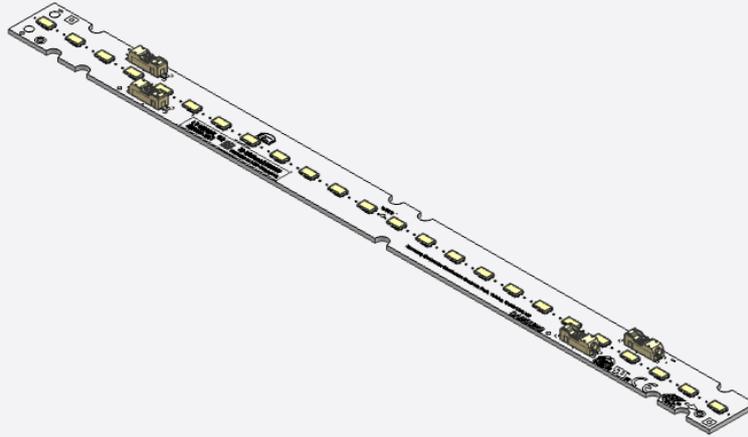


# Datasheet



MODEL NAME	CCT	SEC CODE
LT-M282C GEN3	3000K	SI-B8V11428001
	3500K	SI-B8U11428001
	4000K	SI-B8T11428001
	5000K	SI-B8R11428001

SAMSUNG				CUSTOMER
DEVELOP.	PRODUCT PLANNING	QA(DQA)	SALES	

SAMSUNG ELECTRONICS CO.,LTD.

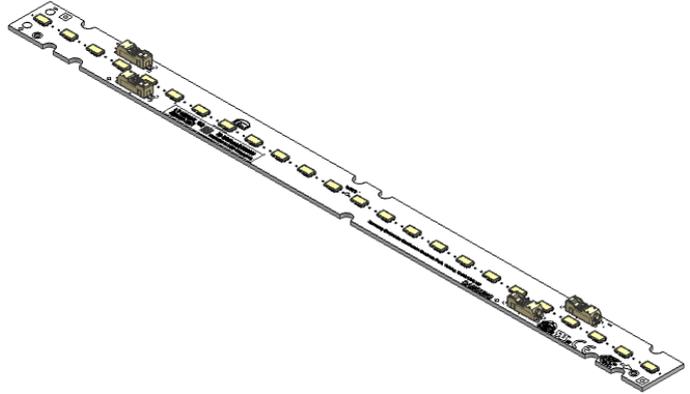
1 Samsung-ro , Giheung-gu ,  
Yongin-si , Gyeonggi-do 17113 , KOREA

**SAMSUNG**



## LED Module

# LT-M282C GEN3



### 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

1.	Product Code Information	-----	3
2.	Characteristics	-----	4
3.	Structure and Assembly	-----	6
4.	Certification and Declaration	-----	7
5.	Label Structure	-----	8
6.	Packing Structure	-----	10
7.	Precautions in Handling & Use	-----	11
APPENDIX			
1.	Applicable Solid Wires	-----	12

## 1. Product Code Information

Nominal CCT (K)	Product Code
3000K	SI-B8V11428001
3500K	SI-B8U11428001
4000K	SI-B8T11428001
5000K	SI-B8R11428001

## 2. Characteristics (If=450mA, $t_p=50^\circ\text{C}$ )

### a) Basic Information

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

### b) Electro-Optical Characteristics

Item	Nom. CCT (K)	Rating			Unit	Remark
		Min	Typ.	Max		
Luminous Flux ( $\Phi_v$ )	3000	1495	1660	1845	lm	$I_f = 450\text{mA}$ $t_p = 50^\circ\text{C}$
	3500	1510	1680	1865		
	4000	1555	1730	1920		
	5000	1555	1730	1920		
Luminous Efficacy	3000	134	149	165	lm/W	
	3500	135	151	167		
	4000	139	155	172		
	5000	139	155	172		
CCT	3000	2944	3032	3127	K	
	3500	3331	3443	3566		
	4000	3815	3959	4114		
	5000	4825	5010	5209		
Color Consistency (initial)	-	-	3	-	-	Mac Adam step
Color Rendering Index (Ra)	-	80	83	-	-	Integrating Sphere
Operating Current ( $I_f$ )	-	-	450	540	mA	-
Operating Voltage ( $V_f$ )	-	23.3	24.8	27.3	Vdc	$I_f = 450\text{mA}$
Power Consumption	-	10.5	11.2	12.3	W	$t_p = 50^\circ\text{C}$

