

LED LINE SMD W2  
COMFORT GEN. 3  
HIGH RELIABILITY/EFFICACY  
L07/14/28/56/112



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#### MLC SC W2 G3

#### Typical Applications

Built-in luminaires/general illumination

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

LED Line SMD W2 Comfort Gen. 3 - High Reliability/  
Efficacy L07/14/28/56/112

■ **LONG SERVICE LIFE TIME: 93.000 H (L80, B10)**

■ **HIGHLY EFFICIENT: UP TO 212 LM/W  
AT T<sub>p</sub> = 50 °C**

■ **5 LENGTHS AVAILABLE: 70 / 140 / 280 / 560 /  
1120 MM**

■ **3 DIFFERENT LUMEN PACKAGES**



## LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy L07/14/28/56/112

### Technical Notes

- LED built-in module for integration into luminaires



- Dimensions

MLC SC W2/70: 70x20 mm

MLC SC W2/140: 140x20 mm

MLC SC W2/280: 280x20 mm

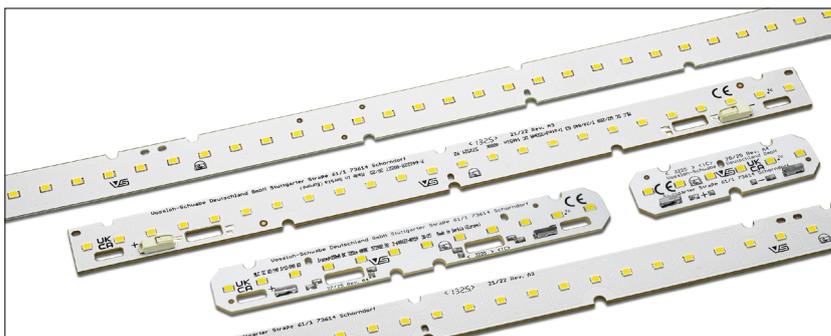
MLC SC W2/560: 560x20 mm

MLC SC W2/1120: 1120x20 mm

- Driving current: 150 mA / 250 mA / 300 mA / 350 mA / 500 mA / 700 mA

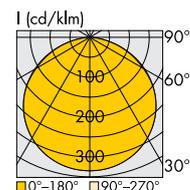
- On-board push-in terminals, optional on top or bottom

- Beam angle: 120°



### Typical Light Distribution Curve

Data are available in .ldt format for download under <https://www.vossloh-schwabe.com/en>



### Covers and W2 optics

Please visit our homepage for details for suitable covers and W2 optics:

- <https://www.vossloh-schwabe.com/en/products/optics-reflectors/linear-covers/linear-covers-1r-for-smd-w2>
- <https://www.vossloh-schwabe.com/en/products/optics-reflectors/linear-optics/linear-optics-1r-for-smd-w2>

### Electrical Characteristics

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

Type	No. of SMDs	Typ. voltage DC						Temperature coefficient mV/K	Typ. power consumption					
		150 mA V	250 mA V	300 mA V	350 mA V	500 mA V	700 mA V		150 mA W	250 mA W	300 mA W	350 mA W	500 mA W	700 mA W
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability – L07</b>														
MLC SC W2/70 x/3R/yz G3	3	2.6	2.7	2.7	2.7	2.8	2.8	-1.01	0.4	0.7	0.8	0.9	1.4	2.0
MLC SC W2/70 x/6/yz G3	6	5.2	5.3	5.4	5.4	5.5	5.7	-2.02	0.8	1.3	1.6	1.9	2.8	4.0
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability – L14</b>														
MLC SC W2/140 x/6R/yz G3	6	5.2	5.3	5.4	5.4	5.5	5.7	-2.02	0.8	1.3	1.6	1.9	2.8	4.0
MLC SC W2/140 x/12/yz G3	12	10.5	10.7	10.8	10.8	11.1	11.4	-4.03	1.6	2.7	3.3	3.8	5.5	8.0
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L28</b>														
MLC SC W2/280 x/12R/yz G3	12	10.5	10.7	10.8	10.8	11.1	11.4	-4.03	1.6	2.7	3.3	3.8	5.5	8.0
MLC SC W2/280 x/24/yz G3	24	20.9	21.3	21.5	21.7	22.2	22.8	-8.07	3.1	5.3	6.5	7.6	11.1	16.0
MLC SC W2/280 x/36/yz HE G3	36	23.3	23.7	23.9	24.0	24.5	25.0	-9.08	3.5	5.9	7.2	8.4	12.2	17.5
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L56</b>														
MLC SC W2/560 x/24R/yz G3	24	20.9	21.3	21.5	21.7	22.2	22.8	-8.07	3.1	5.3	6.5	7.6	11.1	16.0
MLC SC W2/560 x/48/yz G3	48	41.8	42.7	43.0	43.4	44.4	45.6	-16.14	6.3	10.7	12.9	15.2	22.2	31.9
MLC SC W2/560 x/72/yz HE G3	72	46.6	47.4	47.8	48.1	49.0	50.1	-18.15	7.0	11.9	14.3	16.8	24.5	35.1
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L112</b>														
MLC SC W2/1120 x/48R/yz G3	48	41.8	42.7	43.0	43.4	44.4	45.6	-16.14	6.3	10.7	12.9	15.2	22.2	31.9
MLC SC W2/1120 x/96/yz G3	96	83.6	85.3	86.1	86.8	88.7	91.2	-32.27	12.5	21.3	25.8	30.4	44.4	63.8
MLC SC W2/1120 x/144/yz HE G3	144	93.2	94.8	95.5	96.2	98.0	100.2	-36.31	14.0	23.7	28.7	33.7	49.0	70.1

Voltage and power consumption tolerance:  $\pm 10\%$  | **Use of external LED constant current driver required.**

### 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 for frequencies $\geq 100$ Hz [mA]
		$^\circ\text{C}$ min.	$^\circ\text{C}$ max.	$^\circ\text{C}$ min.	$^\circ\text{C}$ max.	
All types	700	-20	+80	-20	+70	1440

### Operating Life

L80/B10 in hours or measured temperature at  $t_p$  point

	150 mA			250 mA			300 mA			350 mA			500 mA			700 mA			
	40 $^\circ\text{C}$	50 $^\circ\text{C}$	80 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	80 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	80 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	80 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	80 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	80 $^\circ\text{C}$	
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	93.000	93.000	93.000	93.000

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 W2 Comfort Gen. 3 - High Reliability/Efficacy – L07/14/28/56/112

