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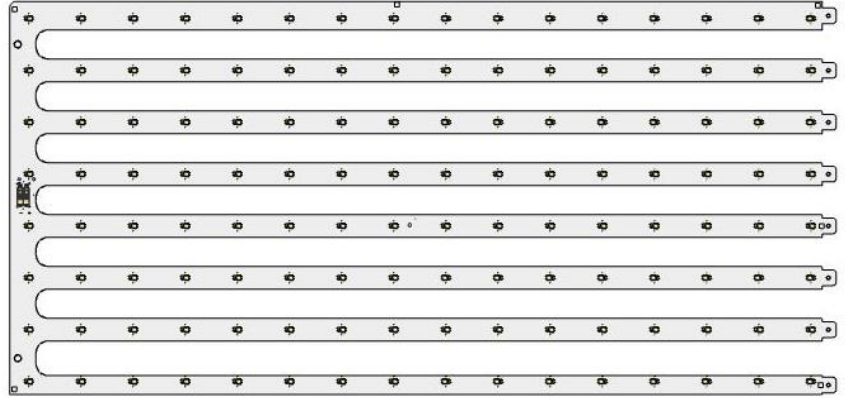
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## LED Module

# FINGER 128D



### 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

Nominal CCT (K)	SEC Code
3000	SI-B8V121530WW
4000	SI-B8T121530WW
6500	SI-B8P121530WW

## 2. Characteristics (If=570mA, t<sub>p</sub>=35°C)

### a) Basic Information

Item	Rating	Unit	Remark
Rated Lifetime	>50,000	hour	L80B50
Ingress Protection (IP)	no rating	-	
Ambient / Operating Temperature (t <sub>amb</sub> )	-20 ~ +50	°C	
Storage Temperature	-30 ~ +80	°C	

### b) Electro-Optical Characteristics

Item	Nom. CCT (K)	Rating			Unit	Remark
		Min	Typ.	Max		
Luminous Flux (Φ <sub>v</sub> )	3000	2205	2450	2720	lm	I <sub>f</sub> = 570 mA t <sub>p</sub> = 35 °C
	4000	2340	2600	2890		
	6500	2175	2415	2685		
Luminous Efficacy	3000	178	198	220	lm/W	
	4000	189	210	234		
	6500	175	195	217		
CCT	3000	2924	3011	3102	K (Initial)	Mac Adam 3 step
	4000	3771	3912	4060		
	6500	6300	6500	6700		
Color Rendering Index (Ra)	-	80	83	-	-	Integrating Sphere
Operating Current (I <sub>f</sub> )	-	-	570	2880	mA	-
Operating Voltage (V <sub>i</sub> )	-	20.1	21.7	23.5	Vdc	I <sub>f</sub> = 570 mA t <sub>p</sub> = 35 °C
Power Consumption	-	11.5	12.4	13.4	W	

#### 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
- 4) The CCT Specification can be changed.

### c) Temperature Characteristics

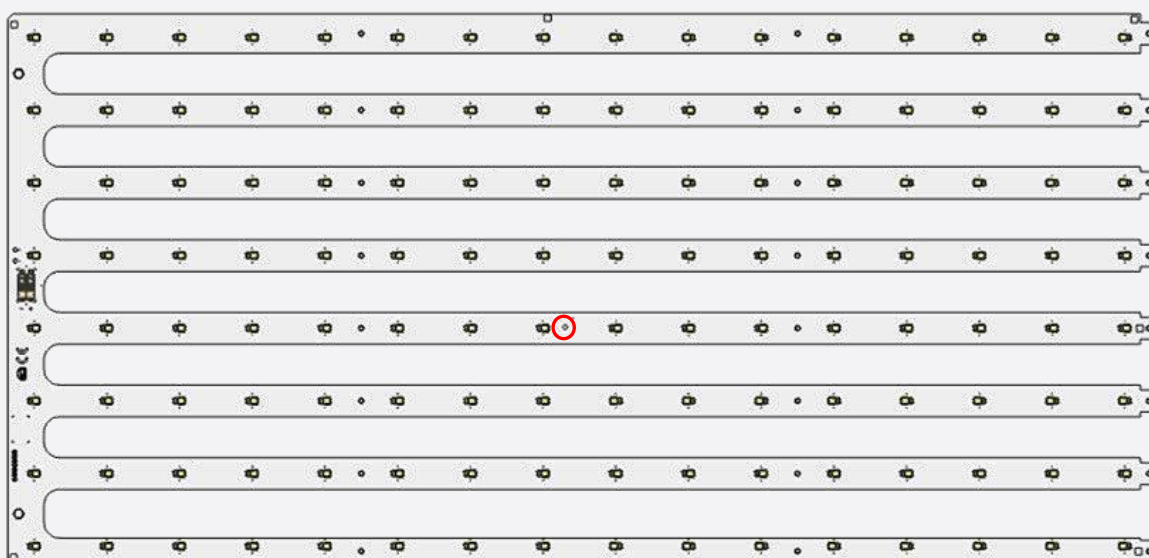
Item	Nominal( $t_p$ ) <sup>*</sup>	Life <sup>**</sup>	Max( $t_c$ ) <sup>***</sup>	Unit
Temperature	35	80	90	°C

