

LED Line SMD Gen. 2 – L14/28/56/70/75/112 W2

# LED LINE SMD GEN. 2 L14/28/56/70/75/ 112 W2

STANDARD AND HB



## LED LINE SMD GEN. 2 L14/28/56/70/75/112 W2 – STANDARD AND HIGH BRIGHTNESS

**WU-M-507/508-G, WU-M-509/510-G,  
WU-M-511/512-G, WU-M-552/553-G,  
WU-M-559/560-G, WU-M-544/527-G**

### 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 Line SMD Gen. 2 –  
L14/28/56/70/75/112 W2**

- **LONG SERVICE LIFE TIME: 50,000 H (L80, B10)**
- **HIGHLY EFFICIENT: UP TO 180 LM/W  
AT T<sub>p</sub> = 50 °C**
- **5 LENGTHS AVAILABLE:  
140 / 280 / 560 / 700 / 750 / 1120 MM**
- **2 DIFFERENT POWER CLASSES**
- **ZHAGA-COMPLIANT HOLE DISTANCES**

## LED Line SMD Gen. 2 – L14/28/56/70/75/ 112 W2

### Technical Notes

- LED built-in module for integration into luminaires
- Dimensions  
WU-M-507/508: 140x20 mm  
WU-M-509/510: 280x20 mm  
WU-M-511/512: 560x20 mm  
WU-M-552/553: 700x20 mm  
WU-M-559/560: 750x20 mm  
WU-M-544/527: 1120x20 mm
- Driving current: 350 mA / 500 mA / 700 mA
- On-board push-in terminals (WAGO 2060)



### Electrical Characteristics

at  $t_p = 50\text{ °C}$

Type	No. of SMDs	Voltage DC (V)									Temperature coefficient mV/K	Power consumption (W)									
		350 mA			500 mA			700 mA				350 mA			500 mA			700 mA			
		min.	typ.	max.	min.	typ.	max.	min.	typ.	max.		min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	
<b>LED Line SMD Gen. 2 – L14 W2</b>																					
WU-M-507-G	5	2.7	2.8	3.2	2.8	3.0	3.3	2.9	3.1	3.4	-3.33	0.9	1.0	1.1	1.4	1.5	1.7	2.0	2.2	2.4	
WU-M-507-G-HB	5	5.2	5.5	5.8	5.4	5.7	6.0	5.7	6.0	6.3	-6.65	1.8	1.9	2.0	2.7	2.9	3.0	4.0	4.2	4.4	
WU-M-508-G	10	5.3	5.7	6.3	5.5	5.9	6.5	5.8	6.2	6.8	-6.65	1.9	2.0	2.2	2.8	3.0	3.3	4.1	4.3	4.8	
WU-M-508-G-HB	10	10.4	11.1	11.6	10.8	11.5	12.0	11.3	12.0	12.5	-13.30	3.6	3.9	4.1	5.4	5.8	6.0	7.9	8.4	8.8	
<b>LED Line SMD Gen. 2 – L28 W2</b>																					
WU-M-509-G	10	5.3	5.7	6.3	5.5	5.9	6.5	5.8	6.2	6.8	-6.65	1.9	2.0	2.2	2.8	3.0	3.3	4.1	4.3	4.8	
WU-M-509-G-HB	10	10.4	11.1	11.6	10.8	11.5	12.0	11.3	12.0	12.5	-13.30	3.6	3.9	4.1	5.4	5.8	6.0	7.9	8.4	8.8	
WU-M-510-G	20	10.6	11.3	12.6	11.1	11.8	13.1	11.6	12.4	13.6	-13.30	3.7	4.0	4.4	5.6	5.9	6.6	8.1	8.7	9.5	
WU-M-510-G-HB	20	20.8	22.2	23.2	21.6	22.9	24.0	22.6	23.9	25.0	-26.60	7.3	7.8	8.1	10.8	11.5	12.0	15.8	16.7	17.5	
<b>LED Line SMD Gen. 2 – L56 W2</b>																					
WU-M-511-G	20	10.6	11.3	12.6	11.1	11.8	13.1	11.6	12.4	13.6	-13.30	3.7	4.0	4.4	5.6	5.9	6.6	8.1	8.7	9.5	
WU-M-511-G-HB	20	20.8	22.2	23.2	21.6	22.9	24.0	22.6	23.9	25.0	-26.60	7.3	7.8	8.1	10.8	11.5	12.0	15.8	16.7	17.5	
WU-M-512-G	40	21.2	22.6	25.2	22.2	23.6	26.2	23.3	24.7	27.3	-26.60	7.4	7.9	8.8	11.1	11.8	13.1	16.3	17.3	19.1	
WU-M-512-G-HB	40	41.7	44.3	46.5	43.2	45.9	48.0	45.2	47.8	50.0	-53.21	14.6	15.5	16.3	21.6	23.0	24.0	31.6	33.5	35.0	
<b>LED Line SMD Gen. 2 – L70 W2</b>																					
WU-M-552-G	25	13.3	14.2	15.8	13.9	14.8	16.4	14.6	15.5	17.1	-16.63	4.7	5.0	5.5	7.0	7.4	8.2	10.2	10.8	12.0	
WU-M-552-G-HB	25	26.1	27.7	29.1	27.0	28.7	30.0	28.3	29.9	31.3	-33.26	9.1	9.7	10.2	13.5	14.4	15.0	19.8	20.9	21.9	
WU-M-553-G	50	26.5	28.3	31.5	27.7	29.5	32.7	29.1	30.9	34.1	-33.26	9.3	9.9	11.0	13.9	14.8	16.4	20.4	21.6	23.9	
WU-M-553-G-HB	50	52.1	55.4	58.1	54.0	57.3	60.0	56.5	59.8	62.5	-66.51	18.2	19.4	20.3	27.0	28.7	30.0	39.5	41.9	43.8	
<b>LED Line SMD Gen. 2 – L75 W2</b>																					
WU-M-559-G	25	13.3	14.2	15.8	13.9	14.8	16.4	14.6	15.5	17.1	-16.63	4.7	5.0	5.5	7.0	7.4	8.2	10.2	10.8	12.0	
WU-M-559-G-HB	25	26.1	27.7	29.1	27.0	28.7	30.0	28.3	29.9	31.3	-33.26	9.1	9.7	10.2	13.5	14.4	15.0	19.8	20.9	21.9	
WU-M-560-G	50	26.5	28.3	31.5	27.7	29.5	32.7	29.1	30.9	34.1	-33.26	9.3	9.9	11.0	13.9	14.8	16.4	20.4	21.6	23.9	
WU-M-560-G-HB	50	52.1	55.4	58.1	54.0	57.3	60.0	56.5	59.8	62.5	-66.51	18.2	19.4	20.3	27.0	28.7	30.0	39.5	41.9	43.8	
<b>LED Line SMD Gen. 2 – L112 W2</b>																					
WU-M-544-G	40	21.2	22.6	25.2	22.2	23.6	26.2	23.3	24.7	27.3	-26.60	7.4	7.9	8.8	11.1	11.8	13.1	16.3	17.3	19.1	
WU-M-544-G-HB	40	41.7	44.3	46.5	43.2	45.9	48.0	45.2	47.8	50.0	-53.21	14.6	15.5	16.3	21.6	23.0	24.0	31.6	33.5	35.0	
WU-M-527-G	80	42.4	45.3	50.4	44.3	47.2	52.3	46.6	49.5	54.6	-53.21	14.8	15.9	17.6	22.2	23.6	26.2	32.6	34.6	38.2	
WU-M-527-G-HB	80	83.4	88.6	93.0	86.5	91.8	96.1	90.4	95.7	100.0	-106.42	29.2	31.0	32.5	43.3	45.9	48.1	63.3	67.0	70.0	