## Optical Characteristics – CRI > 80

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

CRI:  $R_a > 80$

Type	Ref. No. Connection "x"			Colour	Correlated colour temp.* K	Typ. luminous flux** and typ. efficiency** at												Photometric Code
	top (T)	bottom (B)	small top (S)			150 mA		250 mA		300 mA		350 mA		500 mA		700 mA		
						lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability – L07</b>																		
MLC SC W2/70 x/3R/827 G3	on request	—	on request	WW	2700	75	196	125	188	150	184	170	181	240	172	325	162	827/359
MLC SC W2/70 x/3R/830 G3	<b>574197</b>	—	on request	WW	3000	75	196	125	188	150	184	170	181	240	172	325	162	830/359
MLC SC W2/70 x/3R/835 G3	on request	—	on request	NW	3500	80	209	135	201	185	193	185	193	255	284	345	174	835/359
MLC SC W2/70 x/3R/840 G3	<b>573917</b>	—	<b>573979</b>	NW	4000	80	209	135	201	185	193	185	193	255	284	345	174	840/359
MLC SC W2/70 x/3R/850 G3	on request	—	on request	CW	5000	80	209	135	201	185	193	185	193	255	284	345	174	850/359
MLC SC W2/70 x/3R/865 G3	<b>574198</b>	—	on request	CW	6500	80	209	135	201	185	193	185	193	255	284	345	174	865/359
MLC SC W2/70 x/6/827 G3	on request	—	on request	WW	2700	155	196	250	188	295	184	345	181	480	172	650	162	827/359
MLC SC W2/70 x/6/830 G3	<b>574108</b>	—	<b>574195</b>	WW	3000	155	196	250	188	295	184	345	181	480	172	650	162	830/359
MLC SC W2/70 x/6/835 G3	<b>574630</b>	—	<b>574196</b>	NW	3500	165	209	265	201	315	197	365	193	510	184	695	174	835/359
MLC SC W2/70 x/6/840 G3	<b>573500</b>	—	<b>573980</b>	NW	4000	165	209	265	201	315	197	365	193	510	184	695	174	840/359
MLC SC W2/70 x/6/850 G3	<b>574386</b>	—	on request	CW	5000	165	209	265	201	315	197	365	193	510	184	695	174	850/359
MLC SC W2/70 x/6/865 G3	<b>573621</b>	—	on request	CW	6500	165	209	265	201	315	197	365	193	510	184	695	174	865/359
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability – L14</b>																		
MLC SC W2/140 x/6R/827 G3	on request	on request	on request	WW	2700	155	196	250	188	295	184	345	181	480	172	650	162	827/359
MLC SC W2/140 x/6R/830 G3	<b>573915</b>	on request	on request	WW	3000	155	196	250	188	295	184	345	181	480	172	650	162	830/359
MLC SC W2/140 x/6R/835 G3	on request	on request	on request	NW	3500	165	209	265	201	315	197	365	193	510	184	695	174	835/359
MLC SC W2/140 x/6R/840 G3	<b>573914</b>	<b>573918</b>	<b>573981</b>	NW	4000	165	209	265	201	315	197	365	193	510	184	695	174	840/359
MLC SC W2/140 x/6R/850 G3	on request	on request	on request	CW	5000	165	209	265	201	315	197	365	193	510	184	695	174	850/359
MLC SC W2/140 x/6R/865 G3	<b>574199</b>	on request	on request	CW	6500	165	209	265	201	315	197	365	193	510	184	695	174	865/359
MLC SC W2/140 x/12/827 G3	on request	on request	on request	WW	2700	305	196	500	188	595	184	685	181	955	172	1295	162	827/359
MLC SC W2/140 x/12/830 G3	<b>573506</b>	on request	<b>574655</b>	WW	3000	305	196	500	188	595	184	685	181	955	172	1295	162	830/359
MLC SC W2/140 x/12/835 G3	<b>574631</b>	on request	on request	NW	3500	330	209	535	201	635	197	735	193	1020	184	1385	174	835/359
MLC SC W2/140 x/12/840 G3	<b>573507</b>	on request	<b>573982</b>	NW	4000	330	209	535	201	635	197	735	193	1020	184	1385	174	840/359
MLC SC W2/140 x/12/850 G3	<b>574112</b>	<b>574664</b>	on request	CW	5000	330	209	535	201	635	197	735	193	1020	184	1385	174	850/359
MLC SC W2/140 x/12/865 G3	<b>574109</b>	on request	<b>573623</b>	CW	6500	330	209	535	201	635	197	735	193	1020	184	1385	174	865/359
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L28</b>																		
MLC SC W2/280 x/12R/827 G3	on request	on request	on request	WW	2700	305	196	500	188	595	184	685	181	955	172	1295	162	827/359
MLC SC W2/280 x/12R/830 G3	<b>573900</b>	on request	on request	WW	3000	305	196	500	188	595	184	685	181	955	172	1295	162	830/359
MLC SC W2/280 x/12R/835 G3	on request	on request	on request	NW	3500	330	209	535	201	635	197	735	193	1020	184	1385	174	835/359
MLC SC W2/280 x/12R/840 G3	<b>573901</b>	<b>573897</b>	<b>573898</b>	NW	4000	330	209	535	201	635	197	735	193	1020	184	1385	174	840/359
MLC SC W2/280 x/12R/850 G3	on request	on request	on request	CW	5000	330	209	535	201	635	197	735	193	1020	184	1385	174	850/359
MLC SC W2/280 x/12R/865 G3	<b>574200</b>	on request	on request	CW	6500	330	209	535	201	635	197	735	193	1020	184	1385	174	865/359
MLC SC W2/280 x/24/827 G3	<b>573519</b>	on request	on request	WW	2700	615	196	1000	188	1190	184	1370	181	1910	172	2595	162	827/359
MLC SC W2/280 x/24/830 G3	<b>573520</b>	<b>573523</b>	<b>573525</b>	WW	3000	615	196	1000	188	1190	184	1370	181	1910	172	2595	162	830/359
MLC SC W2/280 x/24/835 G3	<b>574114</b>	<b>574113</b>	<b>574368</b>	NW	3500	655	209	1070	201	1270	197	1465	193	2045	184	2770	174	835/359
MLC SC W2/280 x/24/840 G3	<b>573521</b>	<b>573524</b>	<b>573526</b>	NW	4000	655	209	1070	201	1270	197	1465	193	2045	184	2770	174	840/359
MLC SC W2/280 x/24/850 G3	<b>574115</b>	<b>574661</b>	<b>574331</b>	CW	5000	655	209	1070	201	1270	197	1465	193	2045	184	2770	174	850/359
MLC SC W2/280 x/24/865 G3	<b>573522</b>	<b>574553</b>	on request	CW	6500	655	209	1070	201	1270	197	1465	193	2045	184	2770	174	865/359
MLC SC W2/280 x/36/827 HE G3	<b>573532</b>	on request	on request	WW	2700	695	199	1145	193	1360	190	1570	187	2195	179	3000	171	827/359
MLC SC W2/280 x/36/830 HE G3	<b>573533</b>	on request	on request	WW	3000	695	199	1145	193	1360	190	1570	187	2195	179	3000	171	830/359
MLC SC W2/280 x/36/835 HE G3	on request	on request	on request	NW	3500	745	212	1220	206	1455	203	1680	200	2345	192	3205	183	835/359
MLC SC W2/280 x/36/840 HE G3	<b>573534</b>	<b>573535</b>	<b>573536</b>	NW	4000	745	212	1220	206	1455	203	1680	200	2345	192	3205	183	840/359
MLC SC W2/280 x/36/850 HE G3	on request	on request	on request	CW	5000	745	212	1220	206	1455	203	1680	200	2345	192	3205	183	850/359
MLC SC W2/280 x/36/865 HE G3	<b>574201</b>	on request	on request	CW	6500	745	212	1220	206	1455	203	1680	200	2345	192	3205	183	865/359

2700 K and 3000 K = warm white (WW), 3500 K and 4000 K = neutral white (NW), 5000 K and 6500 K = cool white (CW)

\* Colour tolerance: 3 MacAdam | \*\* Production tolerance of luminous flux and efficiency:  $\pm 10\%$

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 W2 Comfort Gen. 3 - High Reliability/Efficacy – L07/14/28/56/112

## Optical Characteristics – CRI > 80

at  $t_p = 50\text{ °C}$

CRI:  $R_a > 80$

Type	Ref. No.			Colour	Correlated colour temp.*	Typ. luminous flux** and typ. efficiency** at												Photometric Code
	Connection "x"					150 mA		250 mA		300 mA		350 mA		500 mA		700 mA		
	top (T)	bottom (B)	small top (S)			lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	

### LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L56

MLC SC W2/560 x/24R/827 G3	on request	on request	on request	WW	2700	615	196	1000	188	1190	184	1370	181	1910	172	2595	162	827/359
MLC SC W2/560 x/24R/830 G3	<b>573908</b>	<b>573904</b>	on request	WW	3000	615	196	1000	188	1190	184	1370	181	1910	172	2595	162	830/359
MLC SC W2/560 x/24R/835 G3	on request	on request	on request	NW	3500	655	209	1070	201	1270	197	1465	193	2045	184	2770	174	835/359
MLC SC W2/560 x/24R/840 G3	<b>573909</b>	<b>573905</b>	<b>573906</b>	NW	4000	655	209	1070	201	1270	197	1465	193	2045	184	2770	174	840/359
MLC SC W2/560 x/24R/850 G3	on request	on request	on request	CW	5000	655	209	1070	201	1270	197	1465	193	2045	184	2770	174	850/359
MLC SC W2/560 x/24R/865 G3	<b>574202</b>	on request	on request	CW	6500	655	209	1070	201	1270	197	1465	193	2045	184	2770	174	865/359
MLC SC W2/560 x/48/827 G3	<b>573548</b>	on request	on request	WW	2700	1230	196	2000	188	2375	184	2745	181	3825	172	5185	162	827/359
MLC SC W2/560 x/48/830 G3	<b>573549</b>	<b>573552</b>	<b>573554</b>	WW	3000	1230	196	2000	188	2375	184	2745	181	3825	172	5185	162	830/359
MLC SC W2/560 x/48/835 G3	<b>574119</b>	on request	<b>574367</b>	NW	3500	1315	209	2140	201	2540	197	2935	193	4085	184	5545	174	835/359
MLC SC W2/560 x/48/840 G3	<b>573550</b>	<b>573553</b>	<b>573555</b>	NW	4000	1315	209	2140	201	2540	197	2935	193	4085	184	5545	174	840/359
MLC SC W2/560 x/48/850 G3	<b>574120</b>	<b>574116</b>	<b>574118</b>	CW	5000	1315	209	2140	201	2540	197	2935	193	4085	184	5545	174	850/359
MLC SC W2/560 x/48/865 G3	<b>573551</b>	<b>574121</b>	<b>574657</b>	CW	6500	1315	209	2140	201	2540	197	2935	193	4085	184	5545	174	865/359
MLC SC W2/560 x/72/827 HE G3	on request	on request	on request	WW	2700	1390	199	2285	193	2720	190	3145	187	4390	179	6000	171	827/359
MLC SC W2/560 x/72/830 HE G3	<b>573561</b>	on request	on request	WW	3000	1390	199	2285	193	2720	190	3145	187	4390	179	6000	171	830/359
MLC SC W2/560 x/72/835 HE G3	on request	on request	on request	NW	3500	1485	212	2445	206	2905	203	3360	200	4695	192	6410	183	835/359
MLC SC W2/560 x/72/840 HE G3	<b>573563</b>	<b>573564</b>	<b>573565</b>	NW	4000	1485	212	2445	206	2905	203	3360	200	4695	192	6410	183	840/359
MLC SC W2/560 x/72/850 HE G3	on request	on request	on request	CW	5000	1485	212	2445	206	2905	203	3360	200	4695	192	6410	183	850/359
MLC SC W2/560 x/72/865 HE G3	<b>574203</b>	on request	on request	CW	6500	1485	212	2445	206	2905	203	3360	200	4695	192	6410	183	865/359

### LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L112

MLC SC W2/1120 x/48R/827 G3	on request	on request	on request	WW	2700	1230	196	2000	188	2375	184	2745	181	3825	172	5185	162	827/359
MLC SC W2/1120 x/48R/830 G3	<b>573946</b>	on request	on request	WW	3000	1230	196	2000	188	2375	184	2745	181	3825	172	5185	162	830/359
MLC SC W2/1120 x/48R/835 G3	on request	on request	on request	NW	3500	1315	209	2140	201	2540	197	2935	193	4085	184	5545	174	835/359
MLC SC W2/1120 x/48R/840 G3	<b>573947</b>	on request	on request	NW	4000	1315	209	2140	201	2540	197	2935	193	4085	184	5545	174	840/359
MLC SC W2/1120 x/48R/850 G3	<b>574209</b>	on request	on request	CW	5000	1315	209	2140	201	2540	197	2935	193	4085	184	5545	174	850/359
MLC SC W2/1120 x/48R/865 G3	<b>574206</b>	on request	on request	CW	6500	1315	209	2140	201	2540	197	2935	193	4085	184	5545	174	865/359
MLC SC W2/1120 x/96/827 G3	on request	on request	on request	WW	2700	2460	196	4005	188	4750	184	5490	181	7645	172	10370	162	827/359
MLC SC W2/1120 x/96/830 G3	<b>573950</b>	on request	<b>574204</b>	WW	3000	2460	196	4005	188	4750	184	5490	181	7645	172	10370	162	830/359
MLC SC W2/1120 x/96/835 G3	on request	on request	on request	NW	3500	2625	209	4280	201	5085	197	5870	193	8175	184	11085	174	835/359
MLC SC W2/1120 x/96/840 G3	<b>573951</b>	<b>574548</b>	<b>574205</b>	NW	4000	2625	209	4280	201	5080	197	5870	193	8175	184	11085	174	840/359
MLC SC W2/1120 x/96/850 G3	<b>574323</b>	on request	on request	CW	5000	2625	209	4280	201	5080	197	5870	193	8175	184	11085	174	850/359
MLC SC W2/1120 x/96/865 G3	<b>574207</b>	<b>574557</b>	on request	CW	6500	2625	209	4280	201	5080	197	5870	193	8175	184	11085	174	865/359
MLC SC W2/1120 x/144/827 HE G3	on request	on request	on request	WW	2700	2780	199	4570	193	5435	190	6290	187	8780	179	11995	171	827/359
MLC SC W2/1120 x/144/830 HE G3	<b>573954</b>	on request	on request	WW	3000	2780	199	4570	193	5435	190	6290	187	8780	179	11995	171	830/359
MLC SC W2/1120 x/144/835 HE G3	on request	on request	on request	NW	3500	2970	212	4885	206	5810	203	6720	200	9385	192	12825	183	835/359
MLC SC W2/1120 x/144/840 HE G3	<b>573955</b>	on request	on request	NW	4000	2970	212	4885	206	5810	203	6720	200	9385	192	12825	183	840/359
MLC SC W2/1120 x/144/850 HE G3	on request	on request	on request	CW	5000	2970	212	4885	206	5810	203	6720	200	9385	192	12825	183	850/359
MLC SC W2/1120 x/144/865 HE G3	<b>574208</b>	on request	on request	CW	6500	2970	212	4885	206	5810	203	6720	200	9385	192	12825	183	865/359

2700 K and 3000 K = warm white (WW), 3500 K and 4000 K = neutral white (NW), 5000 K and 6500 K = cool white (CW)

\* Colour tolerance: 3 MacAdam | \*\* Production tolerance of luminous flux and efficiency:  $\pm 10\%$

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 W2 Comfort Gen. 3 - High Reliability/Efficacy – L07/14/28/56/112

## Optical Characteristics – CRI > 90

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

CRI:  $R_a > 90$

Type	Ref. No. Connection "x"			Colour	Correlated colour temp.* K	Typ. luminous flux** and typ. efficiency** at												Photometric Code
	top	bottom	small top			150 mA		250 mA		300 mA		350 mA		500 mA		700 mA		
	(T)	(B)	(S)			lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	

### LED Line SMD W2 Comfort Gen. 3 High Reliability – L07

MLC SC W2/70 x/3R/927 G3	on request	—	on request	WW	2700	60	155	100	149	120	146	135	143	190	137	255	129	927/359
MLC SC W2/70 x/3R/930 G3	on request	—	on request	WW	3000	65	169	110	162	130	159	150	156	205	149	280	140	930/359
MLC SC W2/70 x/3R/935 G3	on request	—	on request	NW	3500	65	169	110	162	130	159	150	156	205	149	280	140	935/359
MLC SC W2/70 x/3R/940 G3	<b>573916</b>	—	on request	NW	4000	70	182	115	175	140	171	160	168	220	160	300	151	940/359
MLC SC W2/70 x/3R/950 G3	on request	—	on request	CW	5000	70	182	115	175	140	171	160	168	220	160	300	151	950/359
MLC SC W2/70 x/3R/965 G3	on request	—	on request	CW	6500	70	182	115	175	140	171	160	168	220	160	300	151	965/359
MLC SC W2/70 x/6/927 G3	on request	—	on request	WW	2700	120	155	200	149	235	146	270	143	380	137	515	129	927/359
MLC SC W2/70 x/6/930 G3	<b>574549</b>	—	on request	WW	3000	130	169	215	162	255	159	295	156	410	149	560	140	930/359
MLC SC W2/70 x/6/935 G3	on request	—	on request	NW	3500	130	169	215	162	255	159	295	156	410	149	560	140	935/359
MLC SC W2/70 x/6/940 G3	<b>573501</b>	—	on request	NW	4000	145	182	235	175	275	171	320	168	445	160	605	151	940/359
MLC SC W2/70 x/6/950 G3	on request	—	on request	CW	5000	145	182	235	175	275	171	320	168	445	160	605	151	950/359
MLC SC W2/70 x/6/965 G3	on request	—	on request	CW	6500	145	182	235	175	275	171	320	168	445	160	605	151	965/359

### LED Line SMD W2 Comfort Gen. 3 High Reliability – L14

MLC SC W2/140 x/6R/927 G3	on request	on request	on request	WWW	2700	120	155	200	149	235	146	270	143	380	137	515	129	927/359
MLC SC W2/140 x/6R/930 G3	<b>573913</b>	on request	on request	WWW	3000	130	169	215	162	255	159	295	156	410	149	560	140	930/359
MLC SC W2/140 x/6R/935 G3	on request	on request	on request	NW	3500	130	169	215	162	255	159	295	156	410	149	560	140	935/359
MLC SC W2/140 x/6R/940 G3	<b>573912</b>	on request	on request	NW	4000	145	182	235	175	275	171	320	168	445	160	605	151	940/359
MLC SC W2/140 x/6R/950 G3	<b>574322</b>	on request	on request	CW	5000	145	182	235	175	275	171	320	168	445	160	605	151	950/359
MLC SC W2/140 x/6R/965 G3	on request	on request	on request	CW	6500	145	182	235	175	275	171	320	168	445	160	605	151	965/359
MLC SC W2/140 x/12/927 G3	on request	on request	on request	WW	2700	245	155	395	149	470	146	545	143	760	137	1030	129	927/359
MLC SC W2/140 x/12/930 G3	<b>573508</b>	on request	on request	WW	3000	265	169	430	162	510	159	590	156	825	149	1115	140	930/359
MLC SC W2/140 x/12/935 G3	on request	on request	on request	NW	3500	265	169	430	162	510	159	590	156	825	149	1115	140	935/359
MLC SC W2/140 x/12/940 G3	<b>573509</b>	on request	<b>574656</b>	NW	4000	285	182	465	175	555	171	640	168	890	160	1205	151	940/359
MLC SC W2/140 x/12/950 G3	on request	on request	on request	CW	5000	285	182	465	175	555	171	640	168	890	160	1205	151	950/359
MLC SC W2/140 x/12/965 G3	on request	on request	on request	CW	6500	285	182	465	175	555	171	640	168	890	160	1205	151	965/359

### LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L28

MLC SC W2/280 x/12R/927 G3	on request	on request	on request	WWW	2700	245	155	395	149	470	146	545	143	760	137	1030	129	927/359
MLC SC W2/280 x/12R/930 G3	<b>573902</b>	on request	on request	WWW	3000	265	169	430	162	510	159	590	156	825	149	1115	140	930/359
MLC SC W2/280 x/12R/935 G3	on request	on request	on request	NW	3500	265	169	430	162	510	159	590	156	825	149	1115	140	935/359
MLC SC W2/280 x/12R/940 G3	<b>573903</b>	on request	<b>573899</b>	NW	4000	285	182	465	175	555	171	640	168	890	160	1205	151	940/359
MLC SC W2/280 x/12R/950 G3	on request	on request	on request	CW	5000	285	182	465	175	555	171	640	168	890	160	1205	151	950/359
MLC SC W2/280 x/12R/965 G3	on request	on request	on request	CW	6500	285	182	465	175	555	171	640	168	890	160	1205	151	965/359
MLC SC W2/280 x/24/927 G3	<b>574290</b>	on request	on request	WW	2700	485	155	795	149	940	146	1090	143	1515	137	2055	129	927/359
MLC SC W2/280 x/24/930 G3	<b>573527</b>	<b>573529</b>	on request	WW	3000	530	169	865	162	1025	159	1185	156	1650	149	2235	140	930/359
MLC SC W2/280 x/24/935 G3	on request	on request	<b>573987</b>	NW	3500	530	169	865	162	1025	159	1185	156	1650	149	2235	140	935/359
MLC SC W2/280 x/24/940 G3	<b>573528</b>	<b>573530</b>	<b>573531</b>	NW	4000	570	182	930	175	1105	171	1280	168	1780	160	2415	151	940/359
MLC SC W2/280 x/24/950 G3	<b>574158</b>	on request	on request	CW	5000	570	182	930	175	1105	171	1280	168	1780	160	2415	151	950/359
MLC SC W2/280 x/24/965 G3	<b>573624</b>	on request	on request	CW	6500	570	182	930	175	1105	171	1280	168	1780	160	2415	151	965/359
MLC SC W2/280 x/36/927 HE G3	on request	on request	on request	WW	2700	550	158	905	153	1080	150	1245	148	1740	142	2380	136	927/359
MLC SC W2/280 x/36/930 HE G3	<b>573537</b>	on request	on request	WW	3000	600	171	985	166	1170	164	1355	161	1895	155	2585	147	930/359
MLC SC W2/280 x/36/935 HE G3	on request	on request	on request	NW	3500	600	171	985	166	1170	164	1355	161	1895	155	2585	147	935/359
MLC SC W2/280 x/36/940 HE G3	<b>573538</b>	<b>573539</b>	on request	NW	4000	645	185	1065	180	1265	177	1465	174	2045	167	2790	159	940/359
MLC SC W2/280 x/36/950 HE G3	on request	on request	on request	CW	5000	645	185	1065	180	1265	177	1465	174	2045	167	2790	159	950/359
MLC SC W2/280 x/36/965 HE G3	on request	on request	on request	CW	6500	645	185	1065	180	1265	177	1465	174	2045	167	2790	159	965/359

2700 K and 3000 K = warm white (WW), 3500 K and 4000 K = neutral white (NW), 5000 K and 6500 K = cool white (CW)

\* Colour tolerance: 3 MacAdam | \*\* Production tolerance of luminous flux and efficiency:  $\pm 10\%$

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 W2 Comfort Gen. 3 - High Reliability/Efficacy – L07/14/28/56/112

## Optical Characteristics – CRI > 90

at  $t_p = 50\text{ °C}$

CRI:  $R_a > 90$

Type	Ref. No. Connection "x"			Colour	Correlated colour temp.* K	Typ. luminous flux** and typ. efficiency** at												Photometric Code
	top	bottom	small top			150 mA		250 mA		300 mA		350 mA		500 mA		700 mA		
	(T)	(B)	(S)			lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W	

### LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L56

MLC SC W2/560 x/24R/927 G3	on request	on request	on request	WW	2700	485	155	795	149	940	146	1090	143	1515	137	2055	129	927/359
MLC SC W2/560 x/24R/930 G3	<b>573910</b>	on request	on request	WW	3000	530	169	865	162	1025	159	1185	156	1650	149	2235	140	930/359
MLC SC W2/560 x/24R/935 G3	on request	on request	on request	NW	3500	530	169	865	162	1025	159	1185	156	1650	149	2235	140	935/359
MLC SC W2/560 x/24R/940 G3	<b>573911</b>	on request	<b>573907</b>	NW	4000	570	182	930	175	1105	171	1280	168	1780	160	2415	151	940/359
MLC SC W2/560 x/24R/950 G3	on request	on request	on request	CW	5000	570	182	930	175	1105	171	1280	168	1780	160	2415	151	950/359
MLC SC W2/560 x/24R/965 G3	on request	on request	on request	CW	6500	570	182	930	175	1105	171	1280	168	1780	160	2415	151	965/359
MLC SC W2/560 x/48/927 G3	<b>574363</b>	on request	on request	WW	2700	975	155	1590	149	1885	146	2175	143	3030	137	4110	129	927/359
MLC SC W2/560 x/48/930 G3	<b>573556</b>	<b>574117</b>	<b>573559</b>	WW	3000	1060	169	1725	162	2050	159	2365	156	3295	149	4470	140	930/359
MLC SC W2/560 x/48/935 G3	on request	on request	<b>573988</b>	NW	3500	1060	169	1725	162	2050	159	2365	156	3295	149	4470	140	935/359
MLC SC W2/560 x/48/940 G3	<b>573557</b>	<b>573558</b>	<b>573560</b>	NW	4000	1145	182	1865	175	2210	171	2555	168	3560	160	4825	151	940/359
MLC SC W2/560 x/48/950 G3	<b>574157</b>	on request	on request	CW	5000	1145	182	1865	175	2210	171	2555	168	3560	160	4825	151	950/359
MLC SC W2/560 x/48/965 G3	on request	<b>573983</b>	on request	CW	6500	1145	182	1865	175	2210	171	2555	168	3560	160	4825	151	965/359
MLC SC W2/560 x/72/927 HE G3	on request	on request	on request	WW	2700	1100	158	1810	153	2155	150	2495	148	3480	142	4755	136	927/359
MLC SC W2/560 x/72/930 HE G3	<b>573566</b>	on request	on request	WW	3000	1200	171	1970	166	2345	164	2710	161	3785	155	5170	147	930/359
MLC SC W2/560 x/72/935 HE G3	on request	on request	on request	NW	3500	1200	171	1970	166	2345	164	2710	161	3785	155	5170	147	935/359
MLC SC W2/560 x/72/940 HE G3	<b>573567</b>	on request	on request	NW	4000	1295	185	2130	180	2530	177	2925	174	4090	167	5585	159	940/359
MLC SC W2/560 x/72/950 HE G3	on request	on request	on request	CW	5000	1295	185	2130	180	2530	177	2925	174	4090	167	5585	159	950/359
MLC SC W2/560 x/72/965 HE G3	on request	on request	on request	CW	6500	1295	185	2130	180	2530	177	2925	174	4090	167	5585	159	965/359

### LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L112

MLC SC W2/1120 x/48R/927 G3	on request	on request	on request	WW	2700	975	155	1590	149	1885	146	2175	143	3030	137	4110	129	927/359
MLC SC W2/1120 x/48R/930 G3	<b>573948</b>	on request	on request	WW	3000	1060	169	1725	162	2050	159	2365	156	3295	149	4470	140	930/359
MLC SC W2/1120 x/48R/935 G3	on request	on request	on request	NW	3500	1060	169	1725	162	2050	159	2365	156	3295	149	4470	140	935/359
MLC SC W2/1120 x/48R/940 G3	<b>573949</b>	on request	on request	NW	4000	1145	182	1865	175	2210	171	2555	168	3560	160	4825	151	940/359
MLC SC W2/1120 x/48R/950 G3	on request	on request	on request	CW	5000	1145	182	1865	175	2210	171	2555	168	3560	160	4825	151	950/359
MLC SC W2/1120 x/48R/965 G3	on request	on request	on request	CW	6500	1145	182	1865	175	2210	171	2555	168	3560	160	4825	151	965/359
MLC SC W2/1120 x/96/927 G3	on request	on request	on request	WW	2700	1950	155	3175	149	3770	146	4355	143	6065	137	8225	129	927/359
MLC SC W2/1120 x/96/930 G3	<b>573952</b>	on request	on request	WW	3000	2120	169	3450	162	4095	159	4730	156	6590	149	8940	140	930/359
MLC SC W2/1120 x/96/935 G3	on request	on request	on request	NW	3500	2120	169	3450	162	4095	159	4730	156	6590	149	8940	140	935/359
MLC SC W2/1120 x/96/940 G3	<b>573953</b>	on request	on request	NW	4000	2290	182	3725	175	4425	171	5110	168	7120	160	9655	151	940/359
MLC SC W2/1120 x/96/950 G3	on request	on request	on request	CW	5000	2290	182	3725	175	4425	171	5110	168	7120	160	9655	151	950/359
MLC SC W2/1120 x/96/965 G3	on request	on request	on request	CW	6500	2290	182	3725	175	4425	171	5110	168	7120	160	9655	151	965/359
MLC SC W2/1120 x/144/927 HE G3	on request	on request	on request	WW	2700	2205	158	3625	153	4310	150	4985	148	6965	142	9515	136	927/359
MLC SC W2/1120 x/144/930 HE G3	<b>573956</b>	on request	on request	WW	3000	2395	171	3940	166	4685	164	5420	161	7570	155	10340	147	930/359
MLC SC W2/1120 x/144/935 HE G3	on request	on request	on request	NW	3500	2395	171	3940	166	4685	164	5420	161	7570	155	10340	147	935/359
MLC SC W2/1120 x/144/940 HE G3	<b>573957</b>	on request	on request	NW	4000	2585	185	4255	180	5060	177	5855	174	8175	167	11170	159	940/359
MLC SC W2/1120 x/144/950 HE G3	on request	on request	on request	CW	5000	2585	185	4255	180	5060	177	5855	174	8175	167	11170	159	950/359
MLC SC W2/1120 x/144/965 HE G3	on request	on request	on request	CW	6500	2585	185	4255	180	5060	177	5855	174	8175	167	11170	159	965/359