#### 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 5)

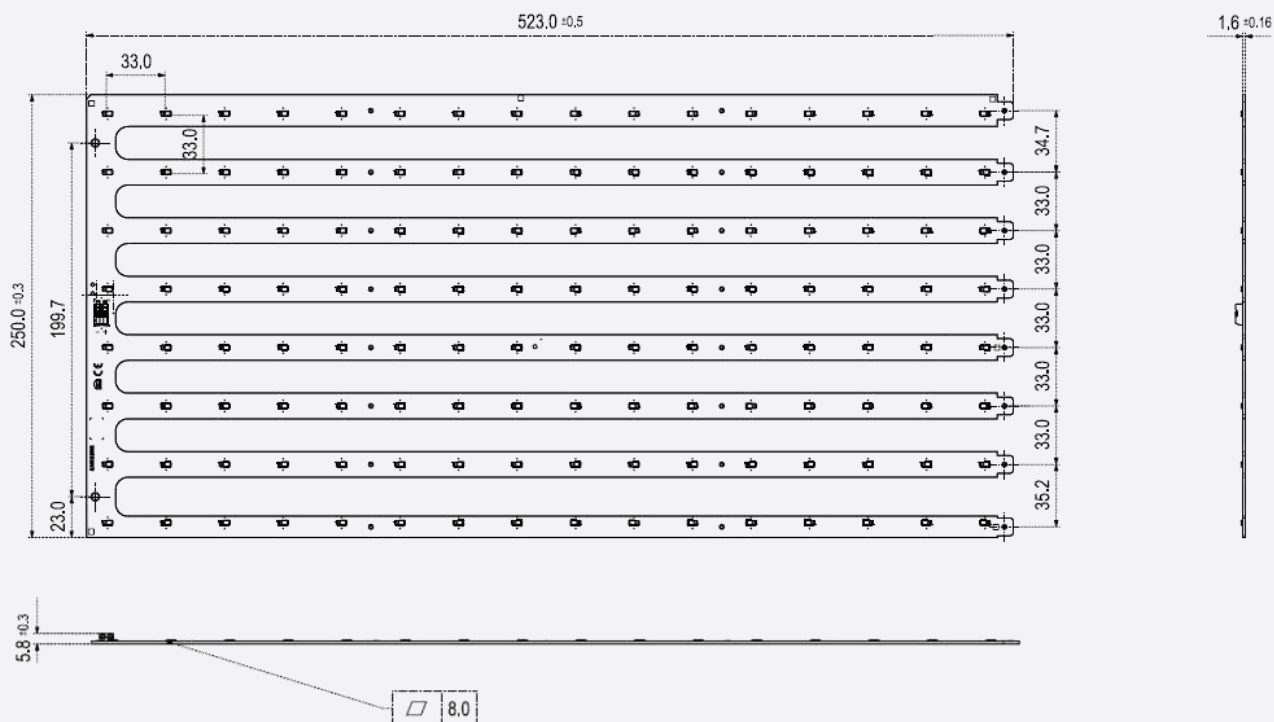
### d) Thermal Measurement

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	523.0	±0.5	mm
Module Width	250.0	±0.3	mm
Module Height	5.8	±0.3	mm
PCB Thickness	1.6	±0.16	mm
Module Weight	161.7	±8.1	g