#### Notes:

- $t_p$ : temperature at which performance is specified; measured at "Tc point".
- Samsung maintains a measurement tolerance of : Luminous flux:  $\pm 7\%$ , CRI:  $\pm 3.0$ , Voltage:  $\pm 0.3\text{ V}$ , Power Consumption:  $\pm 0.3\text{ W}$
- Measurement tolerance of the color coordinates is  $\pm 0.005$

### ※ Optional

Item	Nom. CCT (K)	Rating			Unit	Remark
		Min	Typ.	Max		
Luminous Flux ( $\Phi_v$ )	3000	1420	1580	1755	lm	$I_f = 425\text{mA}$ $t_p = 50^\circ\text{C}$
	3500	1445	1605	1785		
	4000	1485	1650	1835		
	5000	1485	1650	1835		
Luminous Efficacy	3000	135	151	167	lm/W	$I_f = 425\text{mA}$ $t_p = 50^\circ\text{C}$
	3500	138	153	170		
	4000	141	157	175		
	5000	141	157	175		
Operating Current ( $I_f$ )	-	-	425	-	mA	-
Operating Voltage ( $V_f$ )	-	23.2	24.7	27.1	Vdc	$I_f = 425\text{mA}$ $t_p = 50^\circ\text{C}$
Power Consumption	-	9.9	10.5	11.5	W	$t_p = 50^\circ\text{C}$

#### Notes:

- 1)  $t_p$  : temperature at which performance is specified; measured at "Tc point".
- 2) Samsung maintains a measurement tolerance of : Luminous flux:  $\pm 7\%$ , CRI:  $\pm 3.0$ , Voltage:  $\pm 0.3\text{ V}$ , Power Consumption:  $\pm 0.3\text{W}$
- 3) Measurement tolerance of the color coordinates is  $\pm 0.005$

### c) Temperature Characteristics

Item	Nominal( $t_p$ )*	Life**	Max( $t_c$ )***	Unit
Temperature	50	80	90	$^\circ\text{C}$

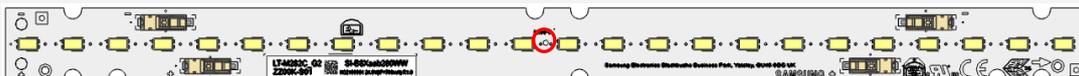
#### Notes:

- \* Temperature used to specify performance of the module ( $t_p$ ).
- \*\* Rated maximum performance temperature at which lifetime is specified.
- \*\*\* 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. (See page 5)