Use of external LED constant current driver required.

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## LED Line SMD Gen. 2 – L14/28/56/70/75/112 W2

### 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 $t_c$ point		Storage temperature range		Max. allowed repetitive peak current mA
		°C min.	°C max.	°C min.	°C max.	
All types	350	-20	+75	-20	+85	1030
	500	-20	+75	-20	+85	980
	700	-20	+75	-20	+85	935

### Operating Life

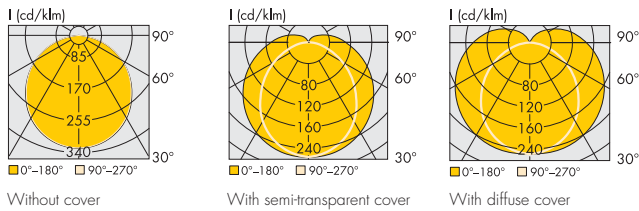
L80/B10

in hours at measured temperature at  $t_p$  point

	350 mA			500 mA			700 mA		
	40 °C	50 °C	75 °C	40 °C	50 °C	75 °C	40 °C	50 °C	75 °C
WU-M-507 to 512, 544, 552/553, 559/560, 527	> 60,000	> 60,000	53,000	> 60,000	> 60,000	45,000	> 60,000	> 60,000	37,000
WU-M-507 to 512, 544, 552/553, 559/560, 527 - HB	> 60,000	> 60,000	29,000	> 60,000	> 60,000	22,000	58,000	37,000	17,000

### Typical Light Distribution Curves

Data are available in .ldt format for download under [www.vossloh-schwabe.com](http://www.vossloh-schwabe.com).



### Optical Characteristics

at  $t_p = 50 °C$

Type	Ref. No.	Colour	Correlated colour temperature K	Luminous flux* (lm) and efficiency (lm/W) at									CRI		Beam angle °	Photometric code
				350 mA			500 mA			700 mA			min. $R_a$	typ. $R_a$		
				min. lm	typ. lm	typ. lm/W	min. lm	typ. lm	typ. lm/W	min. lm	typ. lm	typ. lm/W				

