

### ➤ Product description

- Ideal for linear and panel lights
- 2 terminals for series wiring
- High color rendering index CRI > 80
- Simple installation via clips or screws
- Long life-time up to 50,000 hours
- 5-year guarantee

### ➤ Optical properties

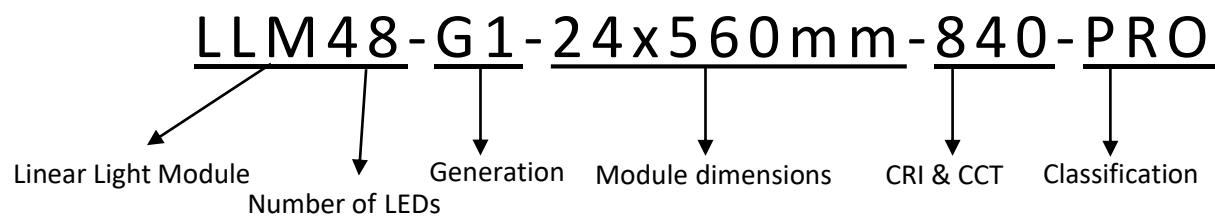
- Colour temperatures 3,000K and 4,000 K
- Typ. luminous flux 2800 lumen (56 cm)
- Efficacy of the module up to 170 lm/W
- High colour rendering index CRI > 80
- Small color tolerance (MacAdam 3)

### ➤ Mechanical properties

- Module dimension 24x560 mm , 24x280 mm , 24x140 mm (ZHAGA compliant)  
Perfectly uniform light, even if several LED modules are used together in a line
- Push terminals for quick and simple wiring of LED module to LED module



Product Code information:

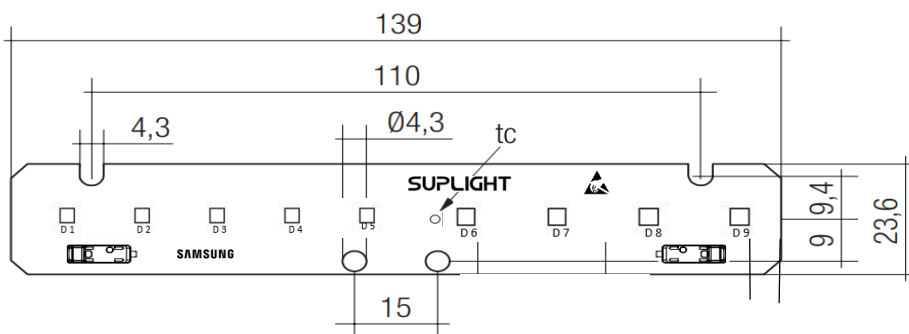
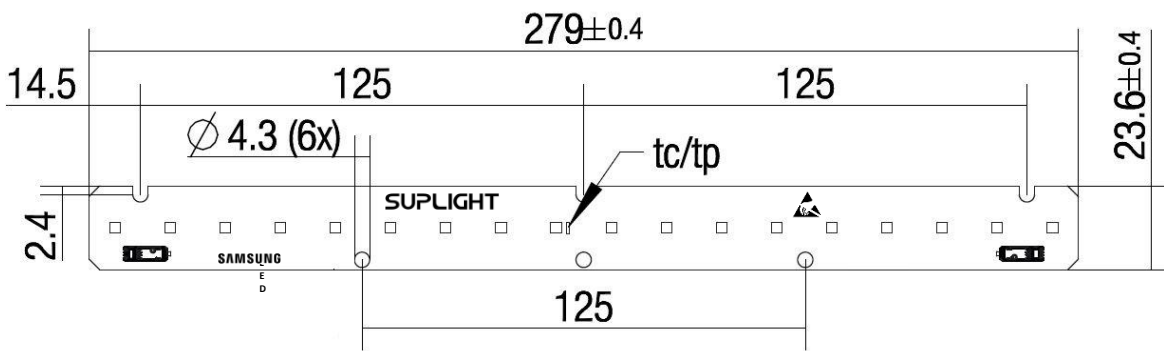
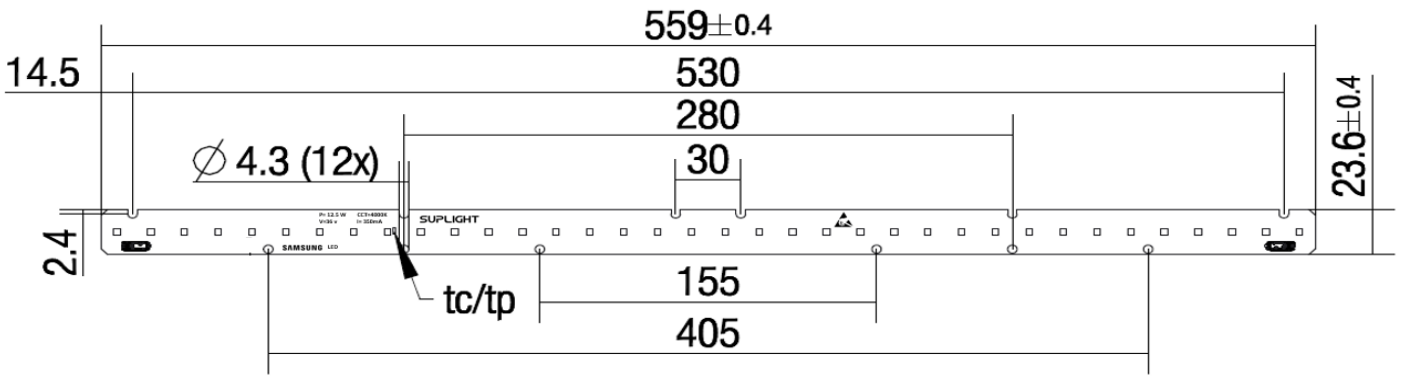


