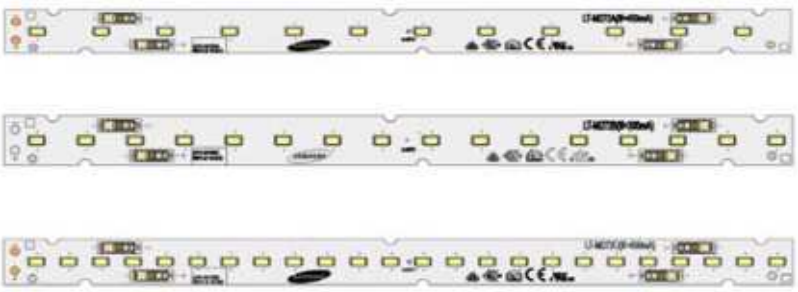
LED Module

LT-M272A
LT-M272B
LT-M272C



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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1. Product Code Information

a) M272A

Nominal CCT (K)	Product Code
3000	SI-B8V051280WW
3500	SI-B8U051280WW
4000	SI-B8T051280WW
5000	SI-B8R051280WW

b) M272B

Nominal CCT (K)	Product Code
3000	SI-B8V071280WW
3500	SI-B8U071280WW
4000	SI-B8T071280WW
5000	SI-B8R071280WW

c) M272C

Nominal CCT (K)	Product Code
3000	SI-B8V113280WW
3500	SI-B8U113280WW
4000	SI-B8T113280WW
5000	SI-B8R113280WW

2. Characteristics

Item	Rating	Unit	Remark
Rated Lifetime	>50,000	hour	L70B50
Ingress Protection (IP)	no rating	-	
Ambient / Operating Temperature (t_{amb})	-20 ~ +50	ºC	
Storage Temperature	-30 ~ +80	ºC	

a) M272A

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	3000	624	710	773	lm	I_f = 450 mA t_p = 55 ºC
	3500	634	721	785		
	4000	654	743	810		
	5000	674	766	834		
Luminous Efficacy	3000	-	126	-	lm/W	
	3500	-	128	-		
	4000	-	132	-		
	5000	-	136	-		
CCT	3000	2962	3055	3149	K	
	3500	3307	3426	3545		
	4000	3818	4127	3972		
	5000	4852	5383	5117		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		80	-	-	-	
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) M272B

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	3000	832	946	1069	lm	
	3500	846	961	1085		
	4000	872	991	1120		
	5000	898	1021	1154		
Luminous Efficacy	3000	-	126	-	lm/W	I_f = 300 mA t_p = 50 ºC
	3500	-	128	-		
	4000	-	132	-		
	5000	-	136	-		
CCT	3000	2965	3059	3153	K	
	3500	3325	3447	3569		
	4000	3858	4016	4175		
	5000	4917	5194	5471		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		80	-	-	-	
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) M272C

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	3000	1249	1419	1551	lm	
	3500	1268	1441	1571		
	4000	1308	1486	1620		
	5000	1347	1531	1669		
Luminous Efficacy	3000	-	126	-	lm/W	I_f = 450 mA t_p = 55 ºC
	3500	-	128	-		
	4000	-	132	-		
	5000	-	136	-		
CCT	3000	2983	3078	3174	K	
	3500	3349	3473	3579		
	4000	3902	4067	4232		
	5000	4945	5230	5516		
Color Consistency (initial)		-	3	-	MacAdam step	
Color Rendering Index (Ra)		80	-	-	-	
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 ($t_{p,50}$).

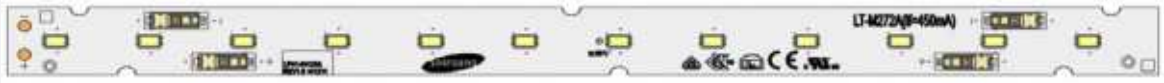
*** Rated maximum temperature, highest permissible temperature to avoid safety risk (t_c).