#### LED Line SMD Gen. 2 – L14 W2

WU-M-507-G-830	<b>560176</b>	warm white	3000	150	165	167	210	230	157	285	315	145	80	85	120	830/349
WU-M-507-G-840	<b>560177</b>	neutral white	4000	155	175	175	220	245	165	295	330	153	80	85	120	840/349
WU-M-507-G-850	<b>560179</b>	neutral white	5000	170	180	180	235	250	169	325	340	157	80	85	120	850/349
WU-M-507-G-865	<b>560180</b>	cool white	6500	155	175	177	220	245	167	295	335	154	80	85	120	865/349
WU-M-507-G-HB-830	<b>560201</b>	warm white	3000	285	315	163	400	440	154	545	600	143	80	85	120	830/349
WU-M-507-G-HB-840	<b>560202</b>	neutral white	4000	310	330	171	435	465	162	590	630	151	80	85	120	840/349
WU-M-507-G-HB-850	<b>560203</b>	neutral white	5000	310	335	174	435	470	165	590	645	153	80	85	120	850/349
WU-M-507-G-HB-865	<b>560204</b>	cool white	6500	310	330	171	435	465	161	590	630	150	80	85	120	865/349
WU-M-508-G-830	<b>560164</b>	warm white	3000	300	330	167	420	465	157	570	630	145	80	85	120	830/349
WU-M-508-G-840	<b>560165</b>	neutral white	4000	310	345	175	435	485	165	590	660	153	80	85	120	840/349
WU-M-508-G-850	<b>560166</b>	neutral white	5000	340	355	180	475	500	169	645	680	157	80	85	120	850/349
WU-M-508-G-865	<b>560167</b>	cool white	6500	310	350	177	435	490	167	590	670	154	80	85	120	865/349
WU-M-508-G-HB-830	<b>560189</b>	warm white	3000	570	630	163	800	885	154	1085	1200	143	80	85	120	830/349
WU-M-508-G-HB-840	<b>560190</b>	neutral white	4000	620	665	171	870	930	162	1185	1265	151	80	85	120	840/349
WU-M-508-G-HB-850	<b>560191</b>	neutral white	5000	620	675	174	870	945	165	1185	1285	153	80	85	120	850/349
WU-M-508-G-HB-865	<b>560192</b>	cool white	6500	620	660	171	870	925	161	1185	1260	150	80	85	120	865/349

\* Measurement tolerance of luminous flux:  $\pm 7\%$  | CRI > 90 on request

**Minimum order quantity (packaging unit): 150 pcs.**

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## LED Line SMD Gen. 2 – L14/28/56/70/75/112 W2

