LED Module

LT-M272F
LT-M272G
LT-M272H

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

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SAMSUNG

1. Product Code Information

a) M272F

Nominal CCT (K)	Product Code
2700	SI-B9W051280WW
3000	SI-B9V051280WW
3500	SI-B9U051280WW
4000	SI-B9T051280WW

b) M272G

Nominal CCT (K)	Product Code
2700	SI-B9W071280WW
3000	SI-B9V071280WW
3500	SI-B9U071280WW
4000	SI-B9T071280WW

c) M272H

Nominal CCT (K)	Product Code
2700	SI-B9W113280WW
3000	SI-B9V113280WW
3500	SI-B9U113280WW
4000	SI-B9T113280WW

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) M272F

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	2700	449	510	576	lm	I_f = 450 mA t_p = 55 ºC
	3000	462	525	593		
	3500	493	560	633		
	4000	515	585	661		
Luminous Efficacy	2700	-	91	-	lm/W	
	3000	-	93	-		
	3500	-	100	-		
	4000	-	104	-		
CCT	2700	2593	2667	2742	K	
	3000	2866	2956	3046		
	3500	3232	3346	3461		
	4000	3784	3936	4089		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		90	-	-	-	
Operating Current (I_f)		-	450	450	mA	-
Operating Voltage (V_f)		11.25	12.5	13.75	Vdc	I_f = 450 mA t_p = 55 ºC
Power Consumption		5.1	5.6	6.2	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) M272G

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	2700	594	675	756	lm	
	3000	607	690	773		
	3500	651	740	829		
	4000	682	775	868		
Luminous Efficacy	2700		90		lm/W	I_f = 300 mA t_p = 50 ºC
	3000	-	92	-		
	3500	-	99	-		
	4000	-	103	-		
CCT	2700	2604	2679	2754	K	
	3000	2891	2982	3073		
	3500	3241	3356	3472		
	4000	3808	3964	4121		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		90	-	-	-	
Operating Current (I_f)		-	300	300	mA	-
Operating Voltage (V_f)		22.5	25.0	27.5	Vdc	I_f = 300 mA t_p = 50 ºC
Power Consumption		6.8	7.5	8.3	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) M272H

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	2700	891	1013	1144	lm	
	3000	911	1035	1170		
	3500	977	1110	1254		
	4000	1023	1163	1314		
Luminous Efficacy	2700	-	90		lm/W	I_f = 450 mA t_p = 55 ºC
	3000	-	92	-		
	3500	-	99	-		
	4000	-	103	-		
CCT	2700	2596	2671	2746	K	
	3000	2882	2973	3065		
	3500	3235	3352	3469		
	4000	3799	3956	4113		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		90	-	-	-	
Operating Current (I_f)		-	450	450	mA	-
Operating Voltage (V_f)		22.5	25.0	27.5	Vdc	I_f = 450 mA t_p = 55 ºC
Power Consumption		10.1	11.3	12.4	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)	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.

