THE DATASHEET OF

SI-B9U111560WW

LED Module

LT-M562F
LT-M562G
LT-M562H

Features & Benefits

- Easy connection with re-workable poke-in connector
- Fit better to replace conventional T5, T8 fixture with narrow width
- Full Certifications

Applications

Indoor Lighting:

- Office / Retail/ Living space
- Area Panels, Troffer and Linear Pendants
- Channel and Cove lighting

Table of Contents

SAMSUNG

1. Product Code Information

a) M562F

Nominal CCT (K)	Product Code
2700	SI-B9W111560WW
3000	SI-B9V111560WW
3500	SI-B9U111560WW
4000	SI-B9T111560WW

b) M562G

Nominal CCT (K)	Product Code
2700	SI-B9W151560WW
3000	SI-B9V151560WW
3500	SI-B9U151560WW
4000	SI-B9T151560WW

c) M562H

Nominal CCT (K)	Product Code
2700	SI-B9W171560WW
3000	SI-B9V171560WW
3500	SI-B9U171560WW
4000	SI-B9T171560WW

2. Characteristics

Item	Rating	Unit	Remark
Rated Lifetime	>50,000	hour	-
Ingress Protection (IP)	no rating	-	
Ambient / Operating Temperature (t_{amb})	-20 ~ +50	ºC	
Storage Temperature	-30 ~ +80	ºC	

a) M562F

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	2700	898	1020	1146	lm	I_f = 450 mA t_p = 50 ºC
	3000	924	1050	1176		
	3500	986	1120	1254		
	4000	1030	1170	1310		
Luminous Efficacy	2700	-	92	-	lm/W	
	3000	-	95	-		
	3500	-	101	-		
	4000	-	105	-		
CCT	2700	2607	2679	2756	K	
	3000	2874	2962	3055		
	3500	3241	3355	3469		
	4000	3784	3930	4089		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		90	-	-	-	
Operating Current (I_f)		-	450	-	mA	-
Operating Voltage (V_f)		23.6	24.7	26.0	Vdc	I_f = 450 mA t_p = 50 ºC
Power Consumption		-	11.1	-	W	

Notes:

1) t_p: temperature at which performance is specified; measured at “Tc point”.

2) Samsung maintains a measurement tolerance of: Luminous flux: ±7 %, CRI: ±3.0, Voltage: ±0.3 V.

b) M562G

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	2700	1188	1350	1512	lm	
	3000	1214	1380	1546		
	3500	1302	1480	1658		
	4000	1364	1550	1736		
Luminous Efficacy	2700		91		lm/W	I_f = 600 mA t_p = 50 ºC
	3000	-	93	-		
	3500	-	100	-		
	4000	-	105	-		
CCT	2700	2606	2678	2755	K	
	3000	2925	3014	3112		
	3500	3236	3351	3465		
	4000	3784	3930	4089		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		90	-	-	-	
Operating Current (I_f)		-	600	-	mA	-
Operating Voltage (V_f)		23.6	24.7	26.0	Vdc	I_f = 600 mA t_p = 50 ºC
Power Consumption		-	14.8	-	W	

Notes:

3) t_p: temperature at which performance is specified; measured at “Tc point”.

4) Samsung maintains a measurement tolerance of: Luminous flux: ±7 %, CRI: ±3.0, Voltage: ±0.3 V.

c) M562H

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	2700	1461	1660	1859	lm	
	3000	1496	1700	1904		
	3500	1602	1820	2038		
	4000	1672	1900	2128		
Luminous Efficacy	2700	-	99		lm/W	I_f = 700 mA t_p = 50 ºC
	3000	-	101	-		
	3500	-	108	-		
	4000	-	113	-		
CCT	2700	2606	2678	2755	K	
	3000	2925	3014	3112		
	3500	3236	3351	3465		
	4000	3784	3930	4089		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		90	-	-	-	
Operating Current (I_f)		-	700	-	mA	-
Operating Voltage (V_f)		22.0	24.0	26.0	Vdc	I_f = 700 mA t_p = 50 ºC
Power Consumption		-	16.8	-	W	

Notes:

5) t_p: temperature at which performance is specified; measured at “Tc point”.

