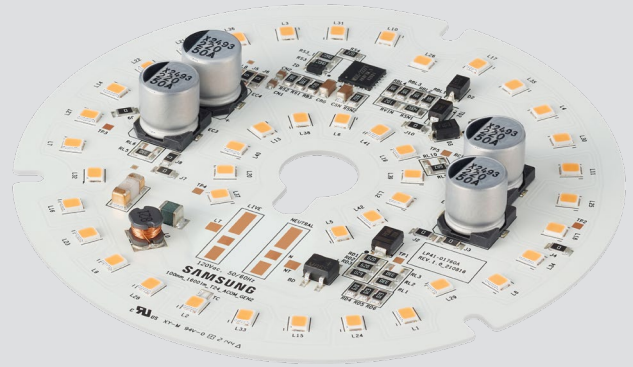


AC Operating Module

100mm
1600lm
T24 ACOM
Gen2



Samsung AC Operating Module is reasonable solution with better uniformity and high reliability

Features & Benefits

- No dark area and smooth light output
- Easy installation by integrated module
- Simple design for Recessed light and Ceiling light

Applications

Indoor Lighting

- Downlight
- Flush mount lighting
- Mushroom lighting
- Fan lighting



Table of Contents

1.	Product Code Information	-----	1
2.	Characteristics	-----	2
3.	Appearance and Structure	-----	6
4.	Certification and Declaration	-----	7
5.	Label Structure	-----	8
6.	Packing Structure	-----	10
7.	Precautions in Handling & Use	-----	11
Appendix			
1.	Label Information	-----	13
2.	Compatible Triac Dimmer List	-----	15

1. Product Code Information

a) 100mm 1600lm T24 ACOM Gen2

CRI (Ra)	CCT (K)	Product Code	Connector
90	3000	SI-N9V1624B1CN	No

2. Characteristics ($V_{IN} = 120V_{ac}$, $t_p = 65^{\circ}C$)

a) Basic Information

Item	Unit	Rating	Remark
Rated Lifetime	hour	>50,000	L70B50
Ingress Protection (IP)	-	N/A	
Operating Temperature	$^{\circ}C$	-20 ~ +40	
Storage Temperature	$^{\circ}C$	-30 ~ +80	
Inrush Current	A	Typ. 2.5	10ms
Transient Protection	V	4,000	
ESD	V	4,000 (Contact)	IEC61000-4-2

Notes

- ※ t_p : temperature at which performance is specified measured at "Tc point".
- ※ Transient Protection: 7 strikes of a 100kHz ring wave for both common mode and differential mode in accordance with ANSI/IEEE C62.41.2-2002 Category **A** operation.
- ※ The performance is the exactly same regardless of connector (or Model Code).

b) Electro-Optical Characteristics

Item	Unit	Rating			Remark
		min	typ	max	
Luminous Flux	lm	1430	1540	1650	
Luminous Efficacy	lm/W	88	94	101	
Operating Voltage (V_{IN})	V_{ac}	108	120	132	
Frequency	Hz	-	60	-	
Power Consumption	W	14.7	16.3	17.9	@120Vac/60Hz, tp 65 °C
Power Factor	-	0.9	-	-	
Color Rendering Index (Ra)	-	90	-	-	
R9	-	50	-	-	
THD	%	-	15	20	

Notes

- ※ Samsung maintains a measurement tolerance of Luminous flux $\pm 7\%$, Ra ± 3.0 , Wattage $\pm 5\%$.
- ※ Optical characteristic is measured under following condition.
 - 1) Measuring time: Within in 10 seconds after turn on
 - 2) Integrating time setting: 40ms.
- ※ Percent flicker: Meet CEC Title 24 standards.

c) Color Coordinate

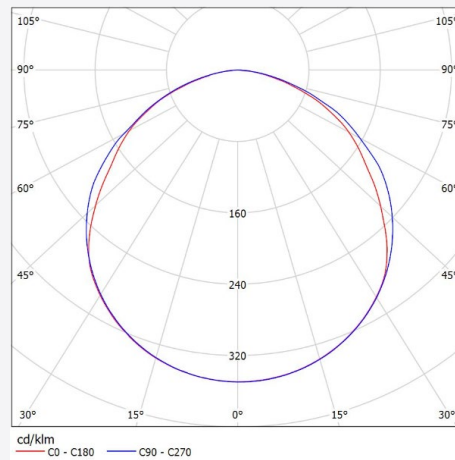
Model	Nom. CCT (K)	CIE 1931 Chromaticity Coordinates				
100mm 1600lm T24 ACOM Gen2	3000	CIE x	0.4147	0.4373	0.4562	0.4299
		CIE y	0.3814	0.3893	0.4260	0.4165
		Center	CIE x	0.4345	CIE y	0.4033

