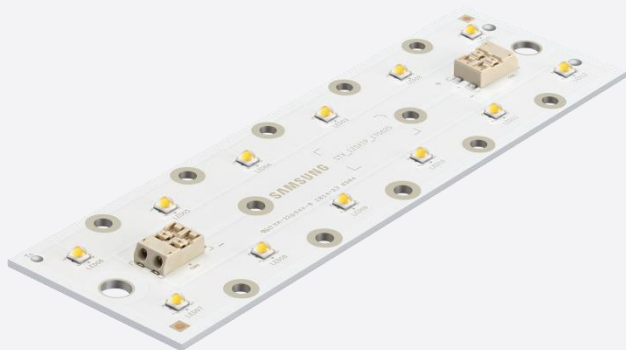


# Datasheet



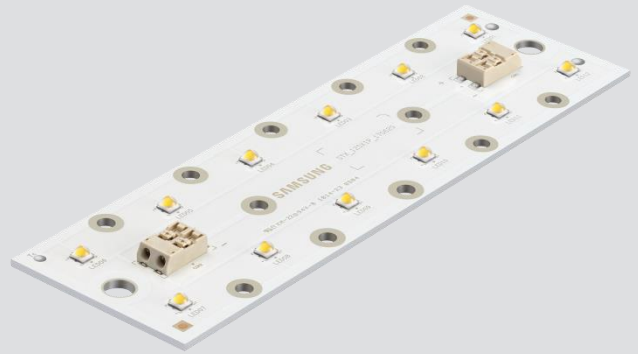
MODEL NAME	CCT	CODE
HILOM RH12	3000K	SL-B7V2N70LCWW
	4000K	SL-B7T2N70LCWW
	5000K	SL-B7R2N70LCWW

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Version	Remark	Page	Date	Traced
0.0	The Preliminary Specification established.	ALL	22.05.30	S.A.JOO

LED Module

# HiLOM RH12



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## 1. Product Code Information

- RH12

CRI	CCT	Product Code
CRI 70	3000K	SL-B7V2N70LCWW
	4000K	SL-B7T2N70LCWW
	5000K	SL-B7R2N70LCWW

## 2. Characteristics ( $I_F = 700\text{mA}$ , $t_p = 70^\circ\text{C}$ )

### 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	lm	3000K	3,400	3,830	If = 700 mA Tp = 70 °C
		4000K	3,750	4,150	
		5000K	3,750	4,150	
Luminous Efficacy	lm/W	3000K	-	163	
		4000K	-	173	
		5000K	-	173	
CCT		3000K	MacAdam 5 Step		Initial CCT Integrating Sphere
		4000K	MacAdam 5 Step		
		5000K	MacAdam 7 Step		
Operating Voltage	V	30.0	33.7	38.2	Working Voltage for Insulation : 59V
Power Consumption	W	-	24.4	-	
Color Rendering Index (Ra)	-	70			
Operating Current	mA		700	1500	CE Max current = 1000mA

### Notes

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

## c) Light Distribution

Item	Unit	Nominal	Tolerance	Remark
Beam Angle (FWHM)	°(degree)	128	$\pm 5$	

## d) Temperature Characteristics

Item	Unit	Nominal*( $t_p$ )	Life**( $t_L$ )	Max***( $t_c$ )
Temperature Case (Tc)	°C	70	105	110

### Notes:

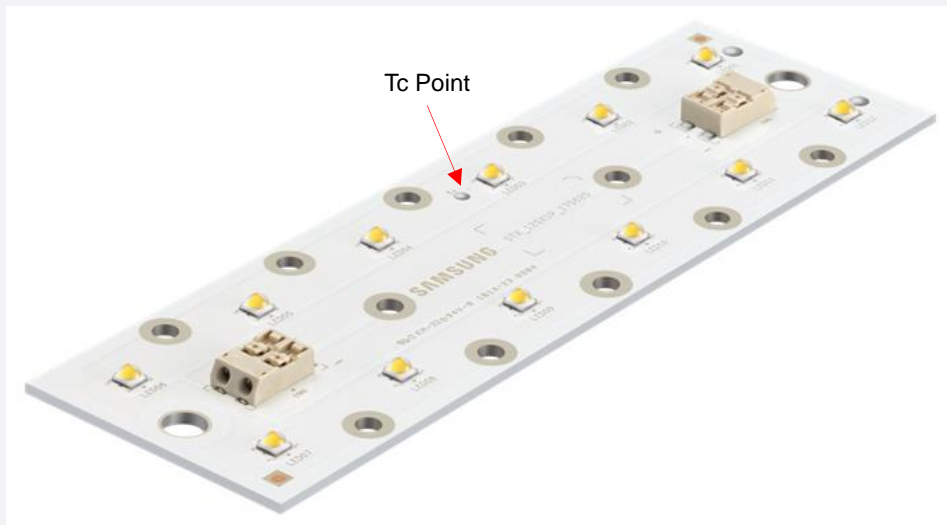
- \* Temperature used to specify performance of the module ( $t_p$ ).
- \*\* Rated maximum performance temperature at which lifetime is specified in L70B50 ( $t_L$ ).
- \*\*\* Rated maximum temperature, highest permissible temperature to avoid safety risk ( $t_c$ ).