6) Samsung maintains a measurement tolerance of: Luminous flux: ±7 %, CRI: ±3.0, Voltage: ±0.3 V.

Item	Nominal*	Life**	Max***	Unit
Temperature	50 (t_p)	M562F: 70($t_{p,50}$) M562G/H: 80($t_{p,50}$)	90(t_c)	ºC

Notes:

* Temperature used to specify performance of the module (t_p).

** Rated maximum performance temperature at which lifetime is specified ($t_{p,\ 50}$).

*** Rated maximum temperature, highest permissible temperature to avoid safety risk (t_c).

All temperatures are measured at the designated “Tc point” as indicated on the module.

3. Structure and Assembly

a) Appearance

M562F

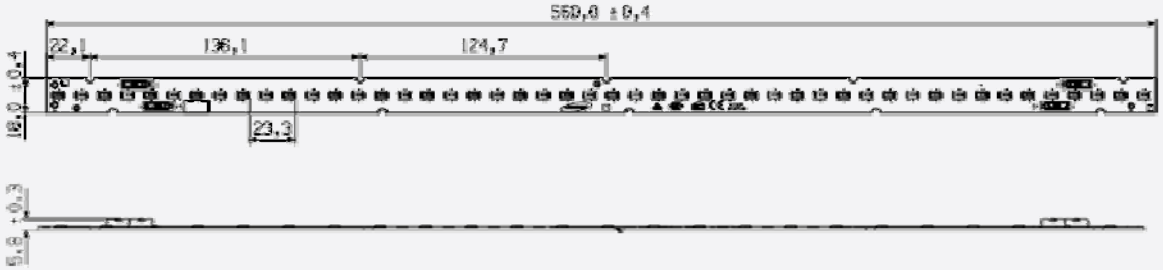
M562G

M562H

b) Dimension

M562F

Dimension	Specification	Tolerance	Unit
Module Length	560	±0.4	mm
Module Width	18.0	±0.4	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	27.0	±1.1	g

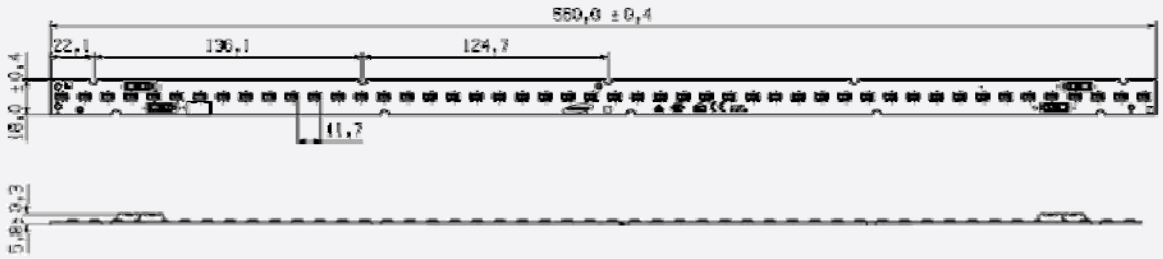


M562G

Dimension	Specification	Tolerance	Unit
Module Length	550	±0.4	mm
Module Width	18.0	±0.4	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	27.0	±1.1	g

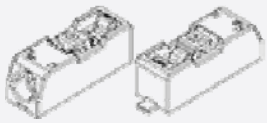
M562H

Dimension	Specification	Tolerance	Unit
Module Length	550	±0.4	mm
Module Width	18.0	±0.4	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	28.0	±1.1	g



c) Assembly

Connectors on the board are provided for easy wiring with the LED driver and between modules