Notes

※ Samsung maintains a measurement tolerance of CIE_x / CIE_y \pm 0.005

d) Light Distribution

Item	Unit	Nominal	Tolerance	Remark
Beam Angle (FWHM)	°(degree)	115	± 5	



e) Temperature Characteristics

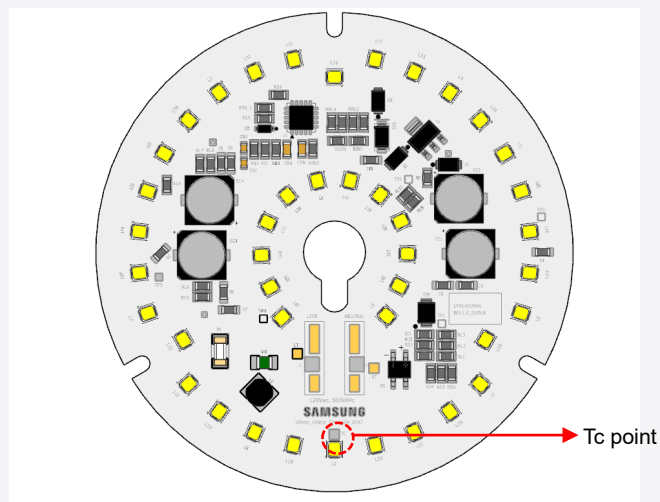
Item	Unit	Nominal*(t_p)	Life**(t_L)	Max***(t_c)
Temperature Case (Tc)	°C	65	80	92

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).