### Optical Characteristics

at  $t_p = 50\text{ °C}$

Type	Ref. No.	Colour	Correlated colour temperature K	Luminous flux* (lm) and efficiency (lm/W) at									CRI		Beam angle °	Photometric code
				350 mA			500 mA			700 mA			R <sub>a</sub>	R <sub>g</sub>		
				min. lm	typ. lm	typ. lm/W	min. lm	typ. lm	typ. lm/W	min. lm	typ. lm	typ. lm/W	min. R <sub>a</sub>	typ. R <sub>a</sub>		
<b>LED Line SMD Gen. 2 – L28 W2</b>																
WU-M-509-G-830	<b>560181</b>	warm white	3000	300	330	167	420	465	157	570	630	145	80	85	120	830/349
WU-M-509-G-840	<b>560182</b>	neutral white	4000	310	345	175	435	485	165	590	660	153	80	85	120	840/349
WU-M-509-G-850	<b>560183</b>	neutral white	5000	340	355	180	475	500	169	645	680	157	80	85	120	850/349
WU-M-509-G-865	<b>560184</b>	cool white	6500	310	350	177	435	490	167	590	670	154	80	85	120	865/349
WU-M-509-G-HB-830	<b>560205</b>	warm white	3000	570	630	163	800	885	154	1085	1200	143	80	85	120	830/349
WU-M-509-G-HB-840	<b>560206</b>	neutral white	4000	620	665	171	870	930	162	1185	1265	151	80	85	120	840/349
WU-M-509-G-HB-850	<b>560207</b>	neutral white	5000	620	675	174	870	945	165	1185	1285	153	80	85	120	850/349
WU-M-509-G-HB-865	<b>560208</b>	cool white	6500	620	660	171	870	925	161	1185	1260	150	80	85	120	865/349
WU-M-510-G-830	<b>560168</b>	warm white	3000	600	660	167	835	925	157	1140	1260	145	80	85	120	830/349
WU-M-510-G-840	<b>560169</b>	neutral white	4000	620	695	175	870	970	165	1185	1320	153	80	85	120	840/349
WU-M-510-G-850	<b>560170</b>	neutral white	5000	680	715	180	950	995	169	1290	1355	157	80	85	120	850/349
WU-M-510-G-865	<b>560171</b>	cool white	6500	620	700	177	870	985	167	1185	1335	154	80	85	120	865/349
WU-M-510-G-HB-830	<b>560193</b>	warm white	3000	1140	1260	163	1595	1765	154	2170	2400	143	80	85	120	830/349
WU-M-510-G-HB-840	<b>560194</b>	neutral white	4000	1240	1325	171	1740	1855	162	2365	2525	151	80	85	120	840/349
WU-M-510-G-HB-850	<b>560195</b>	neutral white	5000	1240	1350	174	1740	1890	165	2365	2570	153	80	85	120	850/349
WU-M-510-G-HB-865	<b>560196</b>	cool white	6500	1240	1325	171	1740	1850	161	2365	2520	150	80	85	120	865/349
<b>LED Line SMD Gen. 2 – L56 W2</b>																
WU-M-511-G-830	<b>560185</b>	warm white	3000	600	660	167	835	925	157	1140	1260	145	80	85	120	830/349
WU-M-511-G-840	<b>560186</b>	neutral white	4000	620	695	175	870	970	165	1185	1320	153	80	85	120	840/349
WU-M-511-G-850	<b>560187</b>	neutral white	5000	680	715	180	950	995	169	1290	1355	157	80	85	120	850/349
WU-M-511-G-865	<b>560188</b>	cool white	6500	620	700	177	870	985	167	1185	1335	154	80	85	120	865/349
WU-M-511-G-HB-830	<b>560209</b>	warm white	3000	1140	1260	163	1595	1765	154	2170	2400	143	80	85	120	830/349
WU-M-511-G-HB-840	<b>560210</b>	neutral white	4000	1240	1325	171	1740	1855	162	2365	2525	151	80	85	120	840/349
WU-M-511-G-HB-850	<b>560211</b>	neutral white	5000	1240	1350	174	1740	1890	165	2365	2570	153	80	85	120	850/349
WU-M-511-G-HB-865	<b>560212</b>	cool white	6500	1240	1325	171	1740	1850	161	2365	2520	150	80	85	120	865/349
WU-M-512-G-830	<b>560172</b>	warm white	3000	1195	1325	167	1670	1850	157	2275	2515	145	80	85	120	830/349
WU-M-512-G-840	<b>560173</b>	neutral white	4000	1245	1390	175	1740	1940	165	2370	2645	153	80	85	120	840/349
WU-M-512-G-850	<b>560174</b>	neutral white	5000	1355	1425	180	1895	1995	169	2580	2715	157	80	85	120	850/349
WU-M-512-G-865	<b>560175</b>	cool white	6500	1245	1405	177	1740	1965	167	2370	2675	154	80	85	120	865/349
WU-M-512-G-HB-830	<b>560197</b>	warm white	3000	2280	2520	163	3190	3530	154	4340	4805	143	80	85	120	830/349
WU-M-512-G-HB-840	<b>560198</b>	neutral white	4000	2485	2650	171	3475	3710	162	4730	5050	151	80	85	120	840/349
WU-M-512-G-HB-850	<b>560199</b>	neutral white	5000	2485	2700	174	3475	3780	165	4730	5140	153	80	85	120	850/349
WU-M-512-G-HB-865	<b>560200</b>	cool white	6500	2485	2645	171	3475	3705	161	4730	5040	150	80	85	120	865/349
<b>LED Line SMD Gen. 2 – L70 W2</b>																
WU-M-552-G-830	<b>563367</b>	warm white	3000	745	825	167	1045	1155	157	1420	1575	145	80	85	120	830/349
WU-M-552-G-840	<b>563368</b>	neutral white	4000	780	870	175	1090	1215	165	1480	1650	153	80	85	120	840/349
WU-M-552-G-850	<b>563369</b>	neutral white	5000	845	890	180	1185	1245	169	1615	1695	157	80	85	120	850/349
WU-M-552-G-865	<b>563370</b>	cool white	6500	780	880	177	1090	1230	167	1480	1670	154	80	85	120	865/349
WU-M-552-G-HB-830	<b>563371</b>	warm white	3000	1425	1575	163	1995	2205	154	2715	3000	143	80	85	120	830/349
WU-M-552-G-HB-840	<b>563372</b>	neutral white	4000	1555	1660	171	2175	2320	162	2960	3155	151	80	85	120	840/349
WU-M-552-G-HB-850	<b>563373</b>	neutral white	5000	1555	1685	174	2175	2360	165	2960	3215	153	80	85	120	850/349
WU-M-552-G-HB-865	<b>563374</b>	cool white	6500	1555	1655	171	2175	2315	161	2960	3150	150	80	85	120	865/349

\* Measurement tolerance of luminous flux:  $\pm 7\%$  | CRI > 90 on request

**Minimum order quantity (packaging unit): 75 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 Gen. 2 – L14/28/56/70/75/112 W2

