
WU-M-536-S	66	59.5	60.3	62.4	64.3	66.6	8.93	12.06	21.83	32.16	46.63

Voltage and power tolerance: $\pm 10\%$

Maximum Ratings

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

Type	Operating current (mA)	Operation temperature range at I_c point		Storage temperature range		Max. allowed repetitive peak current mA
		$^\circ\text{C min.}$	$^\circ\text{C max.}$	$^\circ\text{C min.}$	$^\circ\text{C max.}$	
WU-M-526-S/-536-S	150	-20	+75	-20	+85	1200
	200	-20	+75	-20	+85	1200
	350	-20	+75	-20	+85	1200
	500	-20	+75	-20	+85	1200
	700	-20	+75	-20	+85	1200

Operating Life

L80/B10

in hours at measured temperature at t_p point

Type	150 mA			200 mA			350 mA			500 mA			700 mA		
	40 $^\circ\text{C}$	50 $^\circ\text{C}$	75 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	75 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	75 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	75 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	75 $^\circ\text{C}$
526-S	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000
536-S	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000	> 54,000

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

LED Line SMD Kit 3R Gen. 3

Optical Characteristics

at $t_p = 50^\circ\text{C}$; without secondary optics

CRI R_a 80

Type	Ref. No.		Colour	Correl. colour temp. * K	Luminous flux** (lm) and efficiency (lm/W) at										Photo-metric code
	Connection				150 mA		200 mA		350 mA		500 mA		700 mA		
	Top	Bottom			typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	
	(TC)	(BC)			lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	

Module length: 280 mm

WU-M-526-S-TC/BC-830	566749	566753	warm white	3000	795	178	1045	173	1760	161	2445	152	3300	142	830/349
WU-M-526-S-TC/BC-840	566750	566754	neutral white	4000	855	192	1125	187	1890	173	2630	164	3540	152	840/349
WU-M-526-S-TC/BC-850	566751	566755	neutral white	5000	870	195	1140	189	1920	176	2665	166	3595	154	850/349
WU-M-526-S-TC/BC-865	566752	566756	cool white	6500	825	185	1080	179	1820	167	2530	157	3410	146	865/349

Module length: 566 mm

WU-M-536-S-TC/BC-830	566757	566761	warm white	3000	1590	178	2090	173	3520	161	4890	152	6600	142	830/349
WU-M-536-S-TC/BC-840	566758	566762	neutral white	4000	1710	192	2250	187	3780	173	5260	164	7080	152	840/349
WU-M-536-S-TC/BC-850	566759	566763	neutral white	5000	1740	195	2280	189	3840	176	5330	166	7190	154	850/349
WU-M-536-S-TC/BC-865	566760	566764	cool white	6500	1650	185	2160	179	3640	167	5060	157	6820	146	865/349

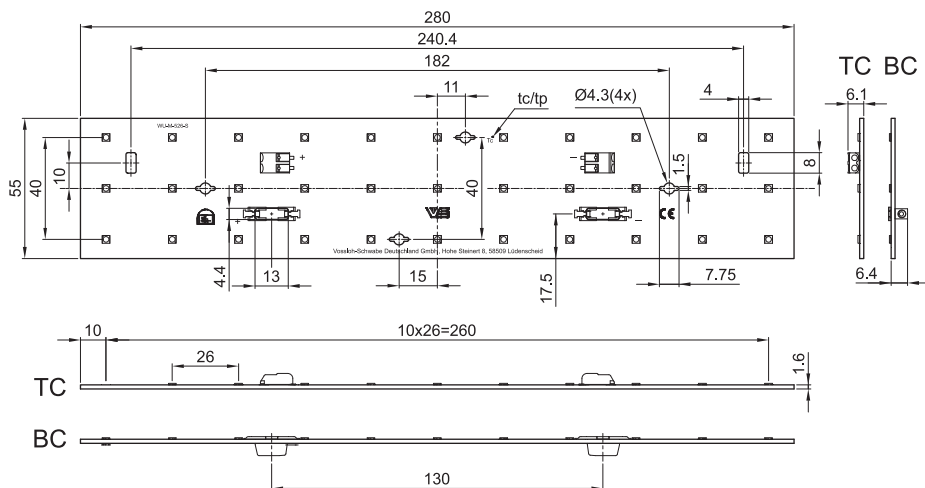
* Colour tolerance: 3 McAdams | ** Production tolerance of luminous flux and efficiency: $\pm 10\%$ | CRI > 90 on request

Minimum order quantity (packaging unit): 42 pcs.