2700 K and 3000 K = warm white (WW), 3500 K and 4000 K = neutral white (NW), 5000 K and 6500 K = cool white (CW)

\* Colour tolerance: 3 MacAdam | \*\* Production tolerance of luminous flux and efficiency:  $\pm 10\%$

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 W2 Comfort Gen. 3 - High Reliability/Efficacy – L07/14/28/56/112

## Logistics Data

Product Dimension mm	Product description	Packaging unit	Dimension of box mm	Pieces per box	Gross weight of box g	Weight per piece g	Box pieces per pallet	Pieces per pallet	Gross weight of pallet kg	Dimension of pallet mm
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L07</b>										
70x20	MLC SC W2/70 x/A/yzz G3	Carton box	213x185x67	120	571.2	3.8	50	6000	52.6	1200x800x480
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L14</b>										
140x20	MLC SC W2/140 x/A/yzz G3	Carton box	290x190x57	96	813	7	56	5376	69.6	1200x800x375
140x20	MLC SC W2/140 B/A/yzz G3	Carton box	290x190x57	48	477	7	182	8736	110.8	1200x800x890
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L28</b>										
280x20	MLC SC W2/280 x/A/yzz G3	Carton box	290x190x57	48	832.8	15	112	5376	117.3	1200x800x605
280x20	MLC SC W2/280 x/A/yzz HE G3	Carton box	290x190x57	48	832.8	15	112	5376	117.3	1200x800x605
280x20	MLC SC W2/280 B/A/yzz G3	Carton box	290x190x57	24	472.8	15	182	4368	110	1200x800x890
280x20	MLC SC W2/280 B/A/yzz HE G3	Carton box	290x190x57	24	472.8	15	182	4368	110	1200x800x890
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L56</b>										
560x20	MLC SC W2/560 x/A/yzz G3	Carton box	570x190x57	48	1619.2	30	104	4992	192.4	1200x800x890
560x20	MLC SC W2/560 x/A/yzz HE G3	Carton box	570x190x57	48	1619.2	30	104	4992	192.4	1200x800x890
560x20	MLC SC W2/560 B/A/yzz G3	Carton box	570x190x57	24	899.2	30	104	2496	117.5	1200x800x890
560x20	MLC SC W2/560 B/A/yzz HE G3	Carton box	570x190x57	24	899.2	30	104	2496	117.5	1200x800x890
<b>LED Line SMD W2 Comfort Gen. 3 High Reliability/Efficacy – L112</b>										
1120x20	MLC SC W2/1120 x/A/yzz G3	Carton box	1130x190x57	48	2612	50	52	2496	159.8	1200x800x890
1120x20	MLC SC W2/1120 x/A/yzz HE G3	Carton box	1130x190x57	48	2612	50	52	2496	159.8	1200x800x890
1120x20	MLC SC W2/1120 B/A/yzz G3	Carton box	1130x190x57	24	1412	50	52	1248	97.5	1200x800x890
1120x20	MLC SC W2/1120 B/A/yzz HE G3	Carton box	1130x190x57	24	1412	50	52	1248	97.5	1200x800x890

X - Connection option (Top connector or Small top connector)

B - Bottom connector

A - Number of components (3R, 6, 12R...)

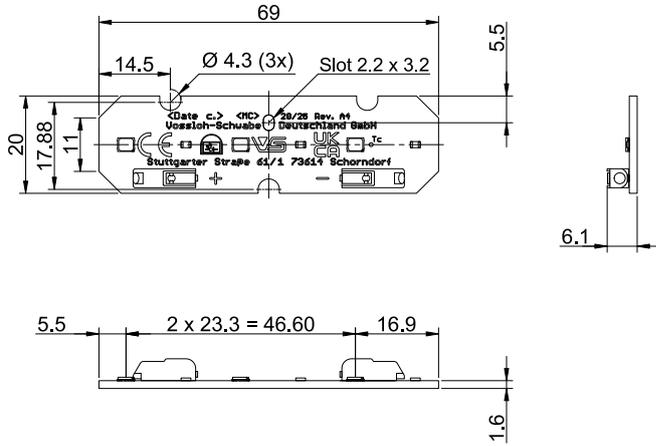
yzz - CCT&CRI combination (830, 840...)

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

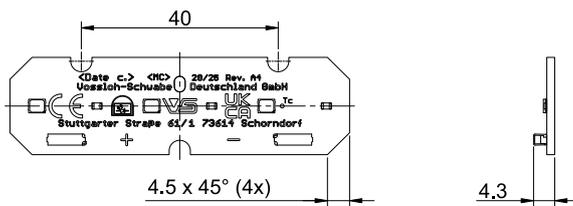
## Mechanical Dimensions

**T = Top Connection**  
**B = Bottom Connection**  
**S = Small Top Connection**

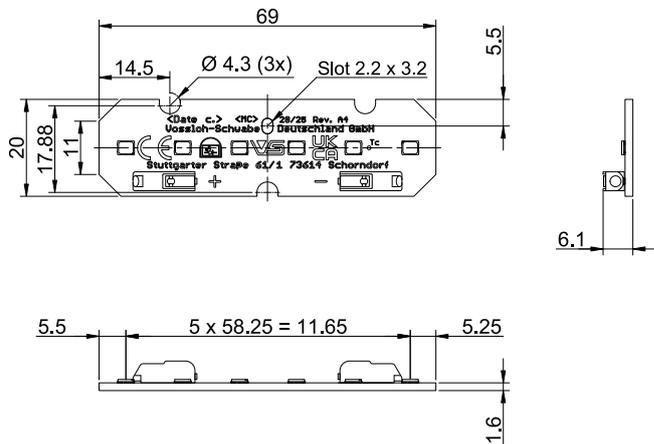
### MLC SC W2/70 T/3R/yz G3



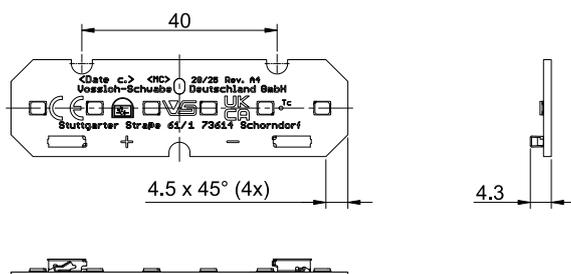
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### MLC SC W2/70 T/6/yz G3



### MLC SC W2/70 S/6/yz G3

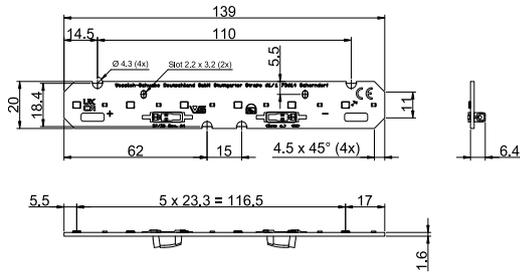


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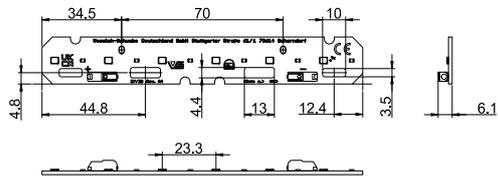
## Mechanical Dimensions

**T = Top Connection**  
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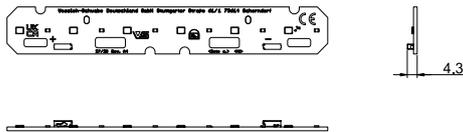
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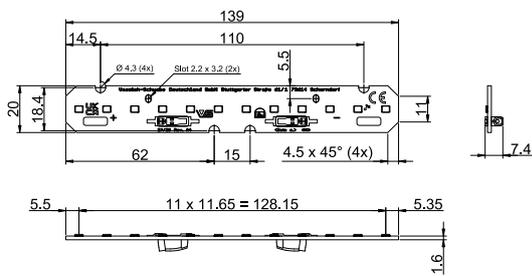
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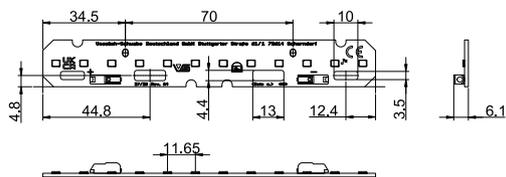
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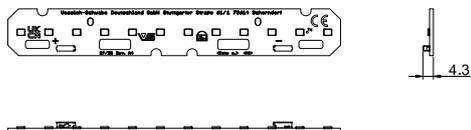
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### MLC SC W2/140 T/12/yz G3