### Optical Characteristics

at  $t_p = 50\text{ °C}$

Type	Ref. No.	Colour	Correlated colour temperature* K	Luminous flux* (lm) and efficiency (lm/W) at									CRI		Beam angle* °	Photo-metric code
				350 mA			500 mA			700 mA			min. $R_a$	typ. $R_a$		
				min. lm	typ. lm	typ. lm/W	min. lm	typ. lm	typ. lm/W	min. lm	typ. lm	typ. lm/W	min. $R_a$	typ. $R_a$		
<b>LED Line SMD Gen. 2 – L70 W2</b>																
WU-M-553-G-830	<b>563383</b>	warm white	3000	1495	1655	167	2090	2315	157	2845	3145	145	80	85	120	830/349
WU-M-553-G-840	<b>563384</b>	neutral white	4000	1555	1735	175	2175	2430	165	2960	3305	153	80	85	120	840/349
WU-M-553-G-850	<b>563385</b>	neutral white	5000	1695	1780	180	2370	2495	169	3225	3390	157	80	85	120	850/349
WU-M-553-G-865	<b>563386</b>	cool white	6500	1555	1755	177	2175	2455	167	2960	3340	154	80	85	120	865/349
WU-M-553-G-HB-830	<b>563387</b>	warm white	3000	2850	3155	163	3990	4415	154	5425	6005	143	80	85	120	830/349
WU-M-553-G-HB-840	<b>563388</b>	neutral white	4000	3105	3315	171	4345	4640	162	5915	6315	151	80	85	120	840/349
WU-M-553-G-HB-850	<b>563389</b>	neutral white	5000	3105	3375	174	4345	4720	165	5915	6425	153	80	85	120	850/349
WU-M-553-G-HB-865	<b>563390</b>	cool white	6500	3105	3310	171	4345	4630	161	5915	6300	150	80	85	120	865/349
<b>LED Line SMD Gen. 2 – L75 W2</b>																
WU-M-559-G-830	<b>564360</b>	warm white	3000	745	825	167	1045	1155	157	1420	1575	145	80	85	120	830/349
WU-M-559-G-840	<b>564361</b>	neutral white	4000	780	870	175	1090	1215	165	1480	1650	153	80	85	120	840/349
WU-M-559-G-850	<b>564362</b>	neutral white	5000	845	890	180	1185	1245	169	1615	1695	157	80	85	120	850/349
WU-M-559-G-865	<b>564363</b>	cool white	6500	780	880	177	1090	1230	167	1480	1670	154	80	85	120	865/349
WU-M-559-G-HB-830	<b>564366</b>	warm white	3000	1425	1575	163	1995	2205	154	2715	3000	143	80	85	120	830/349
WU-M-559-G-HB-840	<b>564367</b>	neutral white	4000	1555	1660	171	2175	2320	162	2960	3155	151	80	85	120	840/349
WU-M-559-G-HB-850	<b>564368</b>	neutral white	5000	1555	1685	174	2175	2360	165	2960	3215	153	80	85	120	850/349
WU-M-559-G-HB-865	<b>564369</b>	cool white	6500	1555	1655	171	2175	2315	161	2960	3150	150	80	85	120	865/349
WU-M-560-G-830	<b>564372</b>	warm white	3000	1495	1655	167	2090	2315	157	2845	3145	145	80	85	120	830/349
WU-M-560-G-840	<b>564373</b>	neutral white	4000	1555	1735	175	2175	2430	165	2960	3305	153	80	85	120	840/349
WU-M-560-G-850	<b>564374</b>	neutral white	5000	1695	1780	180	2370	2495	169	3225	3390	157	80	85	120	850/349
WU-M-560-G-865	<b>564375</b>	cool white	6500	1555	1755	177	2175	2455	167	2960	3340	154	80	85	120	865/349
WU-M-560-G-HB-830	<b>564378</b>	warm white	3000	2850	3155	163	3990	4415	154	5425	6005	143	80	85	120	830/349
WU-M-560-G-HB-840	<b>564379</b>	neutral white	4000	3105	3315	171	4345	4640	162	5915	6315	151	80	85	120	840/349
WU-M-560-G-HB-850	<b>564380</b>	neutral white	5000	3105	3375	174	4345	4720	165	5915	6425	153	80	85	120	850/349
WU-M-560-G-HB-865	<b>564381</b>	cool white	6500	3105	3310	171	4345	4630	161	5915	6300	150	80	85	120	865/349
<b>LED Line SMD Gen. 2 – L112 W2</b>																
WU-M-544-G-830	<b>563023</b>	warm white	3000	1195	1325	167	1670	1850	157	2275	2515	145	80	85	120	830/349
WU-M-544-G-840	<b>563025</b>	neutral white	4000	1245	1390	175	1740	1940	165	2370	2645	153	80	85	120	840/349
WU-M-544-G-850	<b>563027</b>	neutral white	5000	1355	1425	180	1895	1995	169	2580	2715	157	80	85	120	850/349
WU-M-544-G-865	<b>563029</b>	cool white	6500	1245	1405	177	1740	1965	167	2370	2675	154	80	85	120	865/349
WU-M-544-G-HB-830	<b>563024</b>	warm white	3000	2280	2520	163	3190	3530	154	4340	4805	143	80	85	120	830/349
WU-M-544-G-HB-840	<b>563026</b>	neutral white	4000	2485	2650	171	3475	3710	162	4730	5050	151	80	85	120	840/349
WU-M-544-G-HB-850	<b>563028</b>	neutral white	5000	2485	2700	174	3475	3780	165	4730	5140	153	80	85	120	850/349
WU-M-544-G-HB-865	<b>563030</b>	cool white	6500	2485	2645	171	3475	3705	161	4730	5040	150	80	85	120	865/349
WU-M-527-G-830	<b>562970</b>	warm white	3000	2390	2645	167	3345	3700	157	4550	5035	145	80	85	120	830/349
WU-M-527-G-840	<b>562972</b>	neutral white	4000	2490	2775	175	3480	3885	165	4740	5285	153	80	85	120	840/349
WU-M-527-G-850	<b>562974</b>	neutral white	5000	2710	2850	180	3795	3990	169	5160	5425	157	80	85	120	850/349
WU-M-527-G-865	<b>562976</b>	cool white	6500	2490	2810	177	3480	3930	167	4740	5350	154	80	85	120	865/349
WU-M-527-G-HB-830	<b>562971</b>	warm white	3000	4560	5045	163	6380	7060	154	8685	9610	143	80	85	120	830/349
WU-M-527-G-HB-840	<b>562973</b>	neutral white	4000	4970	5305	171	6955	7425	162	9465	10105	151	80	85	120	840/349
WU-M-527-G-HB-850	<b>562975</b>	neutral white	5000	4970	5400	174	6955	7555	165	9465	10280	153	80	85	120	850/349
WU-M-527-G-HB-865	<b>562977</b>	cool white	6500	4970	5295	171	6955	7410	161	9465	10080	150	80	85	120	865/349