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

3. Structure and Assembly

a) Appearance

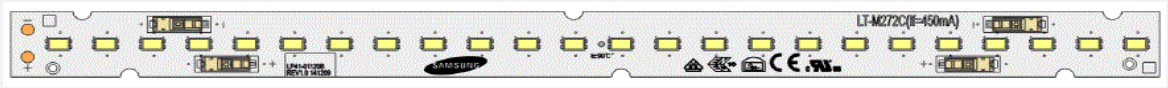
M272A



M272B



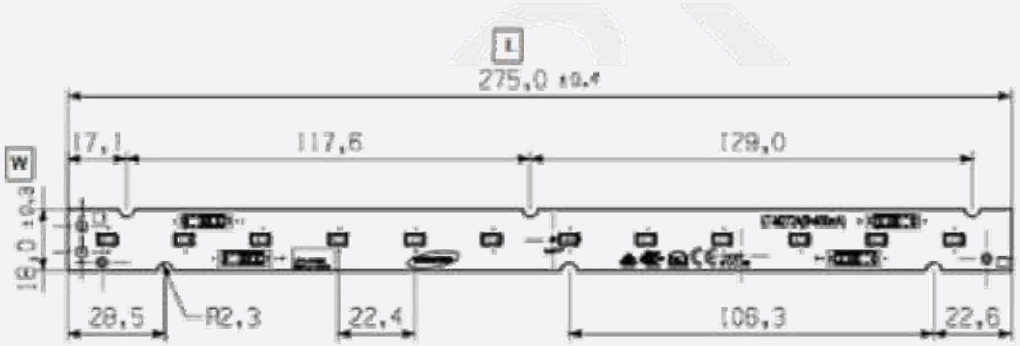
M272C



b) Dimension

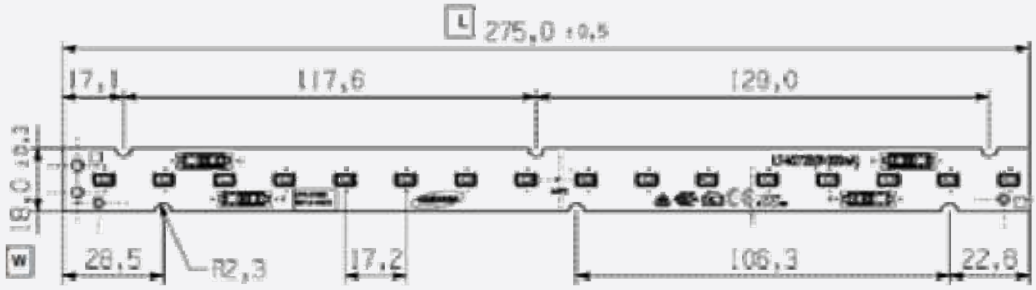
M272A

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



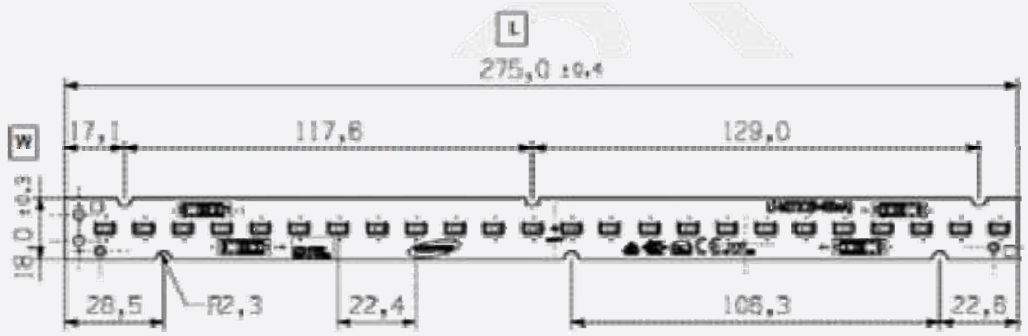
M272B

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



M272C

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