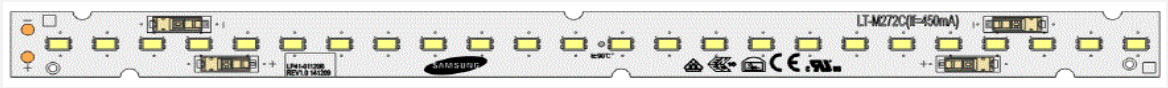
3. Structure and Assembly

a) Appearance

M272F

M272G

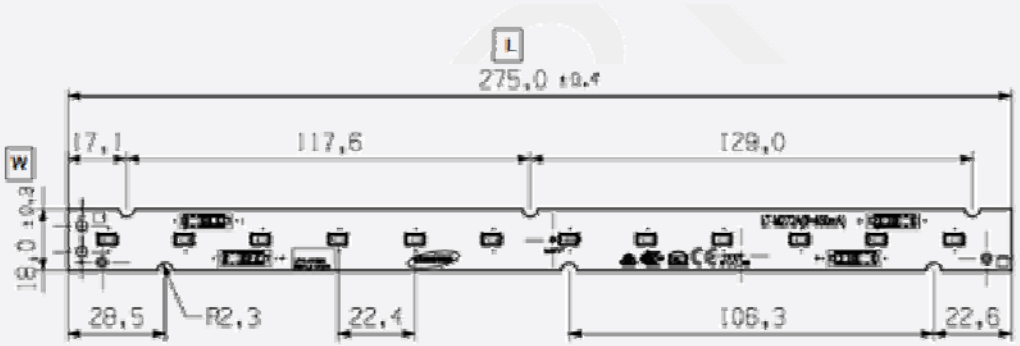
M272H



b) Dimension

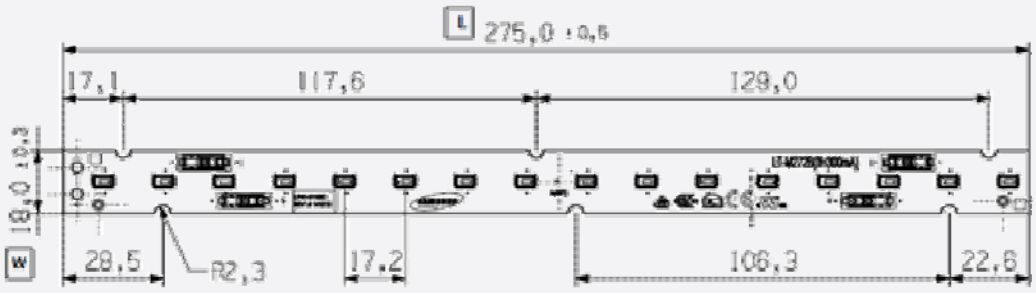
M272F

Dimension	Specification	Tolerance	Unit
Module Length	275.0	±0.5	mm
Module Width	18.0	±0.3	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	13.0	±1.0	g



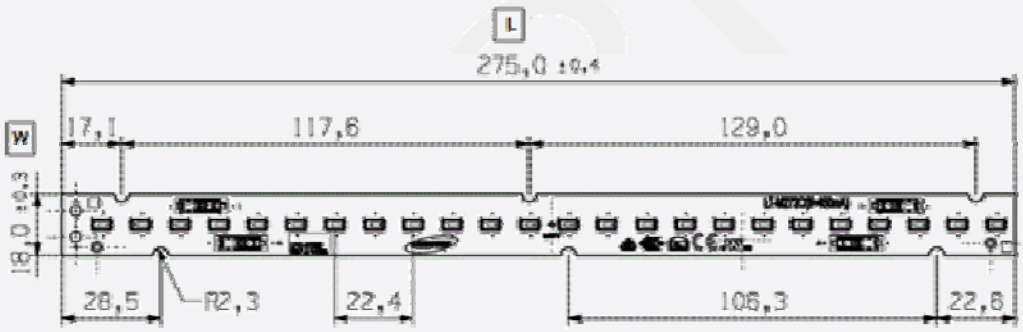
M272G

Dimension	Specification	Tolerance	Unit
Module Length	275.0	±0.5	mm
Module Width	18.0	±0.3	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	13.5	±0.7	g



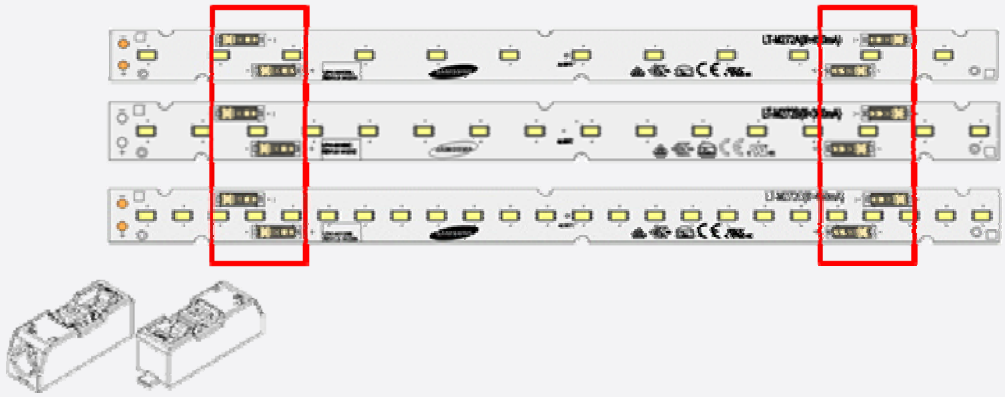
M272H

Dimension	Specification	Tolerance	Unit
Module Length	275.0	±0.5	mm
Module Width	18.0	±0.3	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	14	±1.0	g