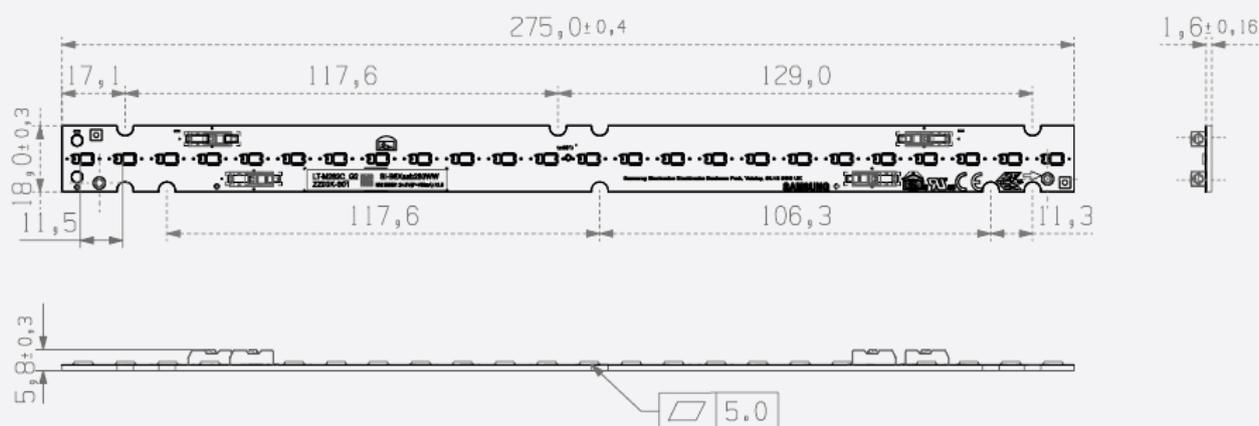
### d) Thermal Measurement

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



### 3. Structure and Assembly

#### a) Appearance & Dimension



Dimension	Specification	Tolerance	Unit
Module Length	275.0	±0.4	mm
Module Width	18.0	±0.3	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	14.0	±1.0	g

#### b) 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 (Appendix 1)

#### c) Schematic Circuit

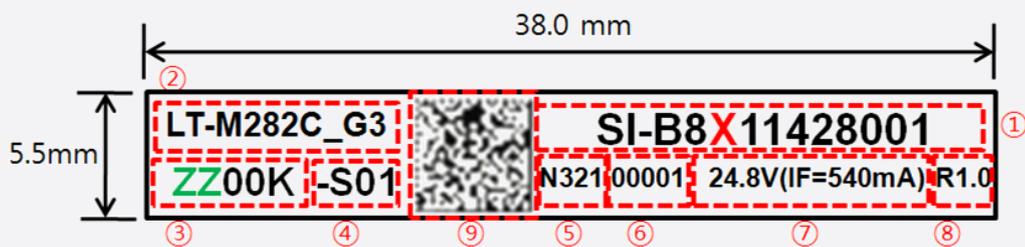
- 8S x 3P

## 4. Certification and Declaration

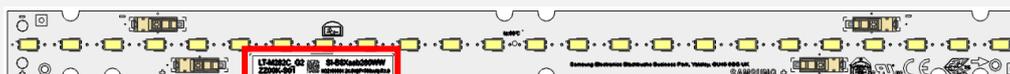
Item	Compliant to	Remark
Test & Certification	CE	IEC / EN 62031, IEC / EN 62471
	UL / cUL	E344519
	Photo biological Safety (LM561B+ LED)	IEC / EN 62471
Declaration	RoHS	Hazardous Substance & Material
	REACH	Hazardous Substance & Material

## 5. Label Structure

### a) Module Label



Number	Item	Remark
①	Model code	Refer to page 3 X = V, U, T, R
②	Product name	
③	Color temperature	ZZ = 30, 35, 40, 50
④	LED maker & Bin rank	-S (Samsung) 00-ZZ
⑤	SMT date	N321 (2013-March-21th)
⑥	Serial No.	00001~99999; Setting "00001" every working day
⑦	Operating Current Max. & VoltageTyp.	
⑧	Product Revision	
⑨	QR Code	SI-B8X11428001_N321100001ZZ00K-S01

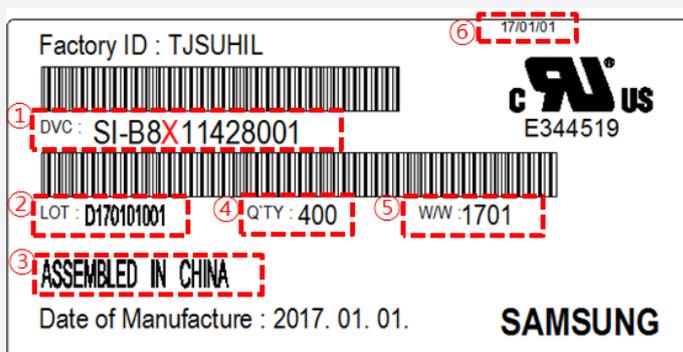


## b) TRAY &amp; MBB bag LABEL



Number	Item	Remark
①	Model Code	Refer to page 3
②	LOT ID	
③	Quantity	Refer to page 10
④	Date of production	
⑤	Date of Issue	