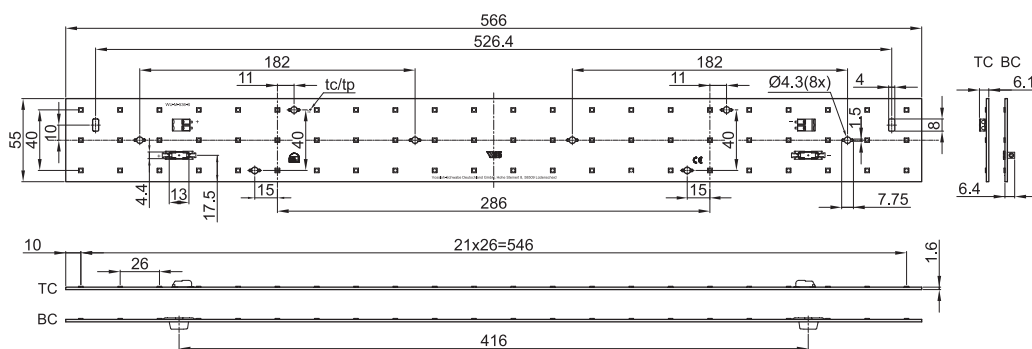
The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

LED Line SMD Kit 3R Gen. 3

Mechanical Dimensions SMD Board



WU-M-526-S-TC/-BC

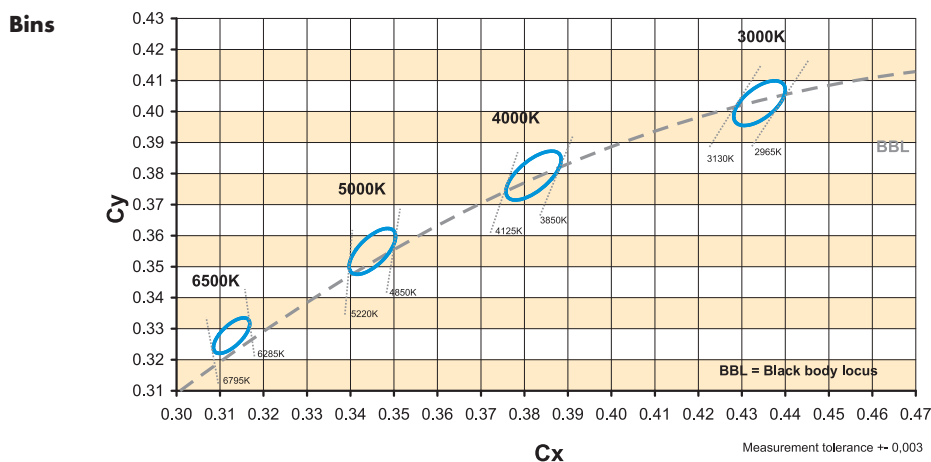


WU-M-536-S-TC/-BC

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

5

LED Line SMD Kit 3R Gen. 3



Technical Notes for Optics

Brilliant light distribution and surfaces

Highly efficient up to 95%

Material: PMMA, transparent or translucent

Dimensions (LxWxH): 285.4x62x11.25 mm

SMD Kits can be strung together, for modules 280 mm, 566 mm and module chains

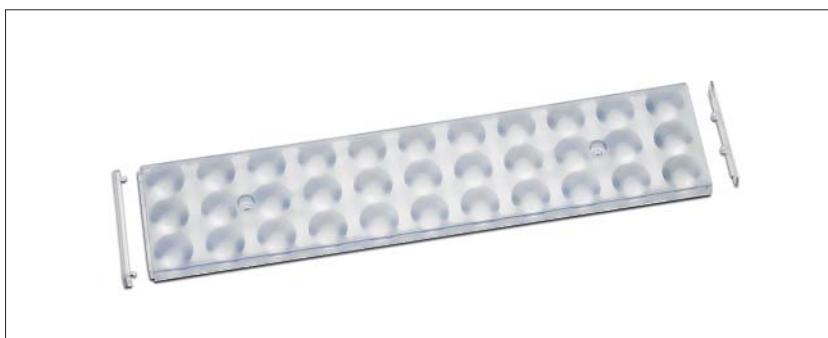
Max. allowed temperature: 80 °C

Fixation with flat or cylinder head screws (M4)

or with fixing clip (see page 7)

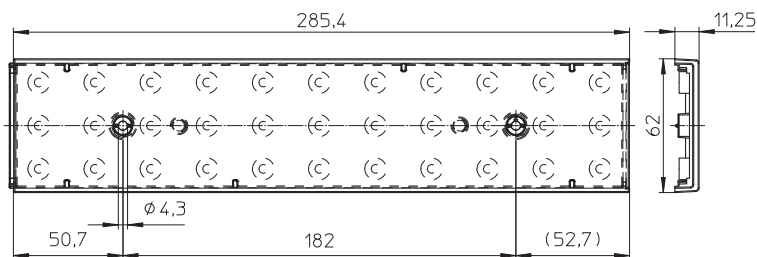
Max. torque: 1.2 Nm (M4)

Packaging unit: 120 pcs.