#### b) Structure

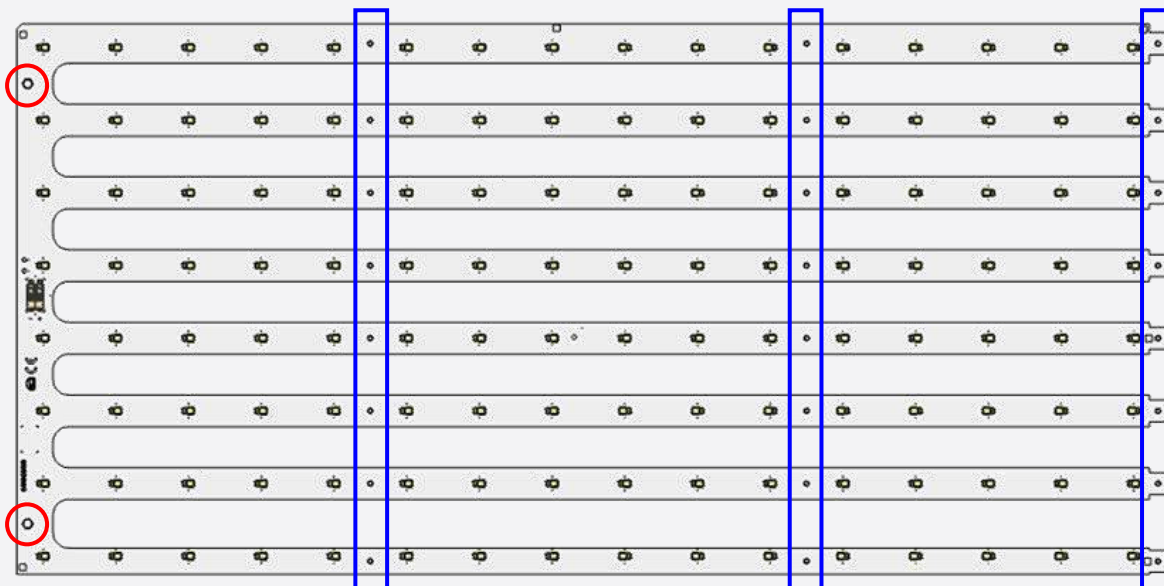
Item	Specification
LED	LM561B+ Middle Power LED
PCB	Material : copper, solder mask, epoxy
Connector	Reworkable poke-in connector type
Wire	24~18 AWG ; terminal strip length of 7.5~8.5 mm (Appendix 1)

#### c) Schematic Circuit

- 8S x 16P

#### d) Precautions in assembly

- The holes below(Blue box) are not screw holes for assembly.
- The Screw head size  $\leq \varnothing 8\text{mm}$ . (Red circles)





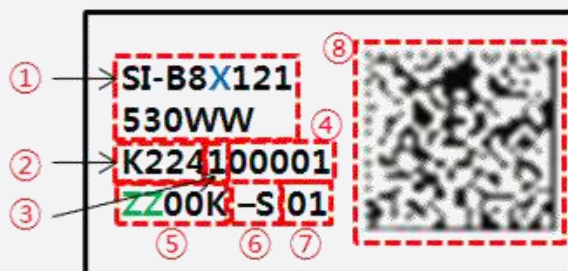
## 4. Certification and Declaration

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

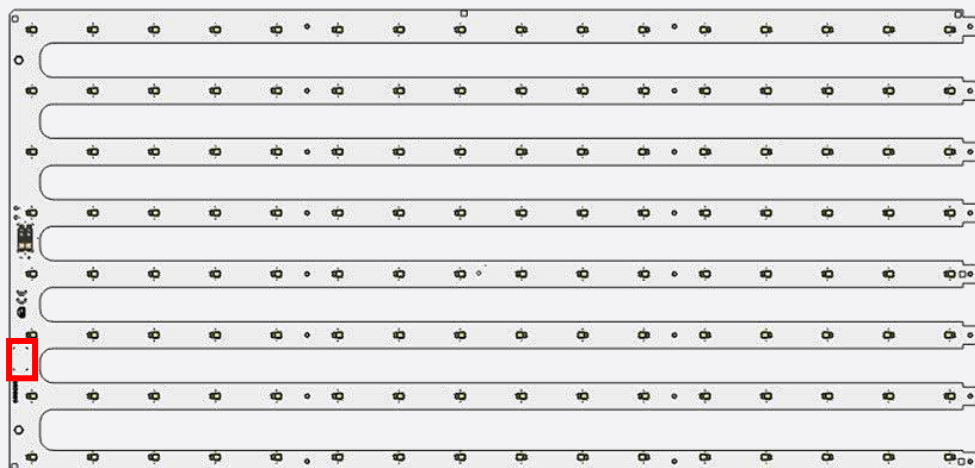
## 5. Label Structure

### a) Module Label

- Size : 10 x 5.5 mm



Number	Item	Remark
①	Model Code	Refer to page 3 X = V, T, P
②	SMT date	K224 (2010-February-24th)
③	SMT Line	1~9, A(10), B(11), C(12), D(13), E(14), F(15)
④	Serial No.	-
⑤	Color temperature	ZZ = 30, 40, 65
⑥	LED Maker	-S (Samsung)
⑦	Bin Rank	00~ZZ
⑧	QR Code	SI-B8X121530WW_K224 1 00001ZZ00K-S01