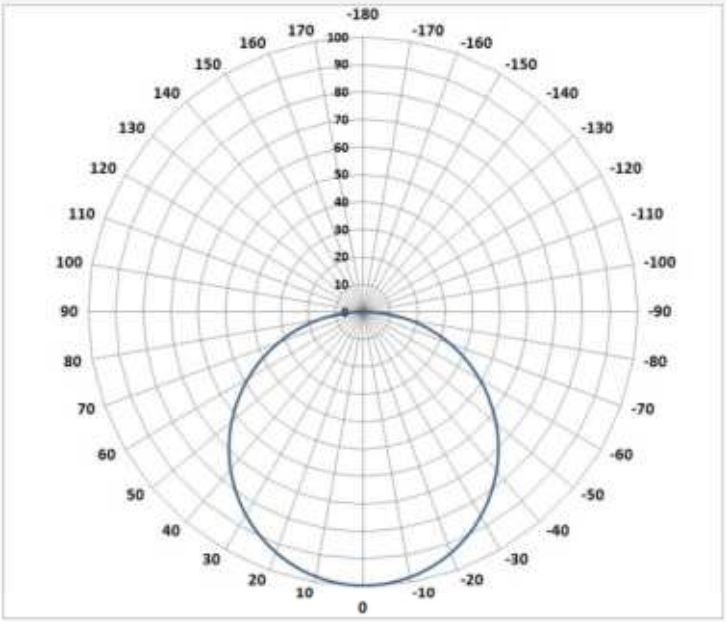


d) Structure

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

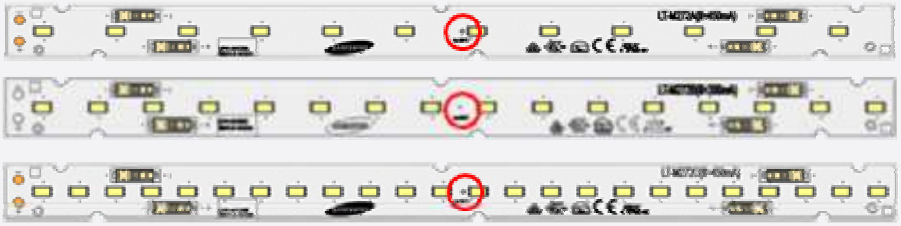
e) Light Distribution

Polar Intensity Diagram: Beam Angle 115 ± 5°



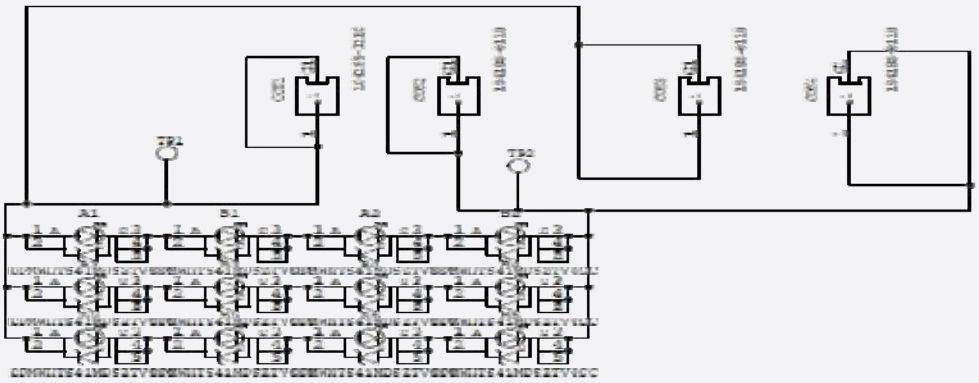
f) Thermal Management

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

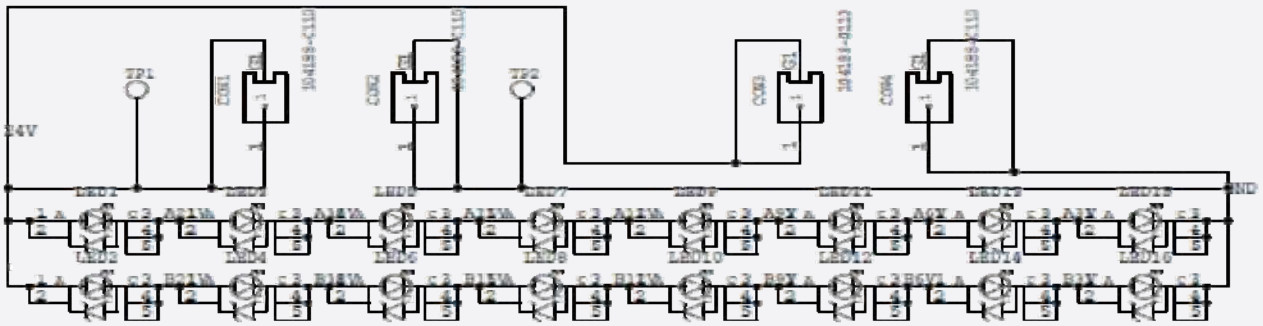


g) Schematic Circuit

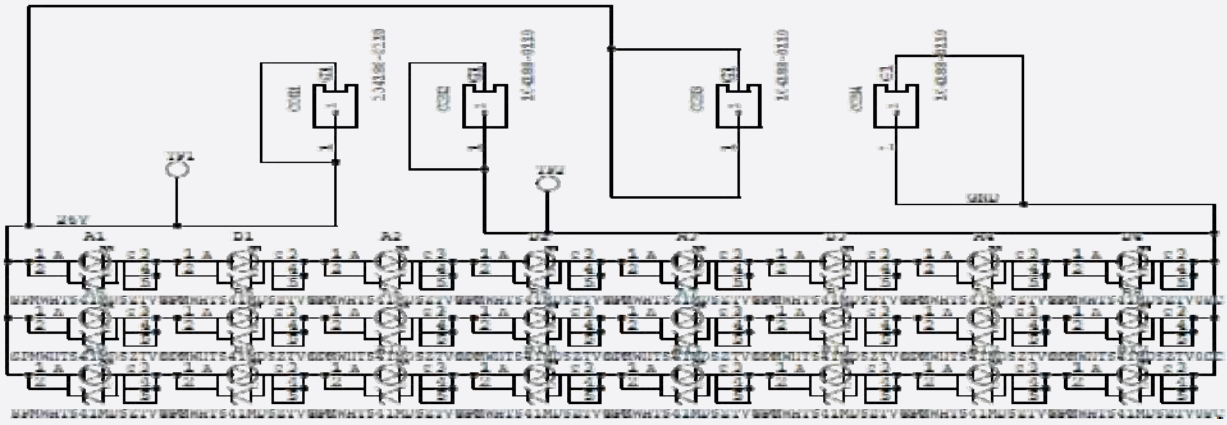
M272A (4S3P)



M272B (8S2P)



M272B (8S3P)