\* Measurement tolerance of luminous flux:  $\pm 7\%$  | CRI > 90 on request

**Minimum order quantity (packaging unit): 75 pcs.**

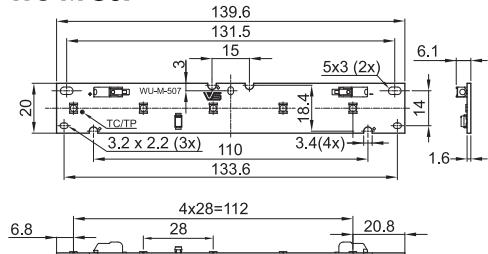
The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.



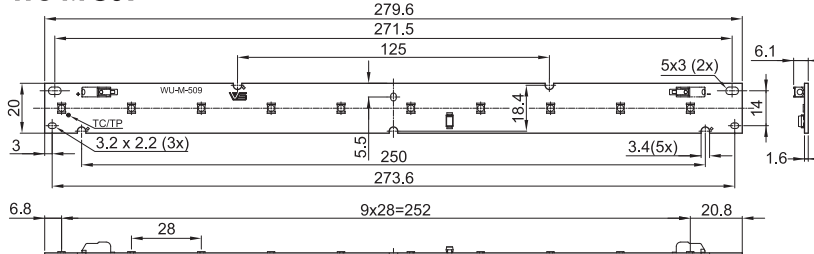
# LED Line SMD Gen. 2 – L14/28/56/70/75/112 W2

