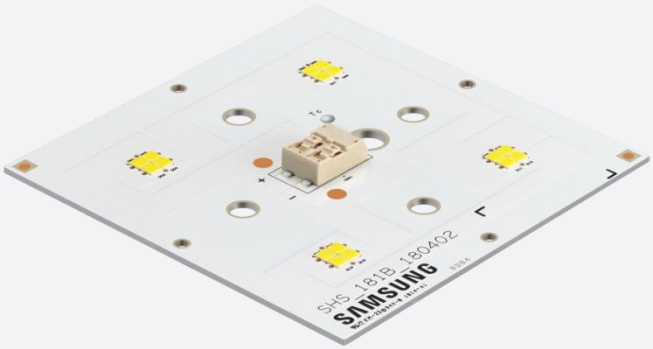
Datasheet



MODEL NAME	CCT	CODE
HILOM SC16	4000K	SL-B7T5N90L2WW
	5000K	SL-B7R5N90L2WW

SAMSUNG ELECTRONICS CO., LTD.
1, Samsung-ro, Giheung-gu,
Yongin-si, Gyeonggi-do 17113, KOREA

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Version	Remark	Page	Date	Traced
1.0	The First Specification established.	ALL	18.09.06	SI.Jang

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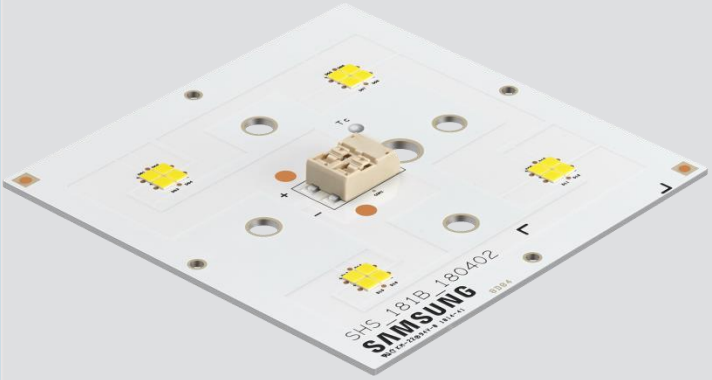
LED Module

HiLOM SC16



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1. Product Code Information

-SC16

Item		Product Code
CRI 70	4000K	SL-B7T5N90L2WW
	5000K	SL-B7R5N90L2WW

2. Characteristics (I_F = 2,100mA , t_p = 70℃)

a) Basic Information

Item	Unit	Rating	Remark
Rated Lifetime	Hour	>50,000	L70B50
Ingress Protection (IP)	-	no rating	
Ambient / Operating Temperature (t_a)	ºC	-30 ~ +50	
Storage Temperature	ºC	-30 ~ +80	

Notes

※ I_F: Forward current or Operating current

※ t_p: temperature at which performance is specified measured at “Tc point”.

※ t_a: ambient temperature

b) Electro-Optical Characteristics

Item		Unit	Rating			Remark
			min	typ	max	
Luminous Flux	4000K	lm	6480	7200	8110	IF = 2100 mA tp = 70 ºC
	5000K		6480	7200	8110	
Luminous Efficacy	4000K	lm/W	-	137.7	-	
	5000K		-	137.7	-	
CCT	4000K	-	MacAdam 5 Step			Initial CCT Integrating Sphere
	5000K	-				
Operating Voltage		V	23.1	24.9	28.2	Tc must be below Tc,max
Power Consumption		W	-	52.3	-	
Color Rendering Index (Ra)		-	70			
Operating Current		mA		2100	2310	

Notes

※ Samsung maintains a measurement tolerance of Luminous flux ±7%, Ra ±3.0, Voltage ±5%, Current = ±5%, CCT = ±5%, CIE = ±0.005.

c) Light Distribution

Item	Unit	Nominal	Tolerance	Remark
Beam Angle (FWHM)	°(degree)	120	± 5	

e) Temperature Characteristics

Item	Unit	Nominal*(t_p)	Life**(t_L)	Max***(t_c)
Temperature Case (Tc)	℃	70	105	120

Notes:

* Temperature used to specify performance of the module (t_p).