### MLC SC W2/140 S/12/yz G3

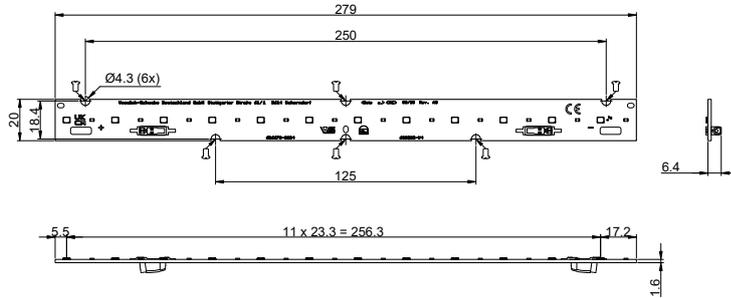


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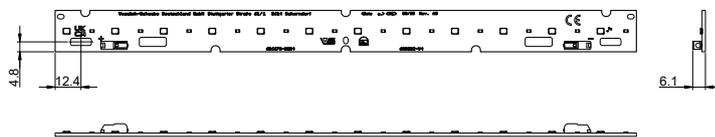
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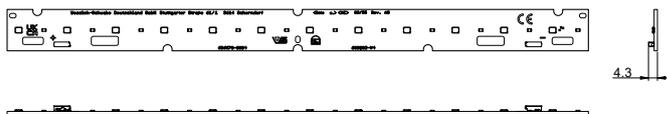
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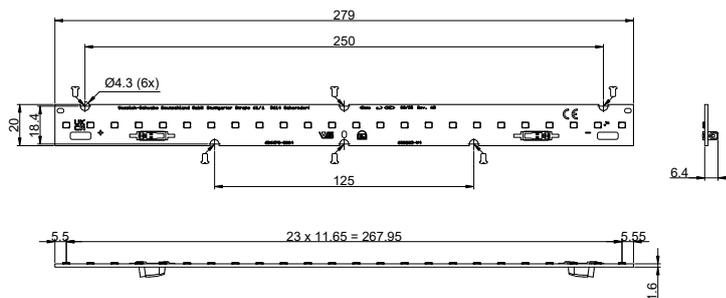
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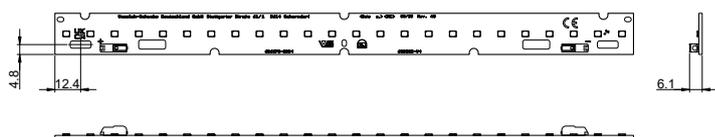
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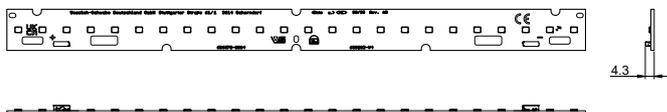
### MLC SC W2/280 B/24/yz G3



### MLC SC W2/280 T/24/yz G3



### MLC SC W2/280 S/24/yz G3

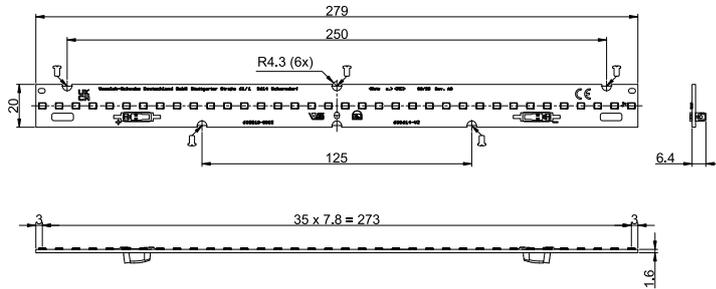


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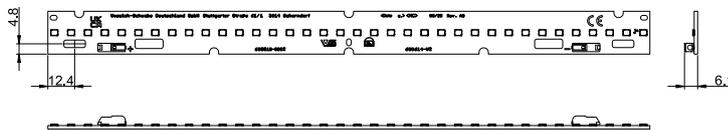
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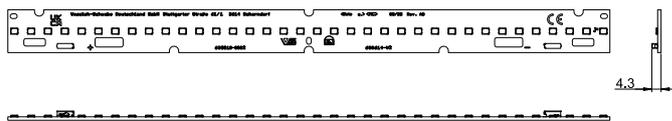
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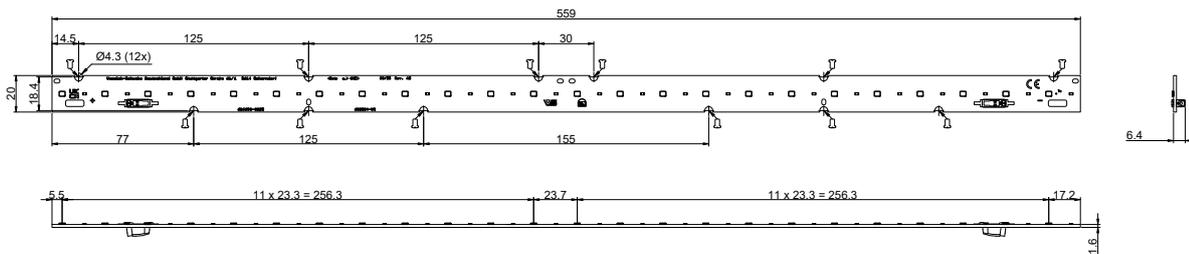
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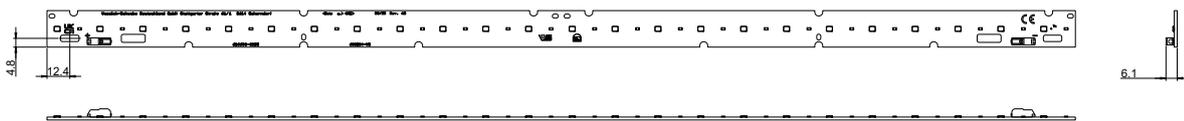
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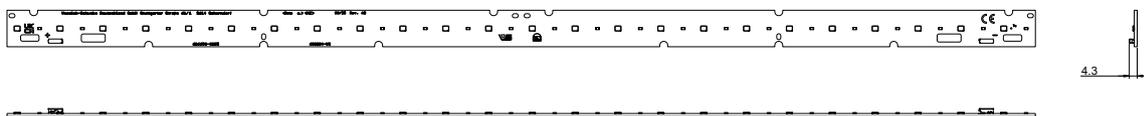
### MLC SC W2/560 B/24R/yzz G3