Light distribution	Optics type	Ref. No.	Efficiency %	Weight g
Material: transparent, high-glossy				
Extra Wide 110°	99400	560371	95	105
Wide 60°	99401	560372	95	88
Narrow 30°	99404	560375	95	94
Retail SYM	99402	560373	95	93
Retail ASYM	99403	560374	95	99
Material: transparent, mat				
Extra Wide 110°	99410	564557	95	105
Wide 90°	99415	564559	95	80
Wide 60°	99411	563660	95	88
Narrow 30°	99414	564558	95	94
Retail SYM	99412	563337	95	93
Retail ASYM	99413	563338	95	99
Material: translucent, high-glossy				
Diffuse	99400	562543	85	105

Optics



The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

LED Line SMD Kit 3R Gen. 3

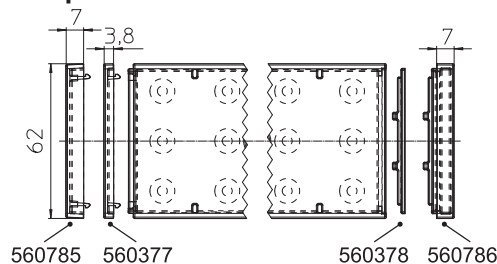
End Caps

Lateral attachment on the optics
(on the side of the groove or tongue)

Material: PC, transparent, mat

End cap type	For optics type	Ref. No.	Length L mm	Weight g	Packaging unit (pcs.)
Tongue side	994	560377	3.8	1.6	250
Tongue side	994	560785	7	2.3	250
Groove side	994	560378	—	1	500
Groove side	994	560786	7	3.3	500

End Caps



Spacer

For creating different lengths of lighting strips

Insert in optics to connect (groove or tongue side)

Material: PMMA, transparent or translucent, high-glossy

Spacer type	For optics type	Ref. No.	Length L mm	Weight g	Packaging unit (pcs.)
-------------	-----------------	----------	-------------	----------	-----------------------

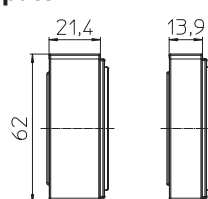
Material: transparent, high-glossy

Short	994	564458	13.9	4.5	350
Long	994	563187	21.4	6.1	350
Short, VS brand	994	560793	13.9	4.5	350
Long, VS brand	994	560789	21.4	6.1	350

Material: translucent, high-glossy

Short	994	564459	13.9	4.5	350
Long	994	564457	21.4	6.1	350
Short, VS brand	994	564678	13.9	4.5	350
Long, VS brand	994	564677	21.4	6.1	350

Spacer



Fixing Clip

For fastening LED optics of type 994 and LED PCBs to luminaire sheets without needing screws

Vibration resistant version

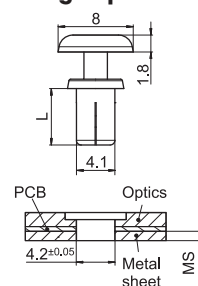
Material: PA, natural (UL-94 V-2)

Weight: 0.2 g, Packaging unit: 1000 pcs.

Type	Ref. No.	For luminaire sheet thickness * (MS) mm	Length L mm
98001	562557	0.5–1.3	8
98002	562558	1.4–2.2	9
98003	562559	2.3–3.1	10

* For PCB thickness: 1.5 mm

Fixing Clip



Linear LED Constant Current Drivers

Please visit our homepage for details for suitable

LED constant current drivers: www.vossloh-schwabe.com

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

LED Line SMD Kit 3R Gen. 3

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 luminaire 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.
- 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 could 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) /countersunk 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 BJB 46.121.1001 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
Rating in accordance with IEC / TR 62778: risk group 1

CCT K	Max. operating current for risk group 1 mA	E threshold for higher operating currents to be risk group 1 lx
≤ 4000	846	1130
5000	537	657
6000	522	545

Applied Standards

EN 62031
LED modules for general lighting – Safety specifications



EN 62471
Photobiological safety of lamps and lamp systems

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.

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.