

## LED Module

# T-Series



### Features & Benefits

- White tunable mixing 2700K + 6500K
- Easily share existing fixture if fixture is designed by M-series same foot-prints
- Matched 2-ch driver (PMD) supplied by Samsung

### Applications

Indoor Lighting:

- Office / Retail / Living space
- Troffer / Linear / Pendant

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## 1. Product Code Information

- T562C

Nominal CCT (K)	Product Code
2700+6500	SI-B8A131560WW

- T282C

Nominal CCT (K)	Product Code
2700+6500	SI-B8A071280WW

## 2. Characteristics

### 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	°C	
Storage Temperature	-30 ~ +80	°C	

### b) Electro-Optical Characteristics

#### - T562C

System	Index	Unit	CCT			Remark	
			2700K	4000 K	6500 K		
Module	Flux	lm	1900	2075	2060	Min, Max : Typ.±10% $t_p = 50^\circ\text{C}$	
	Efficacy	lm/W	141	165	153	$t_p = 50^\circ\text{C}$	
	Total Power	W	13.5	12.6	13.5		
	If	Ch-1(warm)	mA	750	375	-	-
		Ch-2(cool)		-	375	750	-
	Vf	Ch-1(warm)	V	18.0	16.7	-	Min, Max : Typ. ±5% $t_p = 50^\circ\text{C}$
		Ch-2(cool)		-	16.7	18.0	
		CCT	K (Initial)	Typ.2716 ±125	Typ.3966 ±146	Typ.6490 ±271	-
	System (2 - module) 2 series	Flux	lm	3800	4150	4120	Min, Max : Typ.±10% $t_p = 50^\circ\text{C}$
		Efficacy	lm/W	141	166	153	$t_p = 50^\circ\text{C}$
Total Power		W	27.0	25.1	27.0		
If		Ch-1(warm)	mA	750	375	-	-
		Ch-2(cool)		-	375	750	-
Vf		Ch-1(warm)	V	36.0	33.4	-	Min, Max : Typ.±5% $t_p = 50^\circ\text{C}$
		Ch-2(cool)		-	33.4	36.0	

#### Notes:

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

## - T282C

System	Index	Unit	CCT			Remark	
			2700K	4000 K	6500 K		
Module	Flux	lm	950	1040	1030	Min, Max : Typ.±10% t <sub>p</sub> = 50°C	
	Efficacy	lm/W	141	165	153	t <sub>p</sub> = 50°C	
	Total Power	W	6.8	6.3	6.8		
	I <sub>f</sub>	Ch-1(warm)	mA	750	375	-	-
		Ch-2(cool)		-	375	750	-
	V <sub>f</sub>	Ch-1(warm)	V	9.0	8.35	-	Min, Max : Typ. ±5% t <sub>p</sub> = 50°C
		Ch-2(cool)		-	8.35	9.0	
	CCT	K (Initial)	Typ.2716 ±125	Typ.3966 ±146	Typ.6490 ±271	-	
	System (4 - module) 4 series	Flux	lm	3800	4160	4120	Min, Max : Typ.±10% t <sub>p</sub> = 50°C
		Efficacy	lm/W	141	166	153	t <sub>p</sub> = 50°C
Total Power		W	27.0	25.1	27.0		
I <sub>f</sub>		Ch-1(warm)	mA	750	375	-	-
		Ch-2(cool)		-	375	750	-
V <sub>f</sub>		Ch-1(warm)	V	36.0	33.4	-	Min, Max : Typ.±5% t <sub>p</sub> = 50°C
		Ch-2(cool)		-	33.4	36.0	

**Notes:**

- 1) t<sub>p</sub> : 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, Power Consumption: ±0.3W
- 3) Measurement tolerance of the color coordinates is ± 0.005

### c) Temperature Characteristics

Item	Nominal( $t_p$ )*	Life**	Max( $t_c$ )***	Unit
Temperature	50	80	90	°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 6)