### MLC SC W2/560 T/24R/yzz G3



### MLC SC W2/560 S/24R/yzz G3

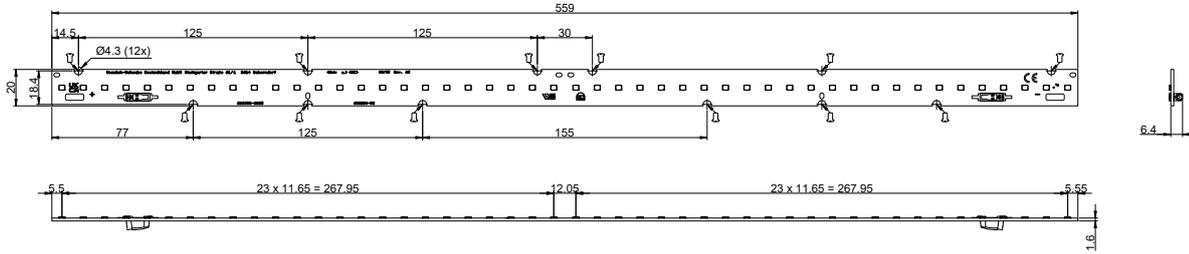


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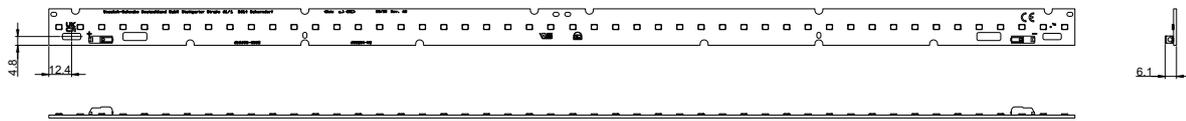
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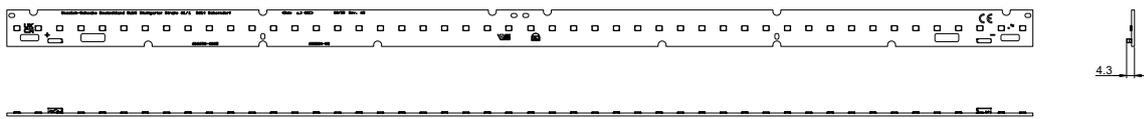
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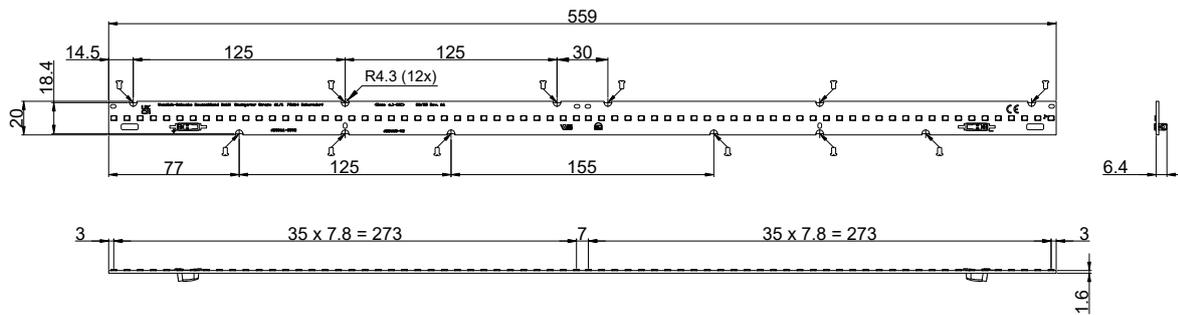
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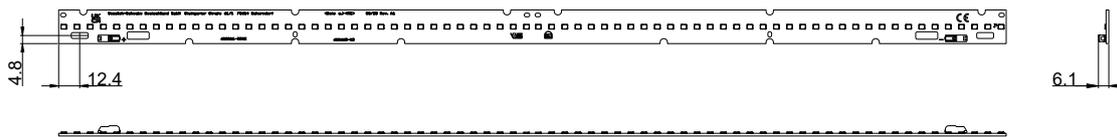
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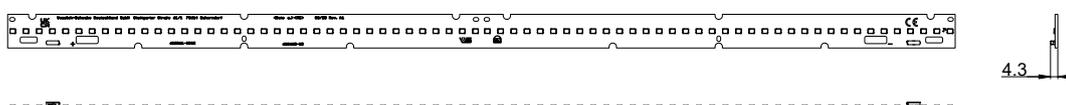
### MLC SC W2/560 B/72/yzz HE G3



### MLC SC W2/560 T/72/yzz HE G3



### MLC SC W2/560 S/72/yzz HE G3

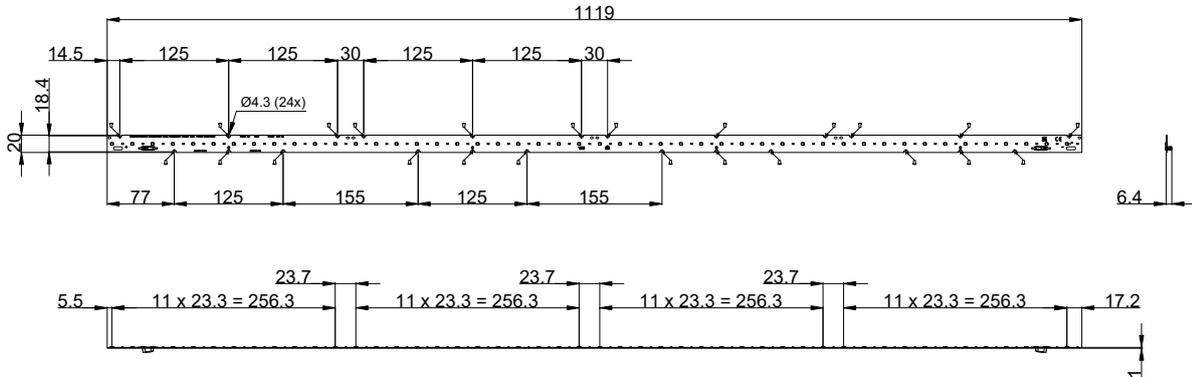


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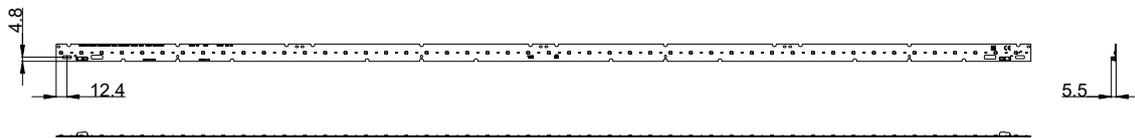
## Mechanical Dimensions

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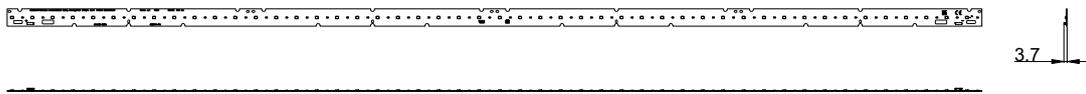
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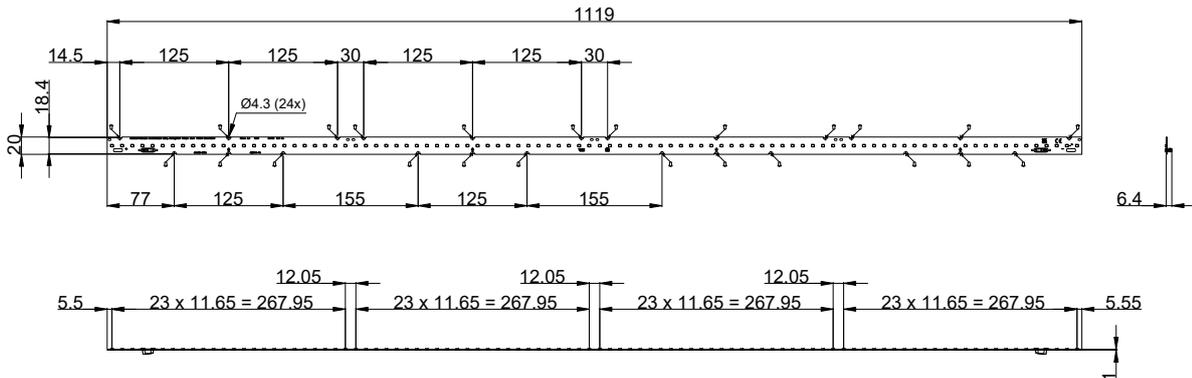
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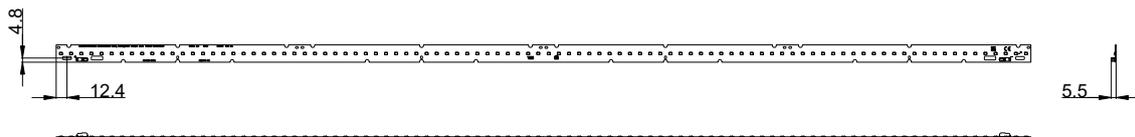
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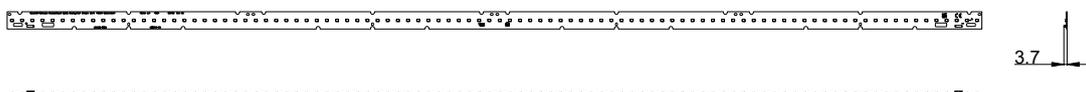
### MLC SC W2/1120 B/96/yzz G3



### MLC SC W2/1120 T/96/yzz G3



### MLC SC W2/1120 S/96/yzz G3



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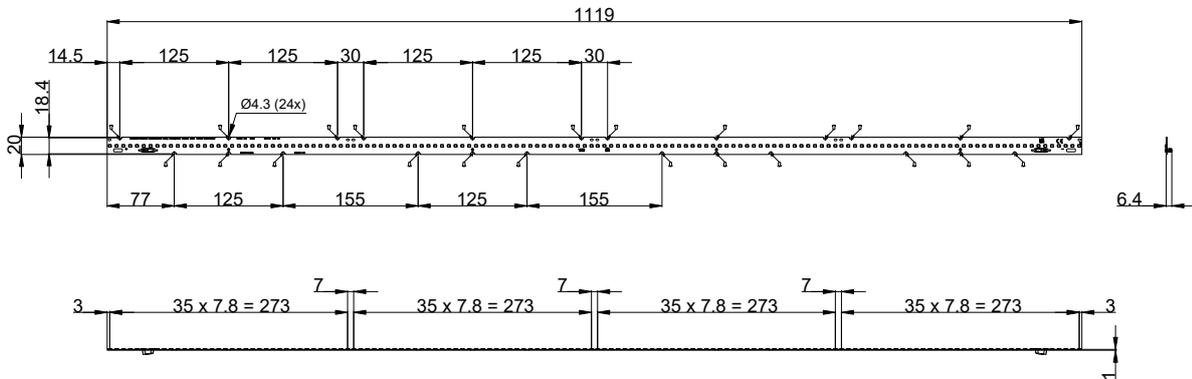
## Mechanical Dimensions