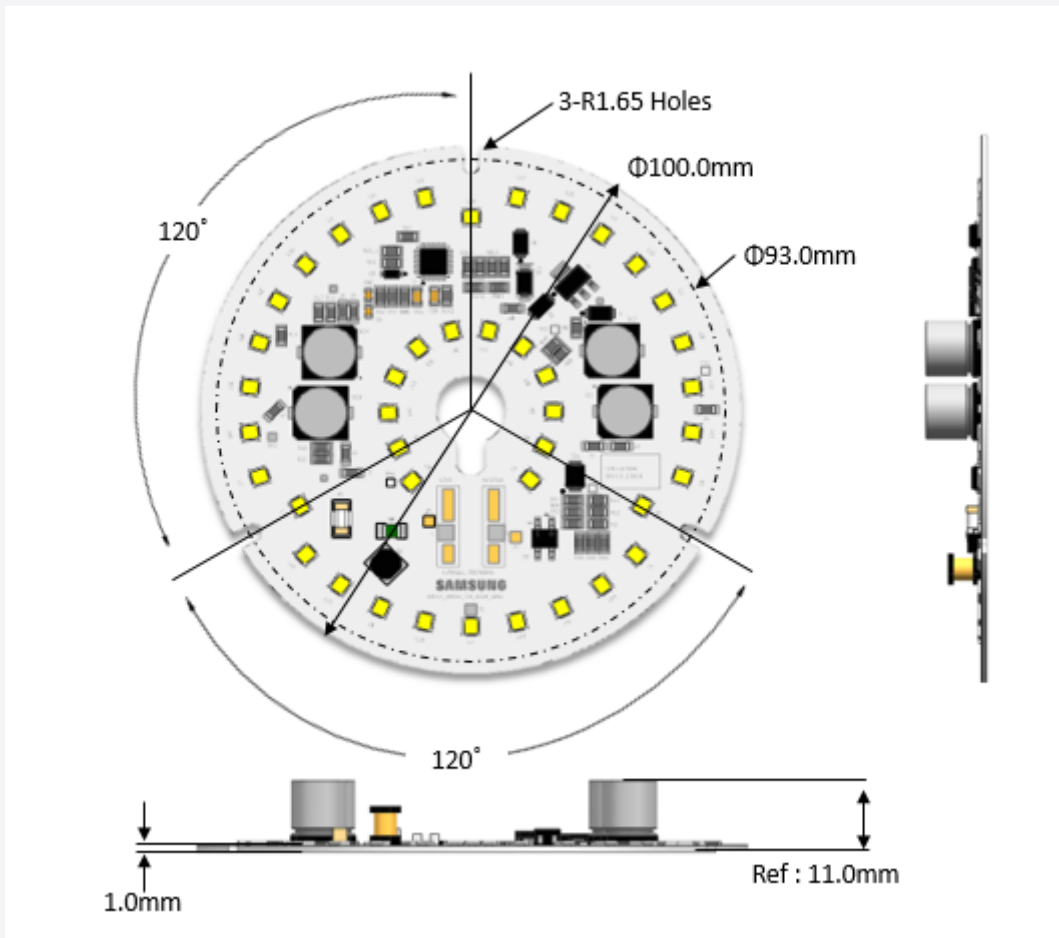
f) Thermal Measurement

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 Diameter	mm	100	±0.2
Module Height	mm	11.0	-
PCB Thickness	mm	1.0	±0.1
Module Weight	g	28.0	±1.4

b) Structure

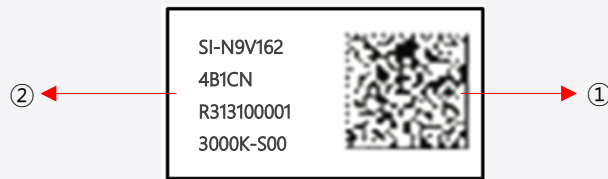
Item	Specification
LED	2835
PCB	MCPCB
IC	Samsung Electronics IC

4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification	UL / cUL	E344519
	CEC	Title 24
Declaration	RoHS	Hazardous Substance & Material

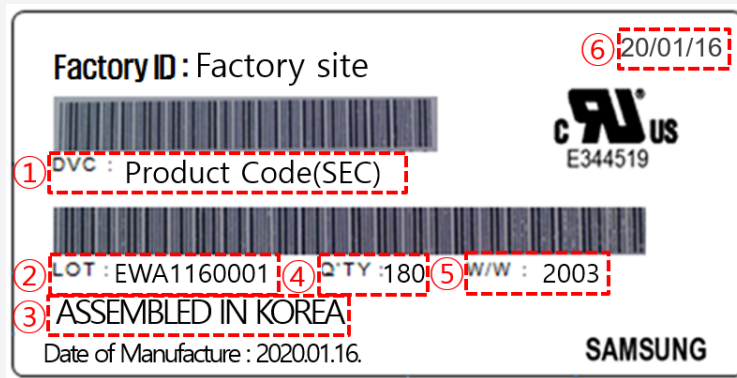
5. Label Structure

a) Module Label



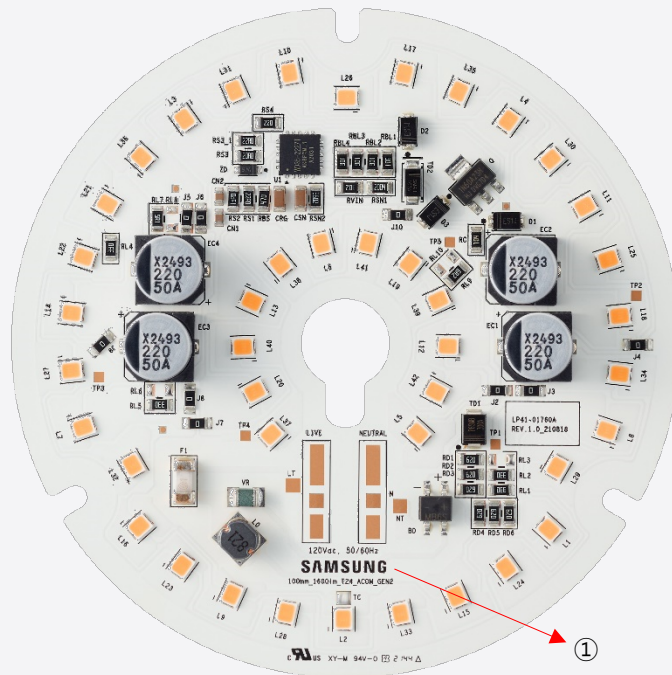
Number	Item	Remark
①	2D Barcode (QR)	-
②	Product code	