** Rated maximum performance temperature at which lifetime is specified in L70B50 (t_L).

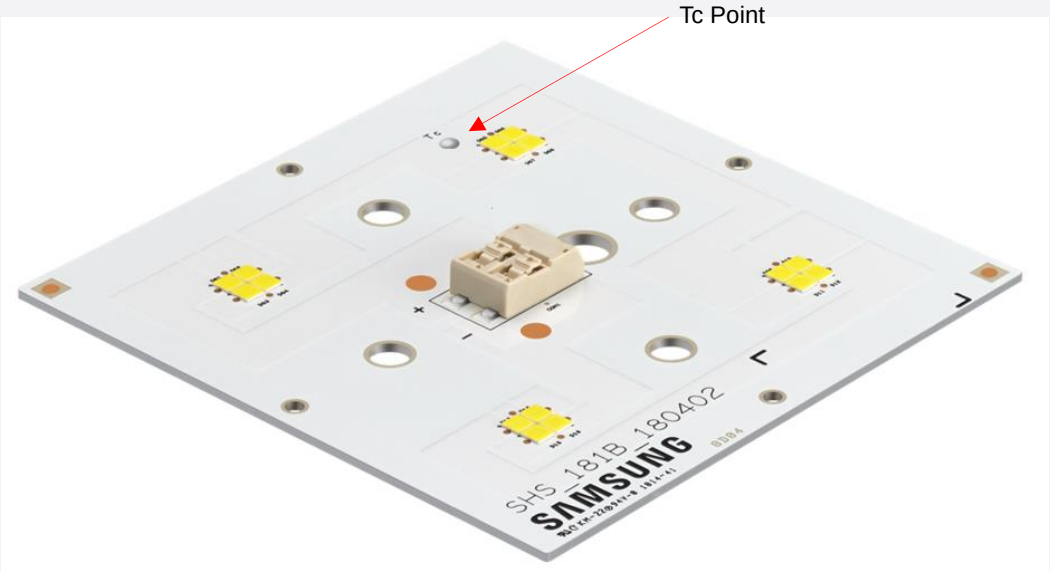
*** Rated maximum temperature, highest permissible temperature to avoid safety risk (t_c).

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

Please use heat-sink(or heat dissipation solution) with proper thermal capacity(operating wattage).

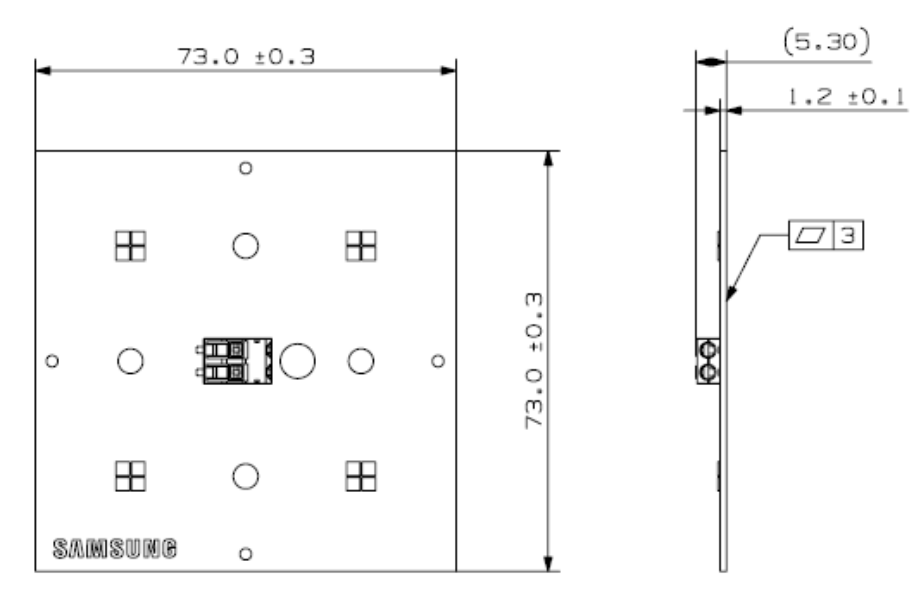
f) Thermal Measurement

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



3. Appearance and Structure

a) Appearance and Dimension



Item	Unit	Dimension	Tolerance
Module Size	mm	73.0 x 73.0	± 0.3
Module Height	mm	5.30	± 0.3
Module Weight	g	17.5	± 0.5

b) Structure

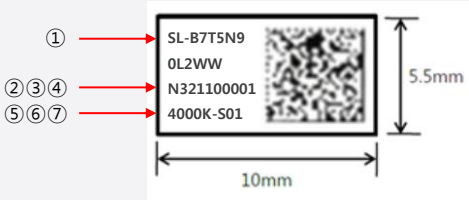
Item	Specification
LED	LH181B
Connector	S-poke 2p
PCB	MCPCB 1.15T, 1oz, 2Px8S