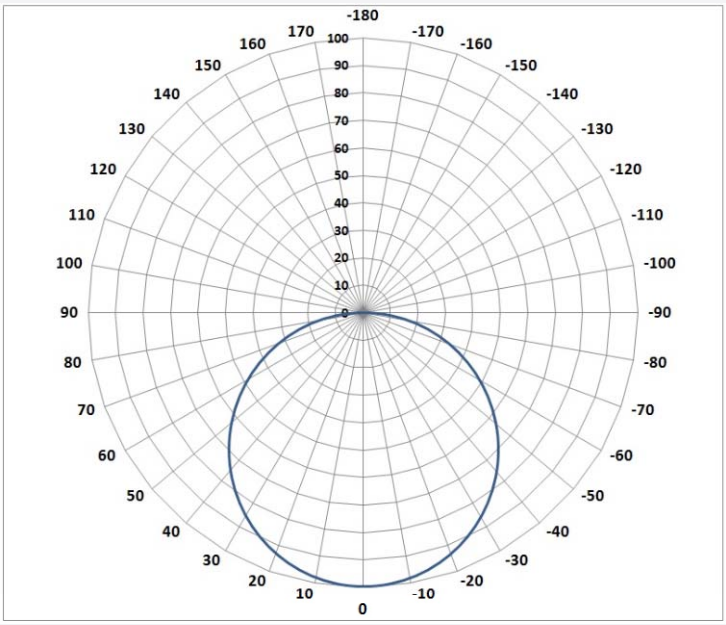


d) Structure

Item	Specification
LED	LM561B Middle Power LED
PCB	Material: copper, solder mask, epoxy
Connector	Reworkable poke-in connector type
Wire	24~18 AWG; terminal strip length of 7.5~8.5 mm

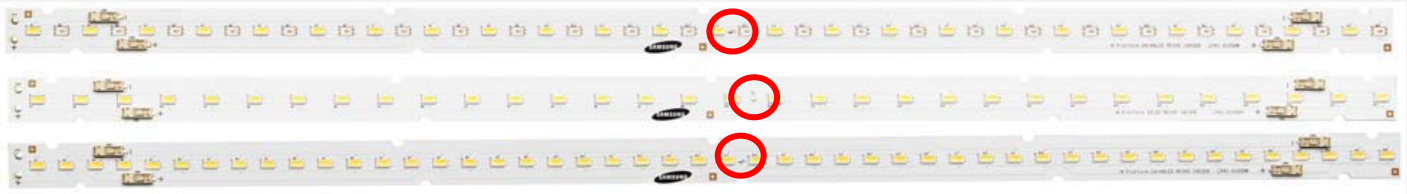
e) Light Distribution

Polar Intensity Diagram: Beam Angle 115 ± 5°



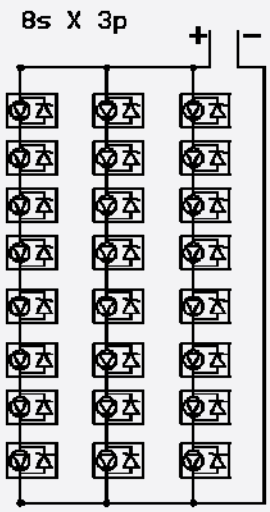
f) Thermal Management

Performance temperatures are measured on “Tc point” as indicated on the module.