### d) Thermal Measurement

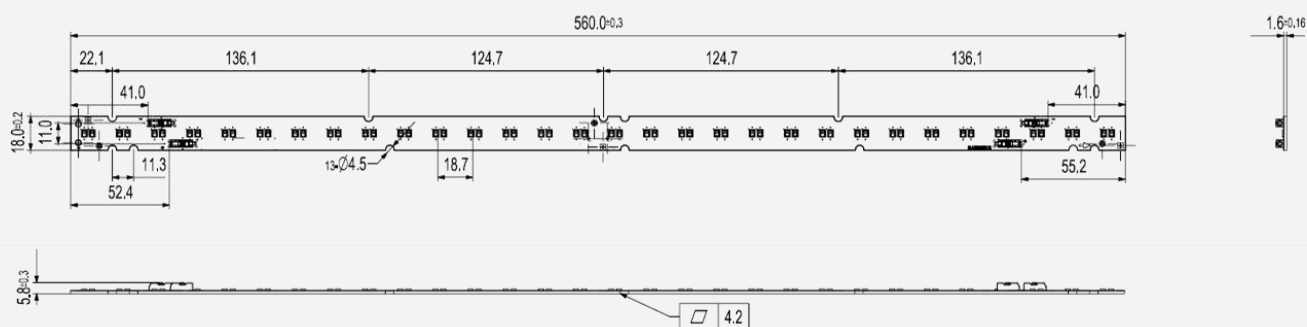
Performance temperatures are measured on "Tc point" as indicated on the module.



### 3. Structure and Assembly

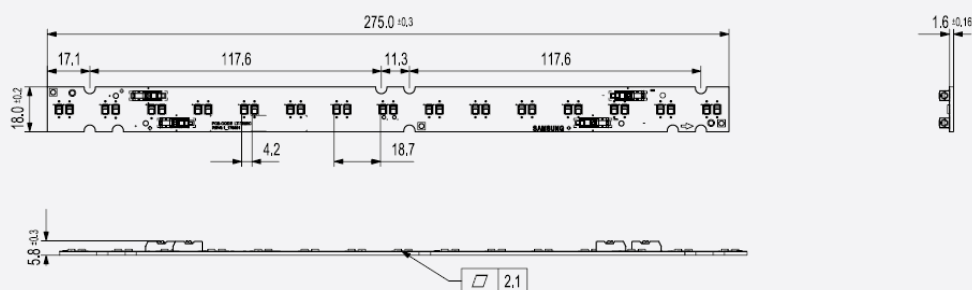
#### a) Appearance & Dimension

##### - T562C



Dimension	Specification	Tolerance	Unit
Module Length	560.0	±0.3	mm
Module Width	18.0	±0.2	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	33.4	±1.67	g

##### - T282C



Dimension	Specification	Tolerance	Unit
Module Length	275.0	±0.3	mm
Module Width	18.0	±0.2	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	16.7	±0.84	g

## b) Structure

Item	Specification
LED	LM281C 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

- T562C : 6S x 5P / Ch
- T282C : 3S x 5P / Ch

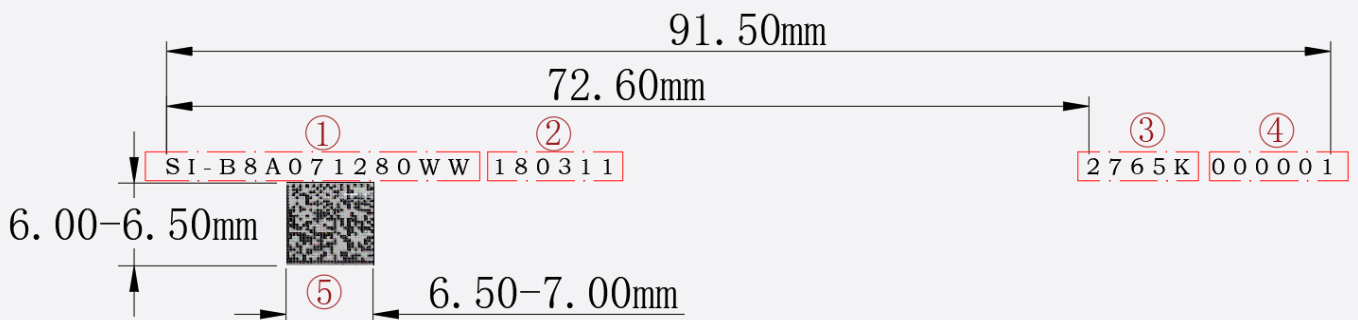
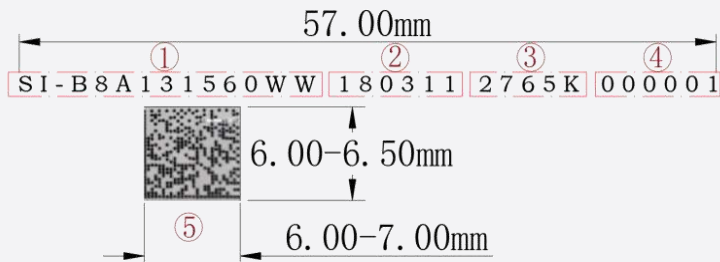