## Mechanical Dimensions

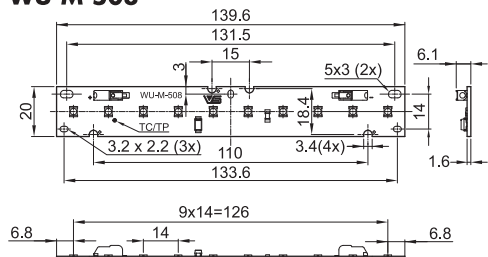
**WU-M-507**



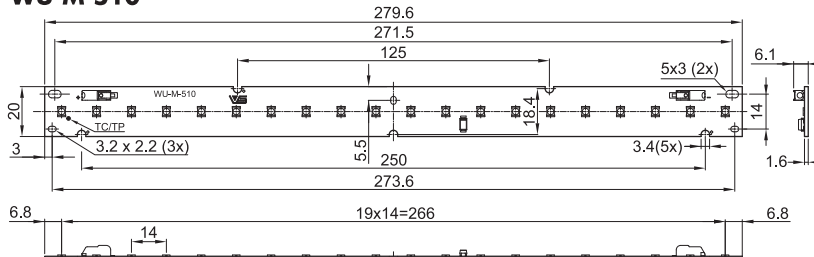
**WU-M-509**



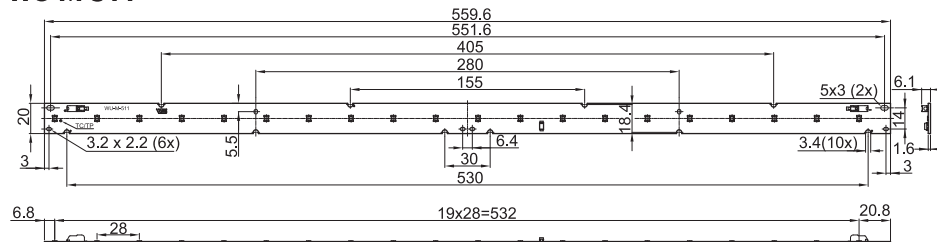
**WU-M-508**



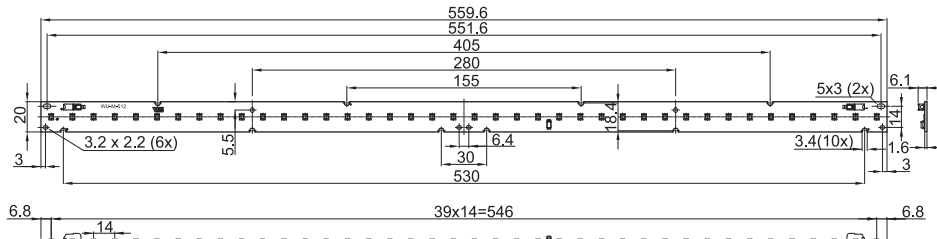
**WU-M-510**



**WU-M-511**



**WU-M-512**

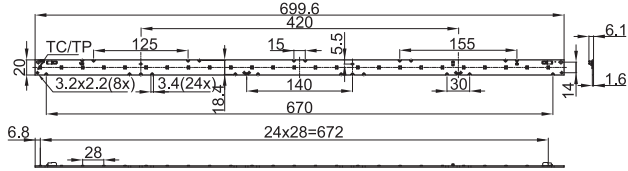


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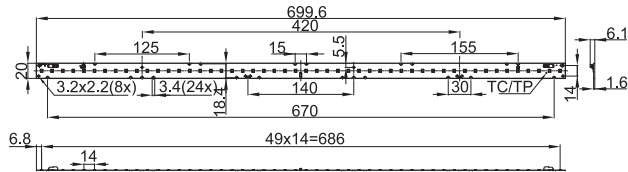
## LED Line SMD Gen. 2 – L14/28/56/70/75/112 W2

### Mechanical Dimensions

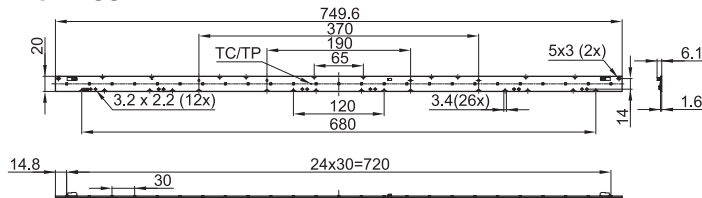
#### WU-M-552



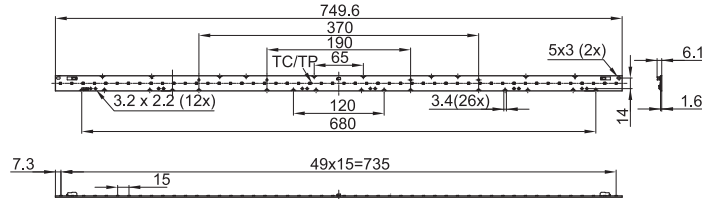
#### WU-M-553



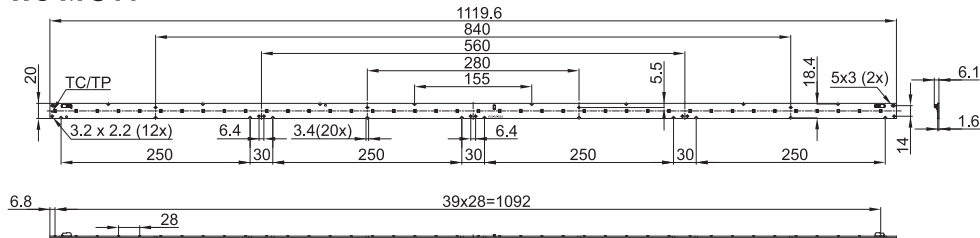
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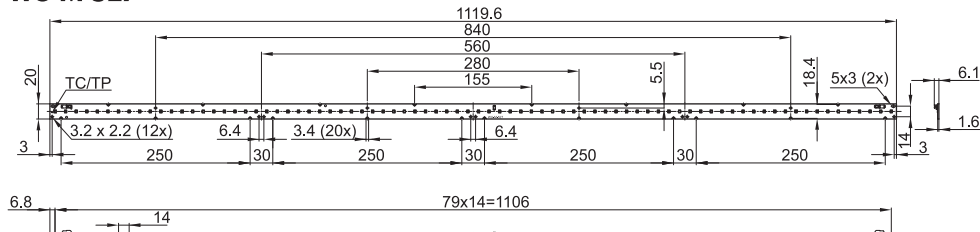
#### WU-M-560



#### WU-M-544



#### WU-M-527

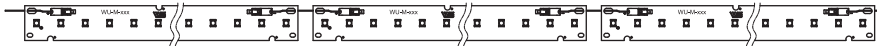


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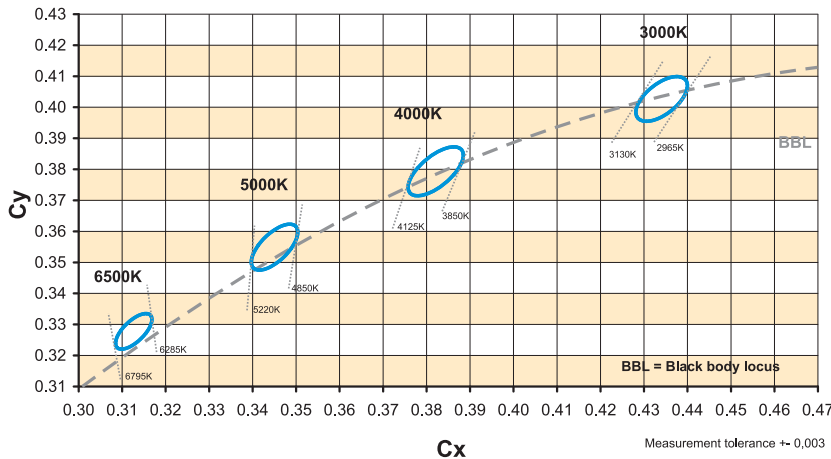
## LED Line SMD Gen. 2 – L14/28/56/70/75/112 W2

