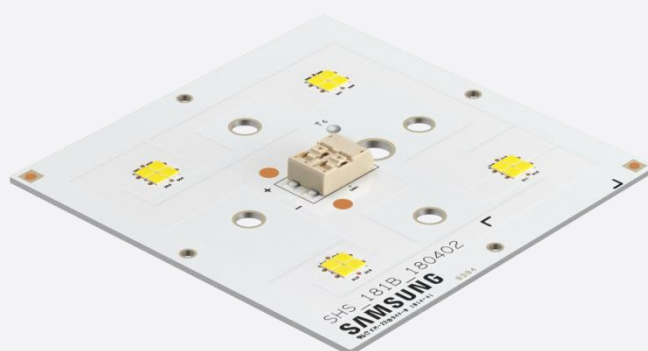




**THE DATASHEET OF
SL-B7R5N90L2WW**



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

LED Module

HiLOM SC16

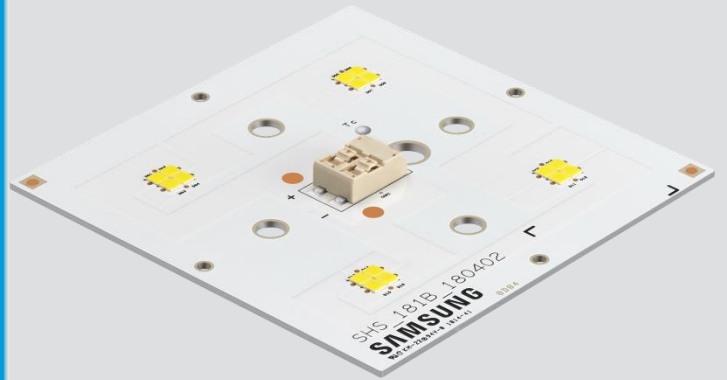


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1. Product Code Information

-SC16

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

2. Characteristics ($I_F = 2,100\text{mA}$, $t_p = 70^\circ\text{C}$)

a) Basic Information

| Item | Unit | Rating | Remark |
|---|------------------|-----------|--------|
| Rated Lifetime | Hour | >50,000 | L70B50 |
| Ingress Protection (IP) | - | no rating | |
| Ambient / Operating Temperature (t_a) | $^\circ\text{C}$ | -30 ~ +50 | |
| Storage Temperature | $^\circ\text{C}$ | -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 °C |
| | 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 $\pm 7\%$, Ra ± 3.0 , Voltage $\pm 5\%$, Current = $\pm 5\%$, CCT = $\pm 5\%$, 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) | °C | 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).

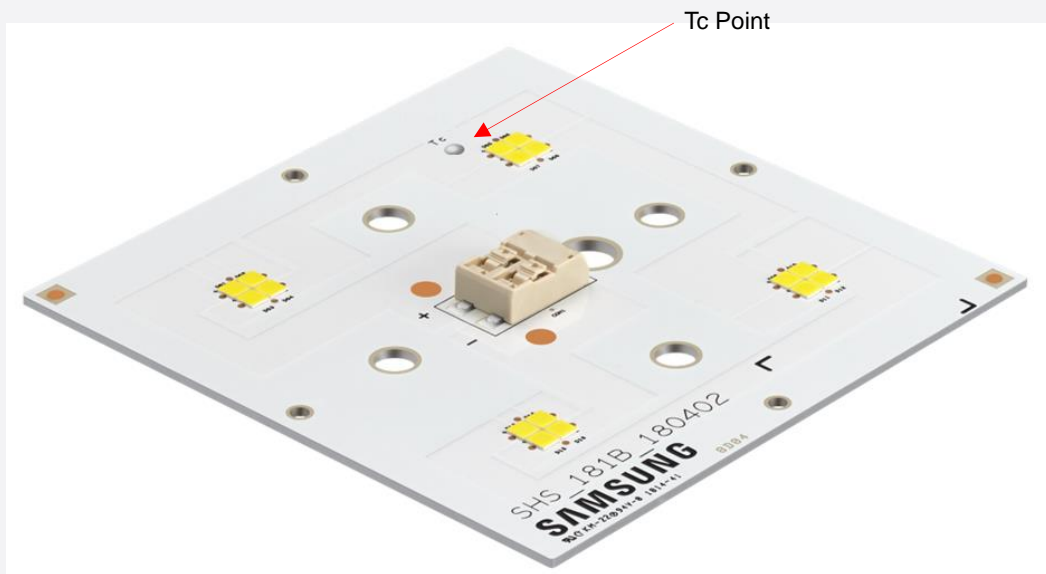
*** Rated maximum temperature, highest permissible temperature to avoid safety risk (t_c).

