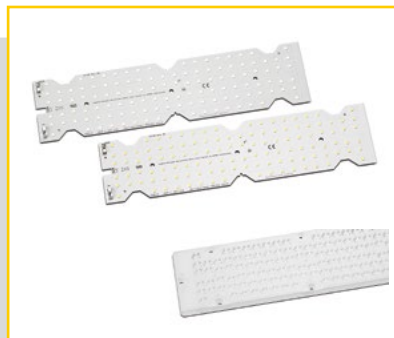


# LED INDUSTRY W7.5 6R-120 LEDS

WU-M-677



## LED INDUSTRY W7.5 6R-120 LEDS

**WU-M-677**

### Typical Applications

Built-in luminaires/general illumination

- Industry lighting for:
  - Production halls
  - Warehouses
- Lighting for sports facilities
- Lighting for department stores

### LED Industry W7.5 6R-120 LEDs

■ **HIGHLY EFFICIENT: UP TO 205 LM/W  
AT T<sub>p</sub> = 65 °C**

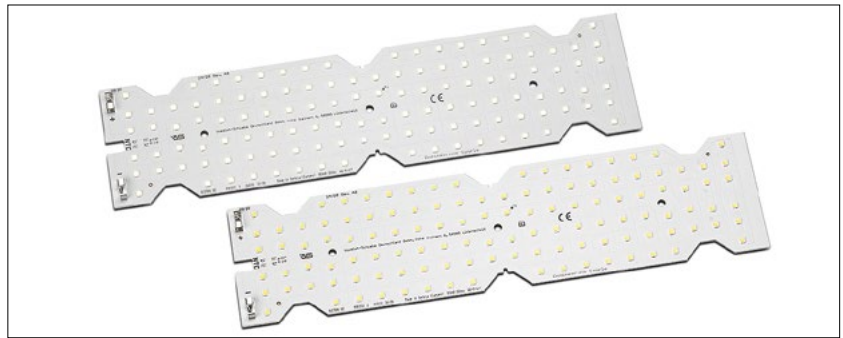
■ **ENEC AND VDE APPROVED**



## LED Industry W7.5 6R-120 LEDs

### Technical Notes

- LED built-in module for integration into luminaires
- Dimensions: 289x73.5 mm
- Driving current: 500 mA / 700 mA / 900 mA
- On-board push terminal system
- Colour tolerance: 3-step MacAdam



### Typical Light Distribution Curve

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

### W7.5 Industry Optics

Please visit our homepage for details for suitable W7.5 Industry Optics:

- [www.vossloh-schwabe.com/en/products/optics-reflectors/linear-optics/](http://www.vossloh-schwabe.com/en/products/optics-reflectors/linear-optics/)

### Electrical Characteristics

at  $t_p = 65^\circ\text{C}$

Type	No. of LEDs	Typ. voltage DC			Typ. power consumption		
		500 mA V	700 mA V	900 mA V	500 mA W	700 mA W	900 mA W
WU-M-677	120	64.6	65.5	66.2	32.3	45.9	59.6

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 mA
		$^\circ\text{C}$ min.	$^\circ\text{C}$ max.	$^\circ\text{C}$ min.	$^\circ\text{C}$ max.	
WU-M-677	500	-30	+85	-30	+85	1000
	700					
	900					

### Operating Life

in hours at measured temperature at  $t_p$  point

	500 mA			700 mA			900 mA		
	40 $^\circ\text{C}$	50 $^\circ\text{C}$	85 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	85 $^\circ\text{C}$	40 $^\circ\text{C}$	50 $^\circ\text{C}$	85 $^\circ\text{C}$
L90/B10	57,000	55,000	50,000	57,000	54,000	45,000	51,000	51,000	31,000
L80/B10	> 102,000	> 102,000	> 102,000	> 102,000	> 102,000	> 102,000	> 108,000	> 108,000	75,000
L70/B10	> 102,000	> 102,000	> 102,000	> 102,000	> 102,000	> 102,000	> 108,000	> 108,000	> 108,000
L90/B50	78,000	75,000	67,000	78,000	75,000	62,000	65,000	65,000	41,000
L80/B50	> 102,000	> 102,000	> 102,000	> 102,000	> 102,000	> 102,000	> 108,000	> 108,000	87,000
L70/B50	> 102,000	> 102,000	> 102,000	> 102,000	> 102,000	> 102,000	> 108,000	> 108,000	> 108,000

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# LED Modules – LED Industry W7.5 6R-120 LEDs