## 4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification	UL	E344519
	cUL	E344519
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
②	SMT date	YYMMDD
③	Color temperature	2765K=2700K+6500K
④	Serial No.	00001~99999; Setting "00001" every working day
⑤	QR Code	T562C : SI-B8A131560WW_N3211000012765K-S01 T282C : SI-B8A071280WW_N3211000012765K-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 12
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 12
⑤	Describe production week	
⑥	Date of Issue	

## 6. Packing Structure

Product	Packing	Quantity (modules)
T562C	Tray	40 ea
	Outer Box	280 ea
	Pallet	5,600 ea
T282C	Tray	80 ea
	Outer Box	560 ea
	Pallet	11,200ea

## 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

Please be careful when taking a product out from packaging.

# Appendix

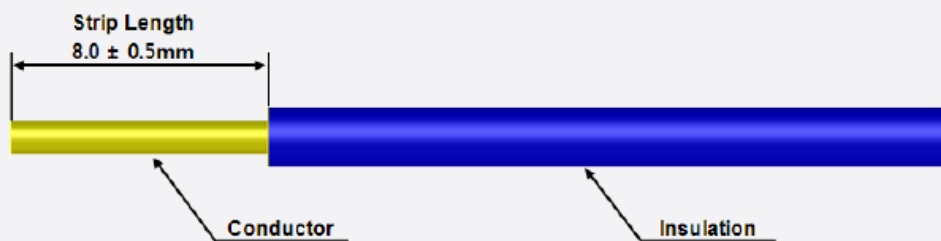
## 1. Applicable Solid Wires

a) Applicable solid wires only

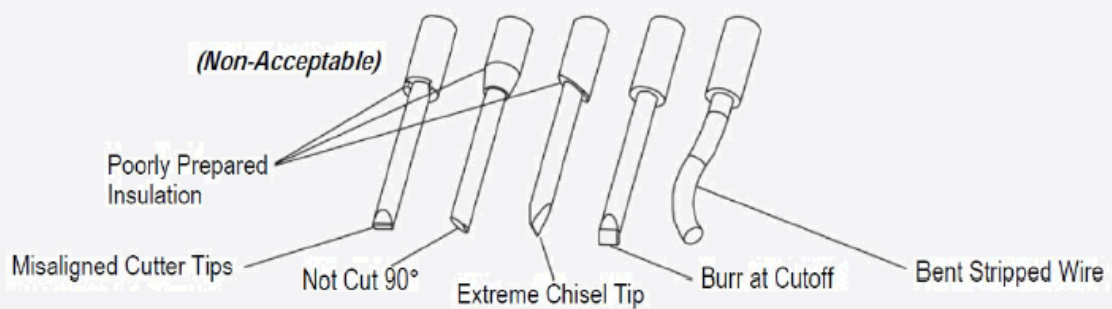
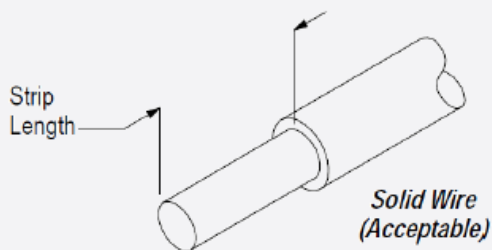
Wire Range AWG NO.	Number of Conductors / Diameter of a conductors (NO. / mm)	Insulation Diameter (mm)	Conductor Type
24	1 / 0.51	1.35	Solid
22	1 / 0.64	1.48	
20	1 / 0.81	1.65	
18	1 / 1.02	1.86	

※ outside insulation diameter  $\Phi 2.1\text{mm}$  Max.

b) Wire strip length



[ Conductor : Bear Copper ]



# Legal and additional information.

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