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).

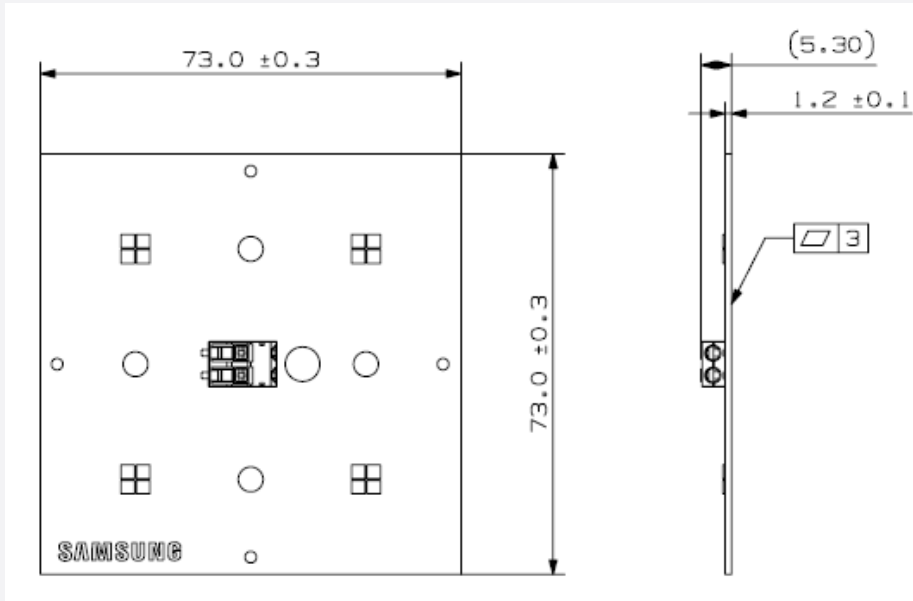
f) Thermal Measurement

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

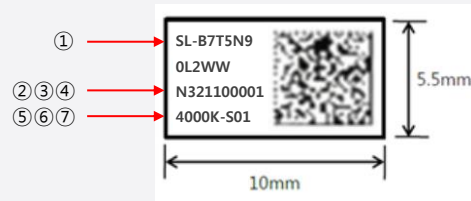
| Item | Specification |
|-----------|-------------------------|
| LED | LH181B |
| Connector | S-poke 2p |
| PCB | MCPCB 1.15T, 1oz, 2Px8S |

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 | - |

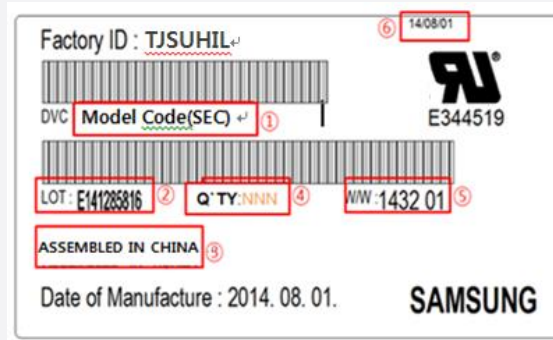
b) Tray Label

- 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.

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Samsung Electronics Co., Ltd.
1, Samsung-ro, Giheung-gu,
Yongin-si, Gyeonggi-do, 17113
KOREA
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