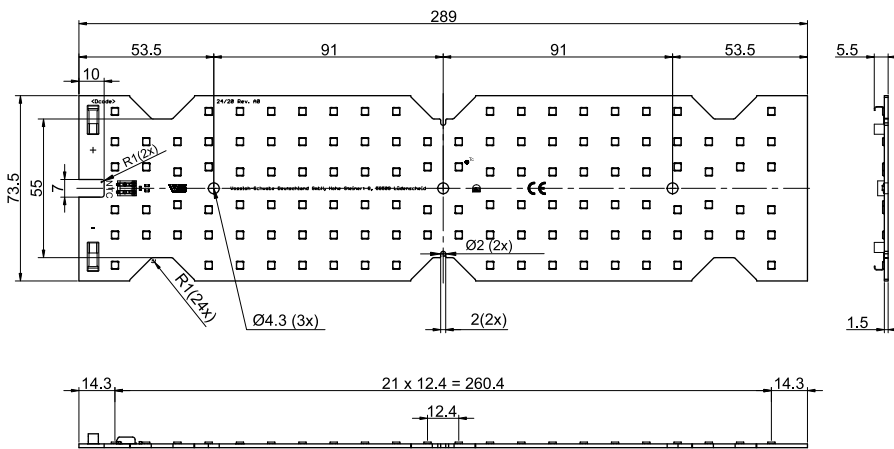
## Optical Characteristics

at  $t_p = 65^\circ\text{C}$ ; without secondary optics

Type	Ref. No.	Colour	Correlated colour temperature [K]	Typ. luminous flux* (lm) and efficiency* (lm/W) at						Beam angle °	Min. CRI $R_a$	Photo-metric code
				500 mA		700 mA		900 mA				
				lm	lm/W	lm	lm/W	lm	lm/W			
WU-M-677-830	<b>570989</b>	warm white	3000	6360	197	8750	191	11105	186	120	80	830/349
WU-M-677-840	<b>570990</b>	neutral white	4000	6615	205	9100	198	11550	194	120	80	840/349
WU-M-677-850	<b>570991</b>	cool white	5000	6615	205	9100	198	11550	194	120	80	850/349
WU-M-677-865	<b>570992</b>	cool white	6500	6295	195	8660	189	10990	184	120	80	865/349

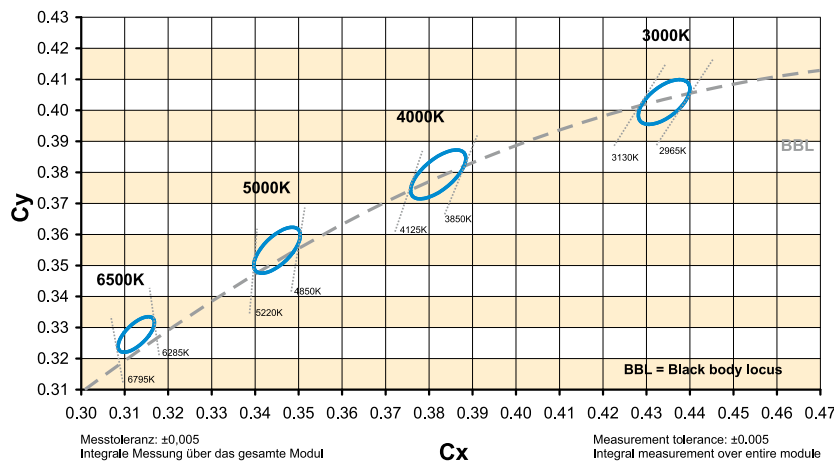
\* Production tolerance of luminous flux and efficiency:  $\pm 10\%$  | Assembly option with NTC interface on-board (available on request)

## Mechanical Dimensions SMD PCB



- 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 600 V DC (basic insulation) and 300 V DC (reinforced insulation).


## Bins



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## Assembly and Safety Information

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

- Consider safety regulations acc. EN 60598 in the 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 in life!!!
- ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED modules. See VS's application notes on ESD protection.
- Adequate anti-static electricity measures, including the use of conductive shoes, ionizers, work bench grounding, wrist straps, flooring and stools should be used.
- LED assembly modules must not be subjected to any undue mechanical stress, e. g.:
  - do not treat as bulk cargo
  - avoid shear and compressive forces during handling and installation
  - do not damage circuit paths
  - avoid any pressure on the light emitting surface
- Safe operation only possible by the use of external constant current sources ( $I_{max}$ . see table "Electrical Characteristics").
- Operation only with power supply units that feature the following protection:
  - Short-circuit protection
  - Overload protection
  - Overheating protection
- The module can be fixed with M4 screws. Fixation only with flat or cylinder head screws (M4) (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.
- 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  
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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