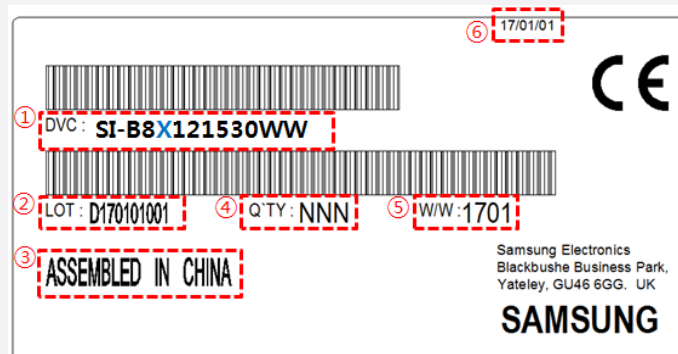


## b) TRAY &amp; MBB bag LABEL



Number	Item	Remark
①	Model Code	Refer to page 3 X = V, T, P
②	LOT ID	
③	Quantity	Refer to page 11
④	Date of production	
⑤	Date of Issue	

## C) Box Label



Number	Item	Remark
①	Model Code	Refer to page 3 X = V, T, P
②	LOT ID	
③	Place of origin	
④	Quantity	Refer to page 11
⑤	Describe production week	
⑥	Date of Issue	

## 6. Packing Structure

Product	Packing	Quantity (modules)	Dimension (mm)		
			Length	Width	Height
Finger 128D	Tray	4 ea	580	310	24
	Outer Box	40 ea	585	315	175
	Pallet	1200 ea	1200	1000	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

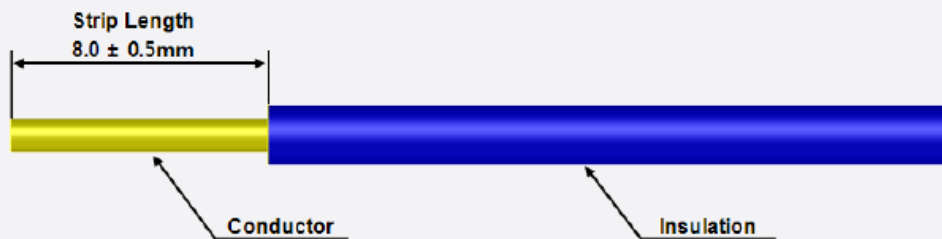
## 1. Applicable Solid Wires

a) Applicable solid wires only

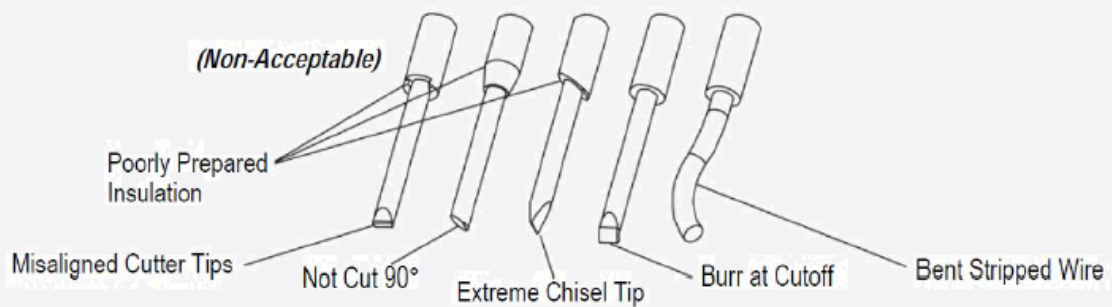
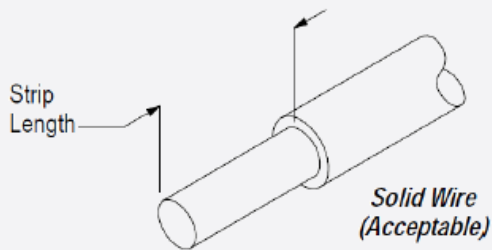
Wire Range AWG NO.	Number of Conductors / Diameter of a conductors (NO. / mm)	Insulation Diameter (mm)	Conductor Type
24	1 / 0.51	1.35	Solid
22	1 / 0.64	1.48	
20	1 / 0.81	1.65	
18	1 / 1.02	1.86	

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

b) Wire strip length



[ Conductor : Bear Copper ]



# Legal and additional information.

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