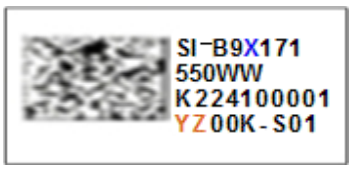


4. Certification and Declaration

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

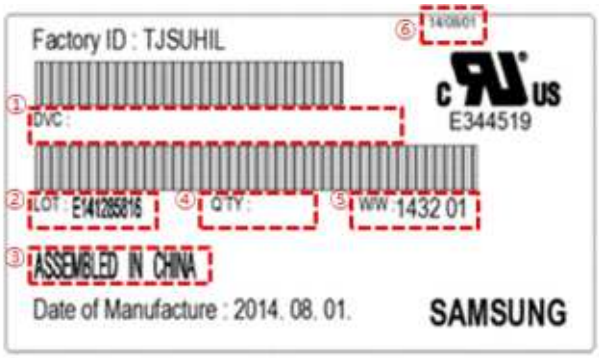
⑥ Color temperature: YZ00K

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

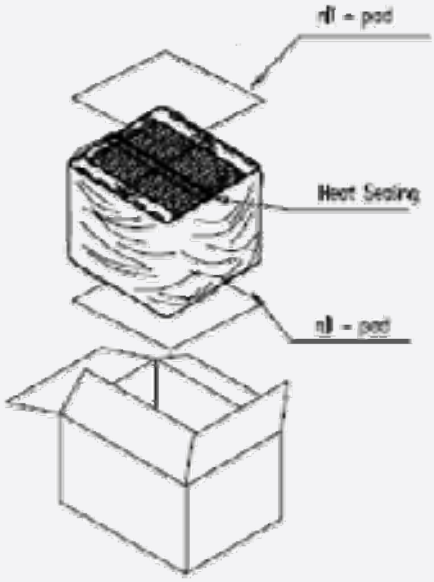
④ : Quantity

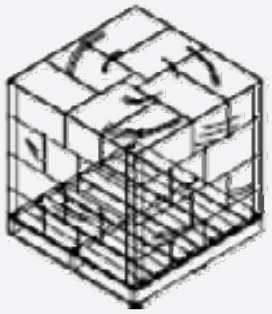
⑤ : Describe production week

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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