4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification	UL	E344519
Declaration	RoHS	Hazardous Substance & Material

5. Label Structure

a) Module Label



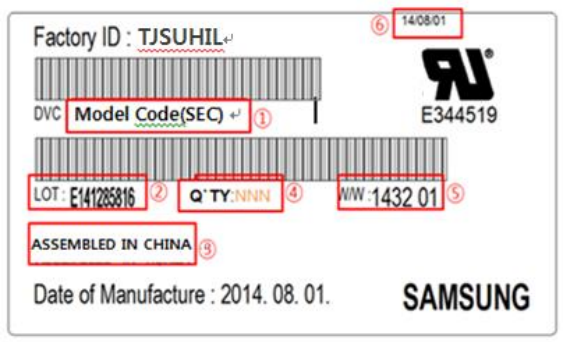
Number	Item	Remark
①	Samsung Product Code	SL-B7T5N90L2WW
②	SMT Date	YMDD
③	SMT Line No	1~E
④	Serial No	00001~99999
⑤	CCT	4000K
⑥	LED Maker	-S(Samsung)
⑦	Group No	-

b) Tray Label

- 100mm x 50mm

Number	Item	Remark
①	Model Code	Refer to page 1
②	LOT ID	
③	Quantity	400
④	Date of production	
⑤	Date of Issue	

c) Box Labels



Number	Item	Remark
①	Model Number (Product Code)	Refer to page 1
②	Lot No.	-
③	Country of Origin	China
④	Packing Quantity	400
⑤	Production Date (year & week)	-
⑥	Production Date (year/month/date)	-

6. Packing Structure

Product	Packing	Quantity (ea)	Weight (kg)	Remark
SL-B7T5N90L2WW	Tray	40	10.6	Weight (includes Modules, Trays and a Box)
	Box	400		
	Pallet	12,000	318	

7. Precautions in Handling & Use

1) This LED Module should not be used in any type of fluid such as water, oil, organic solvent, etc. When washing is required, IPA is recommended to use. When using other solvents it should be confirmed beforehand whether the solvents may react with the Module material. The banned Freon solvents should not be used. Do not clean using ultrasonic cleaner.
2) The LEDs are sensitive to the static electricity and surge. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED Modules. If voltage exceeding the absolute maximum rating is applied to LEDs, it may cause damage or even destruction to LED devices. Damaged LEDs may show some unusual characteristics such as increase in leak current, lowered turn-on voltage, or abnormal lighting of LEDs at low current.
3) VOCs (Volatile Organic Compounds) can be generated from adhesives, flux, hardener or organic additives used in luminaires (fixtures). Transparent LED silicone encapsulant is permeable to those chemicals and they may lead a discoloration of encapsulant when they exposed to heat or light. This phenomenon can cause a significant loss of light emitted (output) from the luminaires (fixtures). In order to prevent these problems, we recommend users to know the physical properties of the materials used in luminaires, and they must be selected carefully.
4) Risk of sulfurization (or tarnishing)
   The LED uses a silver-plated lead frame and its surface color may change to black (or dark colored) when it is exposed to sulfur (S), chlorine (Cl) or other halogen compound. Sulfurization of lead frame may cause intensity degradation, change of chromaticity coordinates and, in extreme cases, open circuit. It requires caution. Due to possible sulfurization of lead frame, the LED Modules should not be used and stored together with oxidizing substances made of materials such as rubber, plain paper, lead solder cream, etc.
5) The resin area is very sensitive, please do not handle, press, touch or rub it.
6) Do not drop the Module or give shocks.
7) Do not store the Module in a dusty place or humid location.
8) Do not disassemble the Module.
9) Do not directly look into the lighted LED with naked eyes for a long period of time.
10) Please consider the creepage and clearance distance at the end product.

Legal and additional information.

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and semiconductor and LED solutions. For the latest news, please visit the Samsung Newsroom at news.samsung.com

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