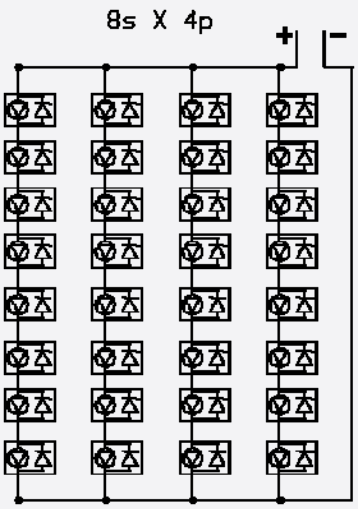


g) Schematic Circuit

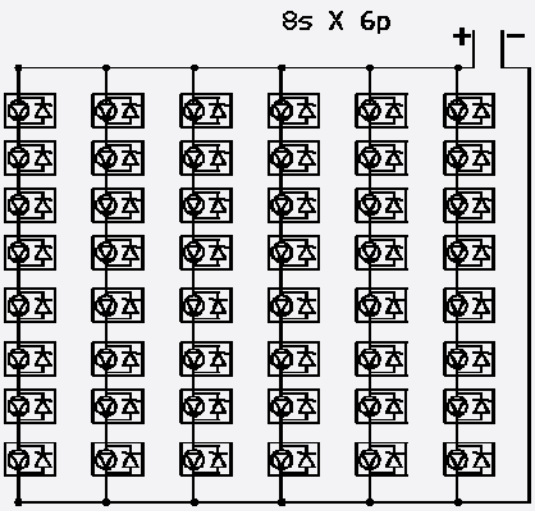
M562F



M562G



M562H

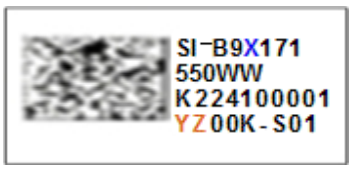


4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification	CE	IEC / EN62031, IEC /EN 62471
	ENEC	IEC / EN 62031, IEC / EN 62471
	UL / cUL for Component	UL 8750
	Photo biological Safety(LM561B LED)	IEC / EN 62471
Declaration	RoHS	Hazardous Substance & Material
	REACH	Hazardous Substance & Material

5. Label Structure

a) Module Label



Size : 10(L) x 5.5(W)

The lot number is composed of the following characters:

A. Barcode type : 2-dimensional data matrix code

B. Information of Barcode

① Example : SI-B8X071300WW_K2241000014000K-S01

② 38 digits: Model code (15) + Space (1) + SMT date (4) + SMT line No (1) + Serial No.(5) + Color temperature (5) + LED maker (2) + GROUP No (2)

C. Number information

① Model code: SI-B8X071300WW

X: W (2700K), V (3000K), U (3500K), T (4000K), R (5000K)

② Space: Space

③ SMT date: K224 (2010-Feburary-24th)

A (2000), B(2001) ····· J(2009), K(2010), L(2011), ····· (year)

1(January), 2(February), ····· 9(September), A(October), B(November), C(December) (month)

01, 02, ····· 31th (date)

④ SMT Line No. : 1 line

1~9, A(10), B(11), C(12), D(13), E(14), F(15)

⑤ Serial No: 00001

00001~99999: Setting "00001" every working day

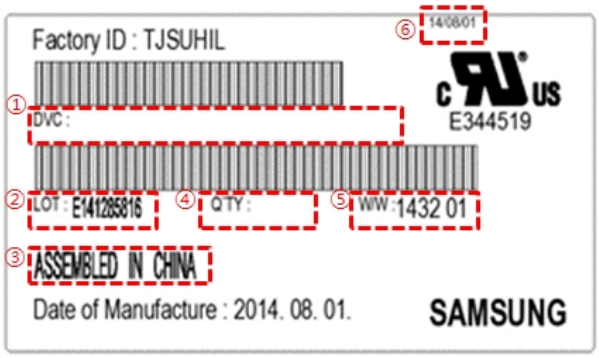
⑥ Color temperature: YZ00K

Y : 27, 30, 35, 40, 50

⑦ LED Maker: -S (Samsung)

⑧ Group No: 01 (Binning group)

b) Box Label



The lot number is composed of the following characters:

① : Product code

② : Lot ID

③ : Place of origin

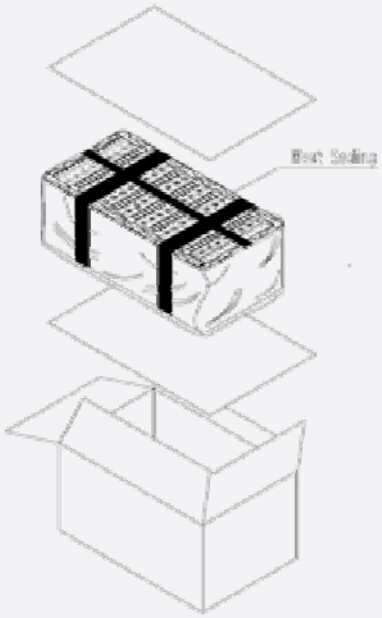
④ : Quantity

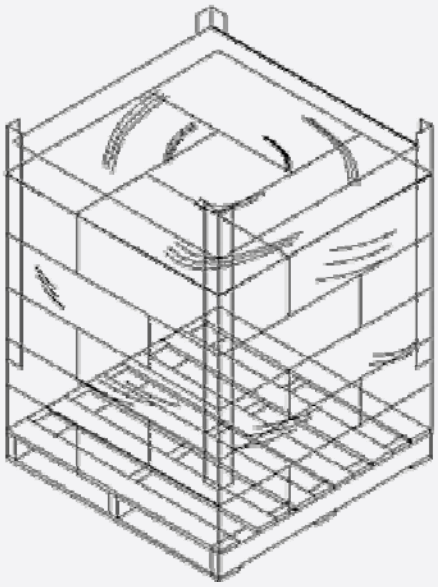
⑤ : Describe production week

⑥ : Date of Issue

6. Packing Structure

a) Packing Process





b) Packing

Packing	Quantity (modules)	Dimension (mm)			
		Length	Width	Height	Tolerance
Outer Box	280	605	449	165	±5
Pallet	5,600	1100	1100	130	-

7. Precautions in Handling & Use

A. The LED Lighting Modules for white light are devices which are materialized by combining white LEDs.
The color of white light can differ a little unusually to diffuser plate(sign-board panel).
Also when the LEDs are illuminating, operating current should be decided after considering
the ambient maximum temperature.

B. Handling
To prevent the LED Lighting Modules from making any defectives, please handle the LED Lighting
Modules with care as follows.
(1) Don't drop the unit and don't give the unit any shocks.
(2) Don't bend the PCB and don't touch the LED Resin.
(3) Don't storage the Module in a dusty place or room.
(4) Don't take the product apart.
(5) Don't touch the LED and also PCB and other circuit parts of Module with your naked fingers or sharpness things.
(6) Take care so that do not pull wire with hand in case of carries or moves LED Lighting Modules.

C. Cleaning
The LED Lighting Modules should not be used in any type of fluid such as water, oil, organic solvent, etc.
It is recommended that IPA (Isopropyl Alcohol) be used as a solvent for cleaning the LED Lighting Modules.
When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the
package and the resin or not. Freon solvents should not be used to clean the LEDs because of
worldwide regulations. Do not clean the LED Lighting Modules by the ultrasonic.
Before cleaning, a pre-test should be done to confirm whether any damage to the LED Lighting
Modules will occur.

D. Static Electricity
Static electricity or surge voltage damages the LED Lighting Modules. Please keep the working
process anti-static electricity condition to prevent the Lighting from destroying, as following.
(1) Anyone who handles the unit should be well grounded.(earth ring or anti-static glove)
(2) Anyone who handles the unit should wear anti-electrostatic working clothes.
(3) All kinds of device and instruments, such as working table, measuring instruments and assembly jigs in your production lines should be well grounded.

E. Storage
The LED Lighting Modules must be stored to insert a package of a moisture absorbent
material(silica gel) in a box.

F. Others
If over voltage which exceeds the absolute maximum rating is applied to LED Lighting Modules.
It will cause damage Circuits(that LED is included) and result in destruction.
Do not directly look into lighted LED with naked eyes.
Please use this product within 5 months, which is kept in its original packaging unopened when
stocked

Legal and additional information.

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