### Connection Example

- 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 450 V DC (basic insulation) and 250 V DC (reinforced insulation).
- In case of assembly of the LED modules in profiles (e.g. aluminium) where the profile touches the top edge of the PCB the clearance and creepage distances are reduced to 200 V DC (basic insulation) and 120 V DC (reinforced insulation).
- Max. diameter of screw head (M3):  $\varnothing$  6 mm



### Bins



### Fixing Clip

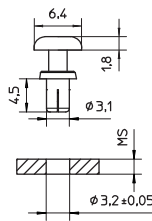
For fastening LED PCBs to luminaire sheets without needing screws

PCB hole dia.: 3.4 mm

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
98010	<b>562560</b>	0.5–1.3*

\* PCB thickness: 1.5 mm

## Linear LED Constant Current Drivers

Please visit our homepage for details for suitable LED constant current drivers: [www.vossloh-schwabe.com](http://www.vossloh-schwabe.com)

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## LED Line SMD Gen. 2 – L14/28/56/70/75/112 W2

### Cover W2 for clip fixing or tape fixing

A semi-transparent or a diffuse cover is available for the modules LED Line SMD W2 which protects the SMD board. The cover reduces glare and makes a homogeneous light distribution.

Easy assembly by clip fixing of the cover under the fixing screws of the SMD board or by tape fixing.

#### Technical Notes for Cover

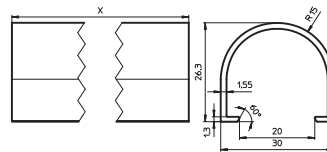
Material: PMMA

High transmission:

- 92% semi-transparent
- 84% diffuse

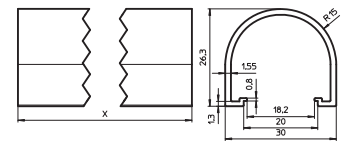
#### For clip fixing

Recommended diameter of fixing screw head: 6 mm



#### For tape fixing

No screws for PCB and cover fixing needed



Type	Ref. No. for clip fixing	Ref. No. for tape fixing	Length X mm	Version	Efficiency %	Weight g	Packaging unit pcs.
89800	<b>562189</b>	<b>562549</b>	597	semi-transparent	92	81.8	240
89801	<b>562192</b>	<b>562551</b>	1200	semi-transparent	92	164.4	192
89802	<b>562195</b>	<b>562553</b>	1500	semi-transparent	92	205.5	192
89803	<b>562198</b>	<b>562555</b>	1800	semi-transparent	92	246.6	192
89800	<b>562190</b>	<b>562550</b>	597	diffuse	84	81.8	240
89801	<b>562193</b>	<b>562552</b>	1200	diffuse	84	164.4	192
89802	<b>562196</b>	<b>562554</b>	1500	diffuse	84	205.5	192
89803	<b>562199</b>	<b>562556</b>	1800	diffuse	84	246.6	192

Length tolerance: 597 mm ± 1 mm (ends finished), 1200 / 1500 / 1800 mm + 10 mm (ends raw)

### End caps for cover for clip fixing

End caps with or without wire hole for push-fit into the cover

Material: PC, transparent

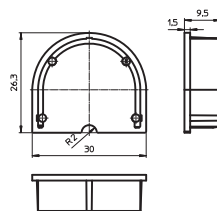
Weight: 2 g, Packaging unit: 250 pcs.

Type: 898

**Ref. No.: 562500** end cap with wire hole

**Ref. No.: 562499** end cap without wire hole

### End cap with wire hole



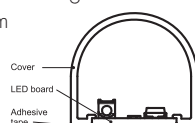
### Preassembled module SMD board including W2 adhesive cover

The cover and PCB are fixed together with double-side adhesive assembled.

No screws for PCB and cover fixing needed!

Length: assembled 597 mm

Packaging unit: 242 pcs.



Type	Ref. No.	Cover	SMD board	Correlated colour temperature (K)
89800	<b>562690</b>	semi-transparent	WU-M-512-G-830	3000
89800	<b>562691</b>	semi-transparent	WU-M-512-G-840	4000
89800	<b>562692</b>	semi-transparent	WU-M-512-G-850	5000
89800	<b>562693</b>	semi-transparent	WU-M-512-G-865	6500
89800	<b>562694</b>	diffuse	WU-M-512-G-830	3000
89800	<b>562695</b>	diffuse	WU-M-512-G-840	4000
89800	<b>562696</b>	diffuse	WU-M-512-G-850	5000
89800	<b>562697</b>	diffuse	WU-M-512-G-865	6500

With other W2 SMD boards or lengths on request

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## LED Line SMD Gen. 2 – L14/28/56/70/75/112 W2

### 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 M3 screws. Fixation only with flat or cylinder head screws (M3) (no countersunk screws)  
Max. torque: 1.2 Nm (M3)
- 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).
- 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](http://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 (except HB, 6500 K, > 500 mA: risk group 2)

### 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](http://www.vossloh-schwabe.com)). We will be happy to send you these conditions upon request.

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