T = Top Connection

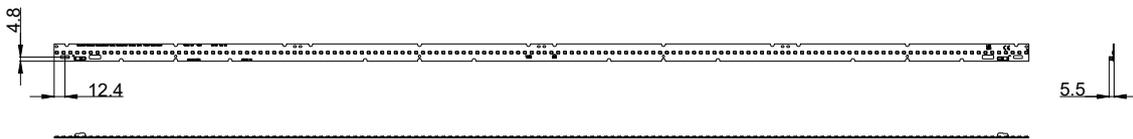
B = Bottom Connection

S = Small Top Connection

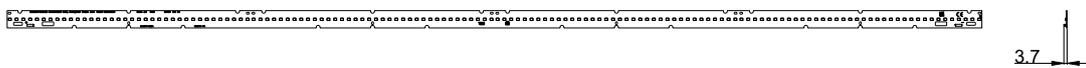
### MLC SC W2/1120 B/144/yzz HE G3



### MLC SC W2/1120 T/144/yzz HE G3

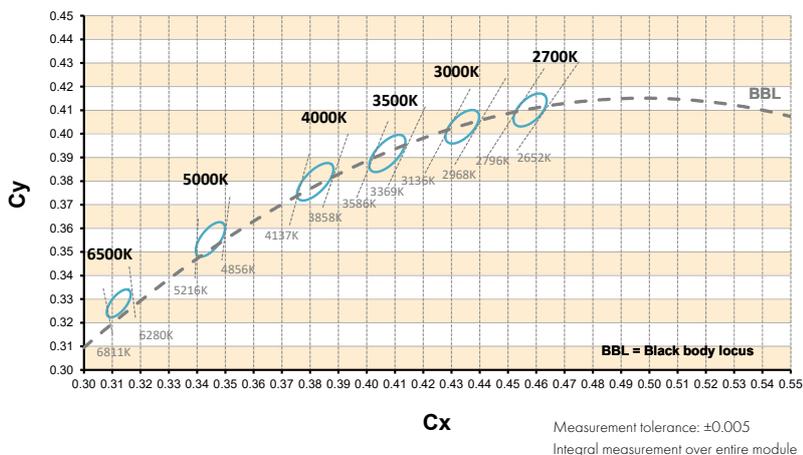


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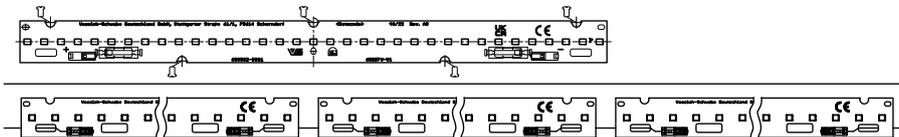
## Bins



## 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:
  - 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 175 V DC (basic insulation) and 40 V DC (reinforced insulation).
  - Max. diameter of screw head (M4): Ø 8 mm
  - Only the marked holes are fixing holes for screws M4. Please do not use other holes for fixation!

<b>350V DC basic (185V DC reinforced)</b>
MLC SC W2/70: 70x20 mm
MLC SC W2/140: 140x20 mm
MLC SC W2/280: 280x20 mm
MLC SC W2/560: 560x20 mm
<b>300V DC basic (150V DC reinforced)</b>
MLC SC W2/1120: 1120x20 mm

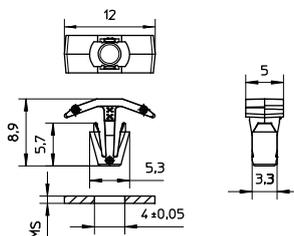


## Fixing Clip

For fastening LED PCBs to luminaire sheets without needing screws  
 PCB hole dia.: 4.3–4.5 mm  
 Vibration resistant version  
 Material: PC, white (UL-94 V2)  
 Weight: 0.2 g, Packaging unit: 1000 pcs. (.11 = 10,000 pcs.)

Type	Ref. No.	For luminaire sheet thickness (MS) mm
98050	<b>562870</b>	0.5–1.0*

\* PCB thickness: 1.6 mm



## Linear LED Constant Current Drivers

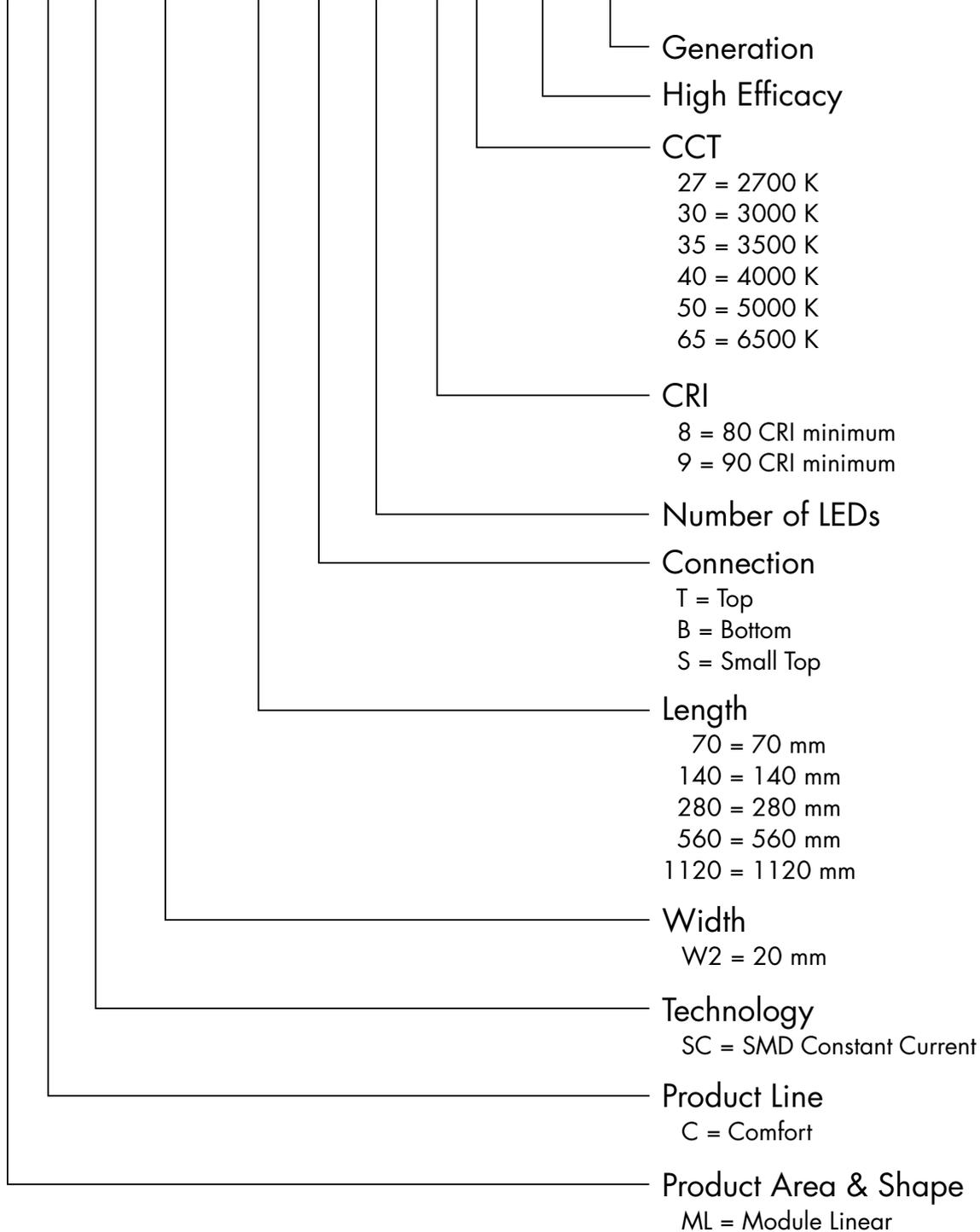
Please visit our homepage for details for suitable LED constant current drivers: [www.vossloh-schwabe.com](http://www.vossloh-schwabe.com)

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**Nomenclature Example**

**MLC SC W2/280 T/36/840 HE G3**



Generation

High Efficacy

CCT

27 = 2700 K

30 = 3000 K

35 = 3500 K

40 = 4000 K

50 = 5000 K

65 = 6500 K

CRI

8 = 80 CRI minimum

9 = 90 CRI minimum

Number of LEDs

Connection

T = Top

B = Bottom

S = Small Top

Length

70 = 70 mm

140 = 140 mm

280 = 280 mm

560 = 560 mm

1120 = 1120 mm

Width

W2 = 20 mm

Technology

SC = SMD Constant Current

Product Line

C = Comfort

Product Area & Shape

ML = Module Linear

## 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.
 



Danger of death!!!
- 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) (no 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 variant; BJB 46.111.1001.50 for bottom variant; WAGO 2065 for small top variant.
- Safety regulations acc. to EN 60598 (or further standards) has to be observed if the maximum output voltage exceed the permitted touchable value.
- Measurement tolerances:
  - luminous flux:  $\pm 7\%$
  - voltage:  $\pm 3\%$
  - CRI:  $\pm 1$
- 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

### 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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