Electro-Optical characteristics : (  $I_f = 350\text{mA}$  ,  $T_a = 25^\circ\text{C}$  )

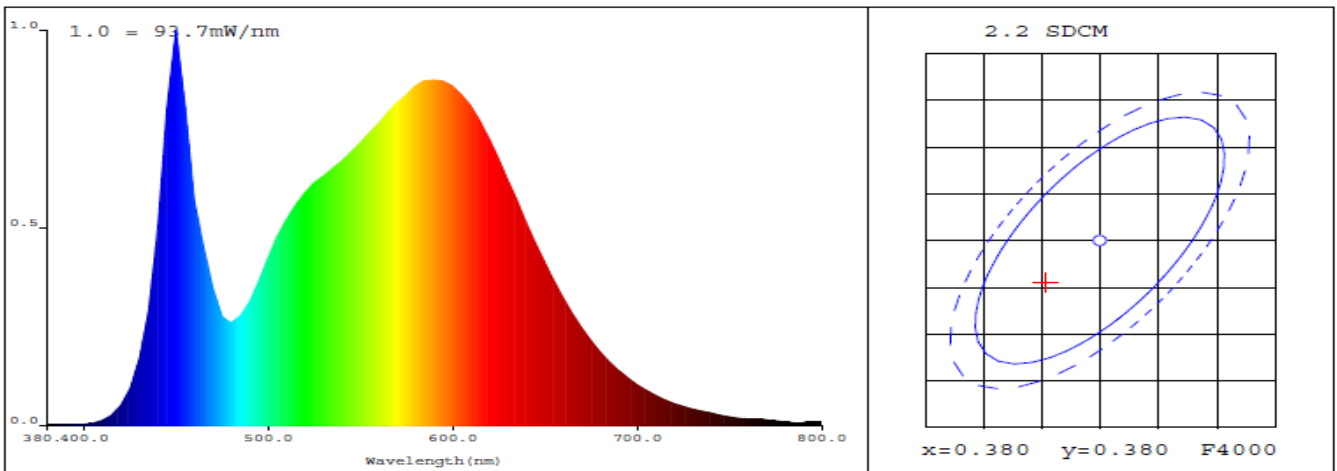
TYPE	Length	Color temp.	Forward current	Luminous flux	forward voltage	Power cons.	Luminous efficacy	CRI
LLM48-G1-24x560mm-8X0-PRO	56 cm	3000 K 4000 K	350 mA	2600 Lm	44.6V .. 45.9V	16 W	168 lm/W	>80
LLM24-G1-24x280mm-8X0-PRO	28 cm	3000 K 4000 K	350 mA	1300 Lm	22.1V .. 22.9V	8 W	168 lm/W	>80
LLM12-G1-24x140mm-8X0-PRO	14 cm	3000 K 4000 K	350 mA	650 Lm	11V .. 11.4V	4 W	168 lm/W	>80

- 1-Tolerance of useful light flux - 0 % / + 15 %. Measurement uncertainty  $\pm 10\%$ .
- 2-Tolerance of expected light flux - 0 % / + 15 %. Measurement uncertainty  $\pm 10\%$ .  
Based on calculation.
- 3- Tolerance of power consumption  $P_{on} \pm 10\%$ . Measurement uncertainty  $\pm 5\%$ .

Technical data	
Beam characteristic	120 ° C
Ambient temperature rang	-25 .. +50° C
tc	85° C
I min	200 mA
I rate	350 mA
I max	450 mA
Type of protection	IP 00
Classification acc. to IEC 62031	Built-in
ESD classification	Severity level 2
Life-time	50,000 h
Guarantee	5 years



### Light Source Test Report (4000K)



### Ordering data

TYPE	Length	Packaging, carton	Weight per pc	Weight per carton
LLM36-G1-24x560mm-8X0-PRO	56 cm	200 PCs	0.036 kg	9.8 kg
LLM18-G1-24x280mm-8X0-PRO	28 cm	200 PCs	0.018 kg	9.5 kg
LLM9-G1-24x140mm-8X0-PRO	14 cm	400 PCs	0.009 kg	9.5 kg

### Storage and humidity Storage

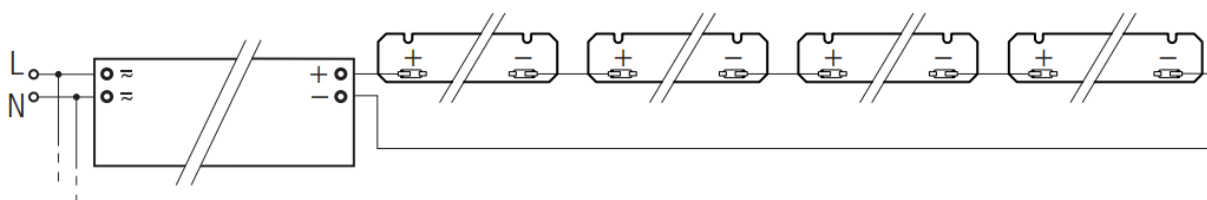
temperature -30...+80°C

Operation only in non condensing environment. Humidity during processing of the module should be between 0 to 70 %.

### Thermal design and heat sink

The rated life of LED products depends to a large extent on the temperature. If the permissible temperature limits are exceeded, the life of the LLM will be greatly reduced or the LLM may be destroyed.

### Wiring example:



### Wire preparation:

The wiring can be in stranded wires or solid with a cross section of 0.2 to 0.75mm. For the push-wire connection you have to strip the insulation (8–9mm). To remove the wires use a suitable tool or through twist and pull .