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

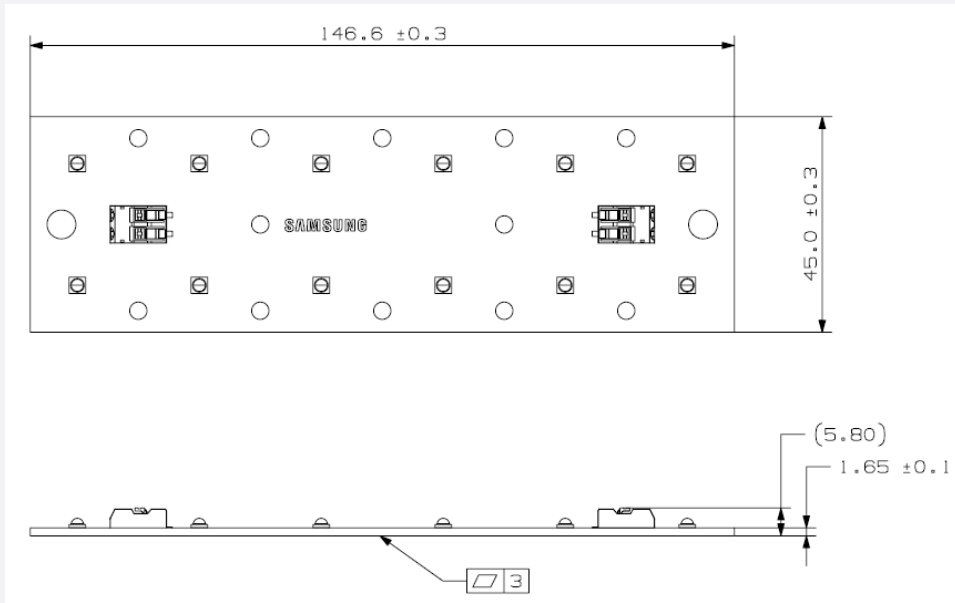
Performance temperatures are measured on “Tc point” as indicated on the module.





### 3. Appearance and Structure

#### a) Appearance and Dimension




Item	Unit	Dimension	Tolerance
Module Size	mm	146.6 x 45.0	$\pm 0.3$
Module Height	mm	5.80	$\pm 0.3$
Module Weight	g	32.5	$\pm 0.5$

#### b) Structure

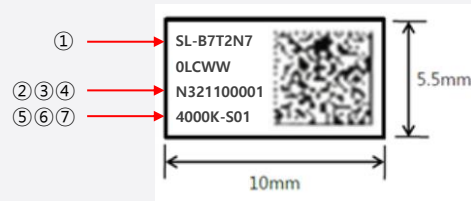
Item	Specification
LED	LH351C
Connector	S-poke 2p
PCB	MCPCB 1.65T, 1oz, 1Px12S

## 4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification Declaration	UL	E344519
	CE	Declaration of Conformity
	Photo-biological Safety	Risk group(at I <sub>max</sub> ) RG2 ( E <sub>thr</sub> = 957.314 lx, RG1 at d <sub>≥</sub> 1.2 m )
	Type Classification	Built in module 
Declaration	RoHS	Hazardous Substance & Material

## 5. Label Structure

### a) Module Label



Number	Item	Remark
①	Samsung Product Code	SL-B7T2N70LCWW
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	-

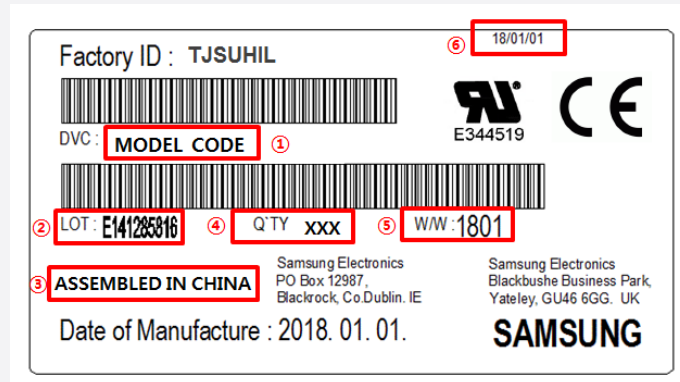
### b) Tray Label

- 100mm x 50mm



Number	Item	Remark
<input type="checkbox"/>	Model Code	Refer to page 1
<input type="checkbox"/>	LOT ID	
<input type="checkbox"/>	Quantity	192
<input type="checkbox"/>	Date of production	
<input type="checkbox"/>	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	192
⑤	Production Date (year & week)	-
⑥	Production Date (year/month/date)	-

## 6. Packing Structure

Product	Packing	Quantity (ea)	Weight (kg)	Remark
SL-B7T2N70LCWW	Tray	48	10	Weight (includes Modules, Trays and a Box)
	Box	192		
	Pallet	6912	360	

## 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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