## C) Box Label



Number	Item	Remark
①	Model Code	Refer to page 3
②	LOT ID	
③	Place of origin	
④	Quantity	Refer to page 10
⑤	Describe production week	
⑥	Date of Issue	

## 6. Packing Structure

Product	Packing	Quantity (modules)	Dimension (mm)		
			Length	Width	Height
LT-M282C GEN3	Tray	40 ea	380	330	24
	Outer Box	400 ea	385	335	225
	Pallet	12800 ea	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

# Appendix

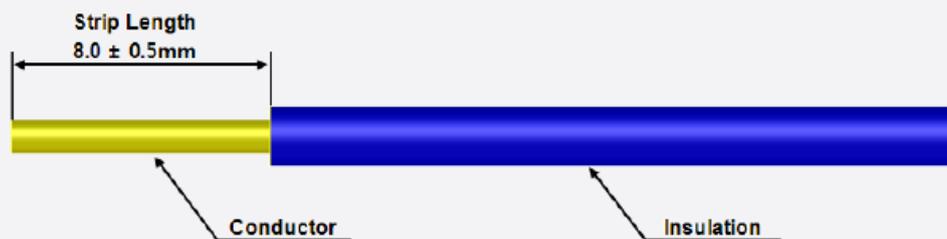
## 1. Applicable Solid Wires

a) Applicable solid wires only

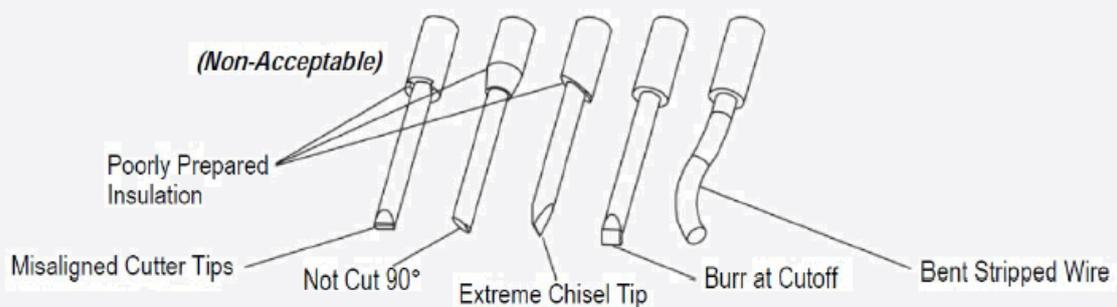
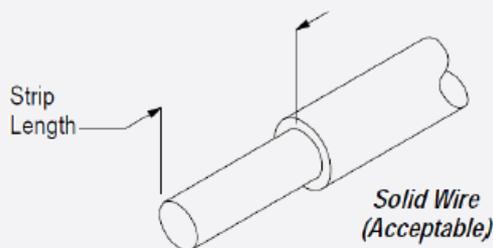
Wire Range AWG NO.	Number of Conductors / Diameter of a conductors (NO. / mm)	Insulation Diameter (mm)	Conductor Type
24	1 / 0.51	1.35	Solid
22	1 / 0.64	1.48	
20	1 / 0.81	1.65	
18	1 / 1.02	1.86	

※ outside insulation diameter  $\Phi$ 2.1mm Max.

b) Wire strip length



[ Conductor : Bear Copper ]



# Legal and additional information.

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Samsung Electronics Co., Ltd.  
95, Samsung 2-ro  
Giheung-gu  
Yongin-si, Gyeonggi-do, 446-711  
KOREA

[www.samsungled.com](http://www.samsungled.com)

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