b) Box Label



Number	Item	Remark
①	Product Code	Refer to 1Page
②	Lot No.	-
③	Country of Origin	ASSEMBLED IN CHINA
④	Packing Quantity	Refer to 10Page
⑤	Product Date (year & week)	yyww
⑥	Product Date (year/month/date)	yy/mm/dd

c) Certification Label and Logo



Number	Item	Remark
①	Samsung logo	-

6. Packing Structure

a) Quantity

Product	Packing	Quantity (ea)	Weight (kg)	Remark
100mm 1600lm T24 ACOM Gen2	Tray	12	10.5	Weight (includes Modules, Trays and a Box)
	Outer Box	180		
	Pallet	4,320	-	

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.
- 11) Solder ball
There might be solder ball and/or residue on the surface of module as long as they do NOT affect performance and safety.

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.

Copyright © 2020 Samsung Electronics Co., Ltd. All rights reserved.

Samsung Electronics reserves the right to modify, at its sole discretion, the design, packaging, specifications, and features shown herein without notice at any time.

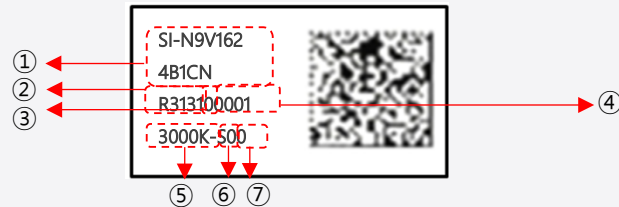
Samsung Electronics Co., Ltd.
1, Samsung-ro, Giheung-gu,
Yongin-si, Gyeonggi-do, 17113
KOREA
www.samsung.com/led

[Appendix]

1. Label Information

a) Information of Printed Label

Label Image

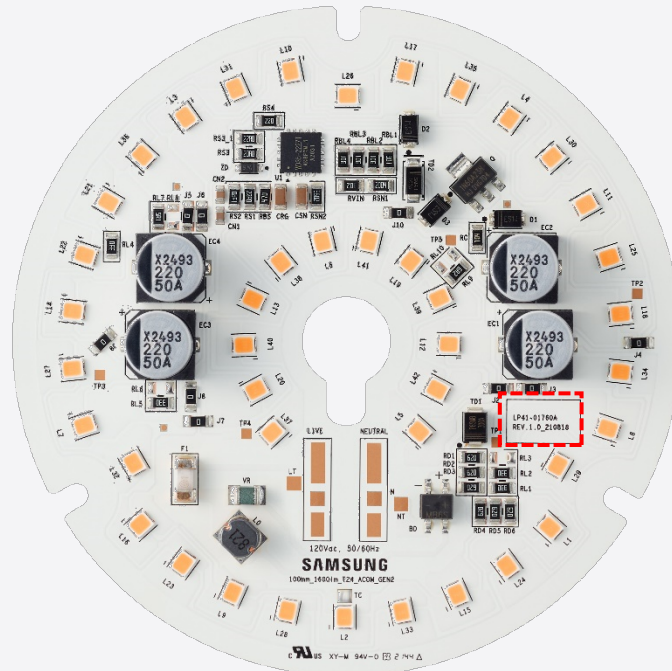


No	Item	Remark
1	Product code	SI-N9V1624B1CN
2	SMT date	R313
3	SMT line No.	1
4	Serial No.	00001
5	CCT	3000K
6	LED Maker	-S
7	Bin Group No.	00

b) QR code Information

QR code	No	Item	Remark
SI-N9V1624B1CN_R3131000013000K-S00	1	Product code	SI-N9V1624B1CN
	2	Space	-
	3	SMT date	R313
	4	SMT line No.	1
	5	Serial No	00001
	6	CCT	3000K
	7	LED Maker	-S
	8	Bin Group No	00

c) Label position



2. Compatible Triac Dimmer List

a) Compatibility depends on triac dimmer characteristics.

Even though dimmer is included in the below table, some dimmers may be incompatible according to installation condition.

b) Compatible dimmer list.

No.	Maker	Model
1	Summerwind	DL-1169FCS-01

Notes

※ Do not guarantee the performance of dimmer which is not on the list above.