c) Assembly

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

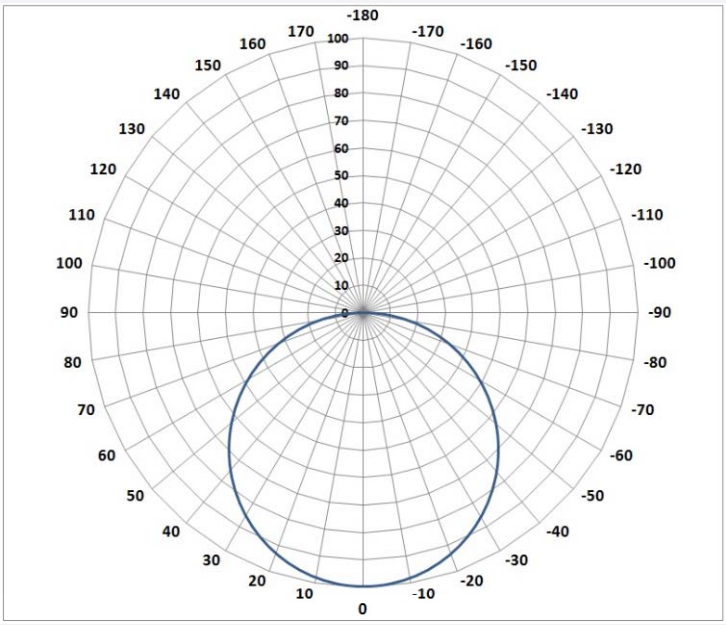


d) Structure

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

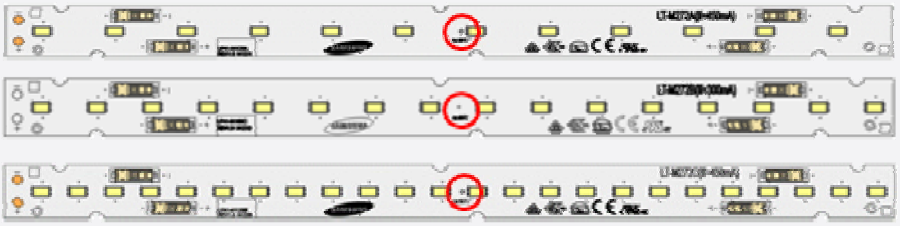
e) Light Distribution

Polar Intensity Diagram: Beam Angle 115 ± 5°



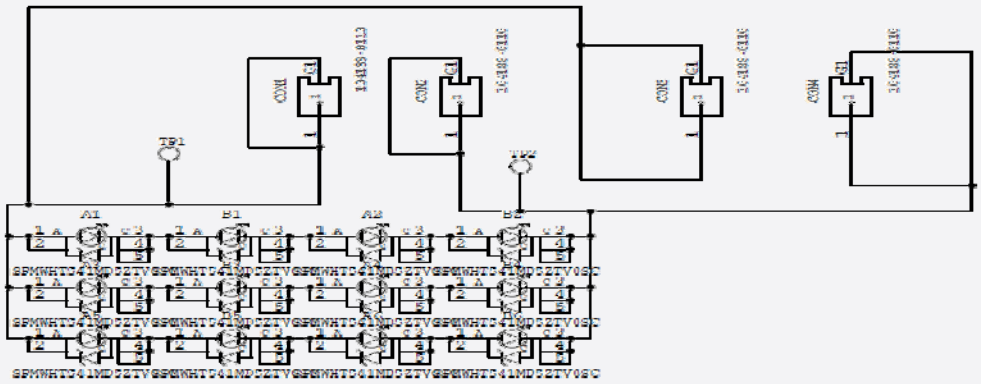
f) Thermal Management

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

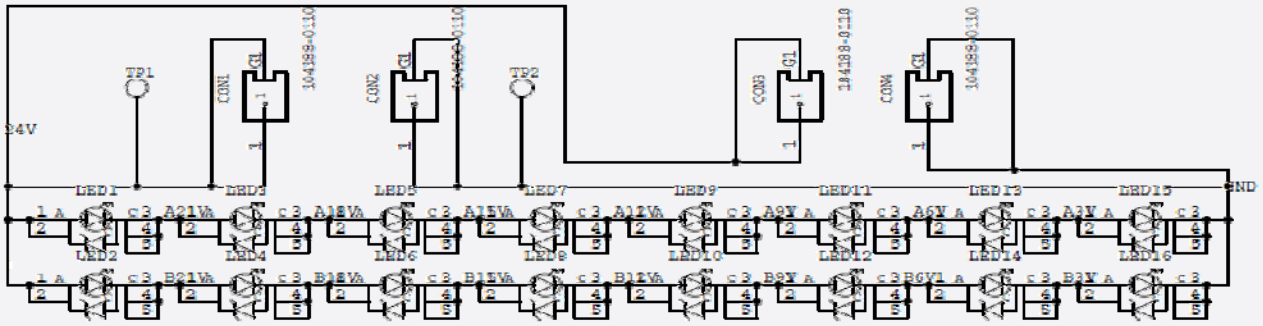


g) Schematic Circuit

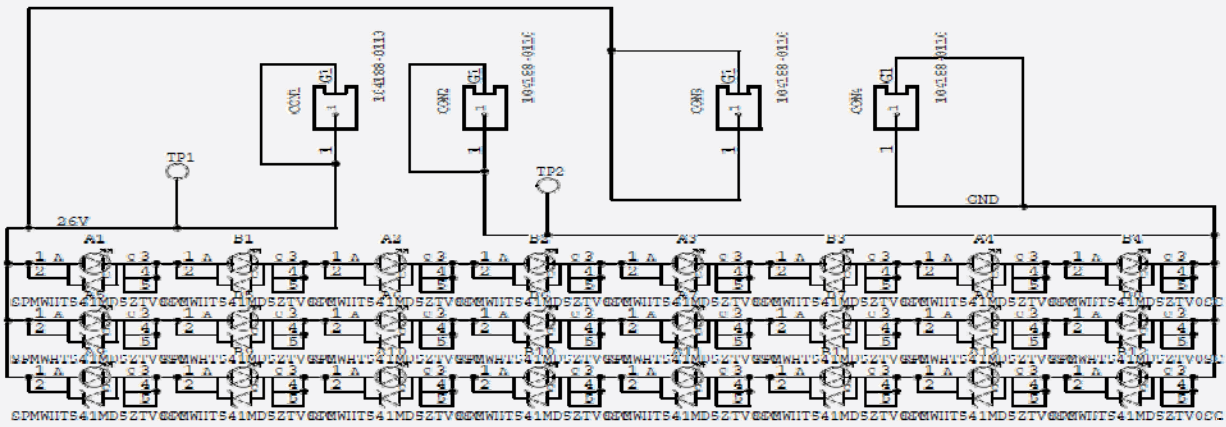
M272F (4S3P)



M272G (8S2P)



M272H (8S3P)

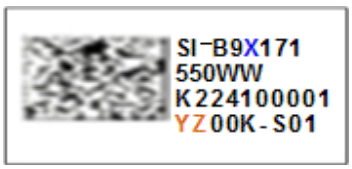


4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification	CE	IEC / EN 62031, 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

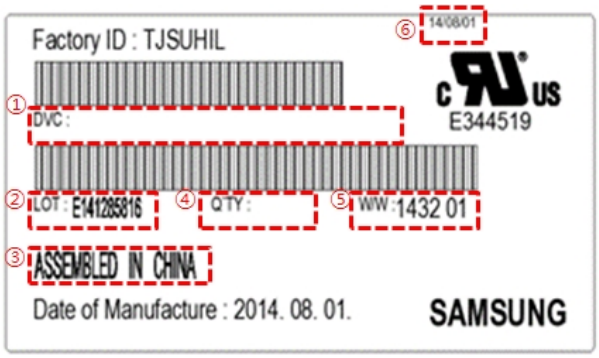
⑥ Color temperature: YZ00K

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

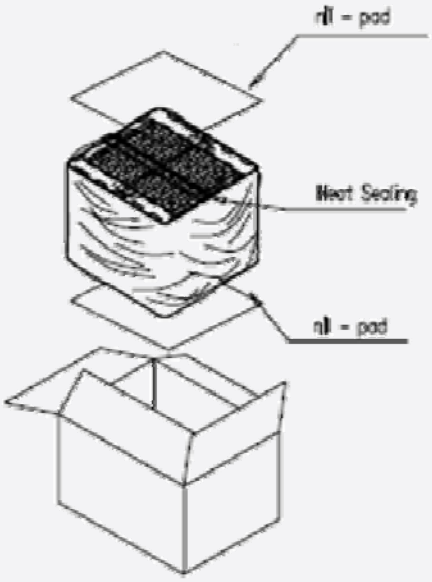
④ : Quantity

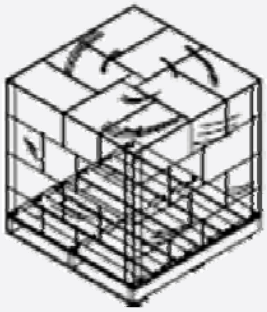
⑤ : Describe production week

⑥ : Date of Issue

6. Packing Structure

a) Packing Process





b) Packing

Packing	Quantity (modules)	Dimension (mm)			
		Length	Width	Height	Tolerance
Outer Box	400	385	335	225	±5
Pallet	12,800	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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