

LED Module

LT-Q282B

LT-Q562B



Features & Benefits

- Superior Efficacy, over 200 lm/W @ LED module
- Two length options of 2 / 1-ft to well-fit in the various luminaire design

Applications

- Replacement of T5/T8 tubes
- Office / Retail / Living space
- Troffer / Linear / Pendant

Table of Contents

1.	Product Code Information	-----	3
2.	Characteristics	-----	4
3.	Structure and Assembly	-----	7
4.	Certification and Declaration	-----	9
5.	Label Structure	-----	10
6.	Packing Structure	-----	12
7.	Precautions in Handling & Use	-----	13
APPENDIX			
1.	Applicable Solid Wires	-----	14

1. Product Code Information

a) LT-Q282B

Nominal CCT (K)	Product Code
3000	SI-B8V053280EU
4000	SI-B8T053280EU

b) LT-Q562B

Nominal CCT (K)	Product Code
3000	SI-B8V103560EU
4000	SI-B8T103560EU

2. Characteristics (If=180mA, tp=40 °C)

a) Basic Information

Item	Rating	Unit	Remark
Rated Lifetime	>50,000	hour	L70B50
Ingress Protection (IP)	no rating	-	
Ambient / Operating Temperature (t_{amb})	-20 ~ +50	°C	
Storage Temperature	-30 ~ +80	°C	

b) Electro-Optical Characteristics

- LT-Q282B

Item	Nom. CCT (K)	Rating			Unit	Remark
		Min	Typ.	Max		
Luminous Flux (Φ_v)	3000	830	920	1020	lm	$I_f = 180 \text{ mA}$ $t_p = 40 \text{ °C}$
	4000	900	1000	1110		
Luminous Efficacy	3000	168	187	208	lm/W	
	4000	183	203	225		
CCT	3000	2914	3004	3094	K (Initial)	Mac Adam 3 step
	4000	3799	3945	4099		
Color Rendering Index (Ra)		80	83	-	-	Integrating sphere
Operating Current (I_f)		-	180	360	mA	-
Operating Voltage (V_f)		26.0	27.4	28.8	Vdc	$I_f = 180 \text{ mA}$
Power Consumption		4.7	4.9	5.2	W	$t_p = 40 \text{ °C}$

Notes:

- 1) t_p : temperature at which performance is specified; measured at "Tc point".
- 2) Samsung maintains a measurement tolerance of : Luminous flux: $\pm 7 \%$, CRI: ± 3.0 , Voltage: $\pm 5\%$
- 3) Measurement tolerance of CCT is $\pm 5\%$

- LT-Q562B

Item	Nom. CCT (K)	Rating			Unit	Remark
		Min	Typ.	Max		
Luminous Flux (Φ_v)	3000	1655	1840	2045	lm	$I_f = 180 \text{ mA}$ $t_p = 40 \text{ }^\circ\text{C}$
	4000	1800	2000	2220		
Luminous Efficacy	3000	168	187	208	lm/W	
	4000	183	203	225		
CCT	3000	2914	3004	3094	K (Initial)	Mac Adam 3 step
	4000	3799	3945	4099		
Color Rendering Index (Ra)		80	83	-	-	Integrating sphere
Operating Current (I_f)		-	180	360	mA	-
Operating Voltage (V_i)		52.1	54.8	57.7	Vdc	$I_f = 180 \text{ mA}$
Power Consumption		9.4	9.9	10.4	W	$t_p = 40 \text{ }^\circ\text{C}$

Notes:

- 1) t_p : temperature at which performance is specified; measured at "Tc point".
- 2) Samsung maintains a measurement tolerance of : Luminous flux: $\pm 7 \%$, CRI: ± 3.0 , Voltage: $\pm 5\%$
- 3) Measurement tolerance of CCT is $\pm 5\%$

c) Temperature Characteristics

Item	Nominal(t_p)*	Life**	Max(t_c)***	Unit
Temperature	40	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 6)

d) Thermal Measurement

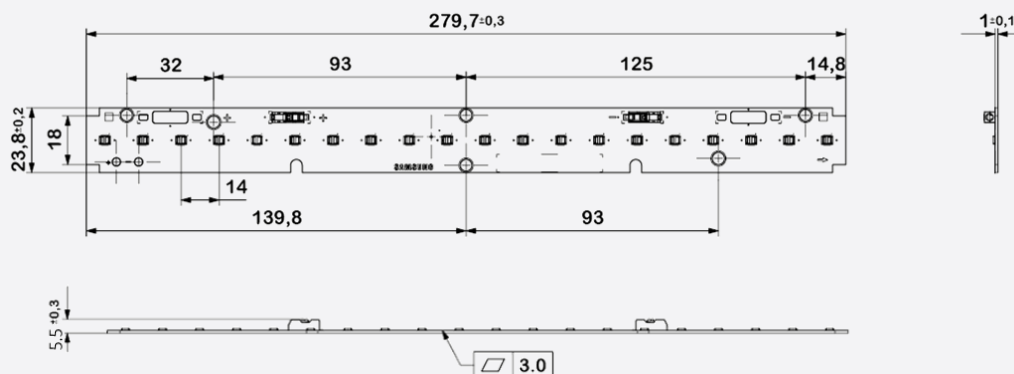
Performance temperatures are measured on "Tc point" as indicated on the module.



3. Structure and Assembly

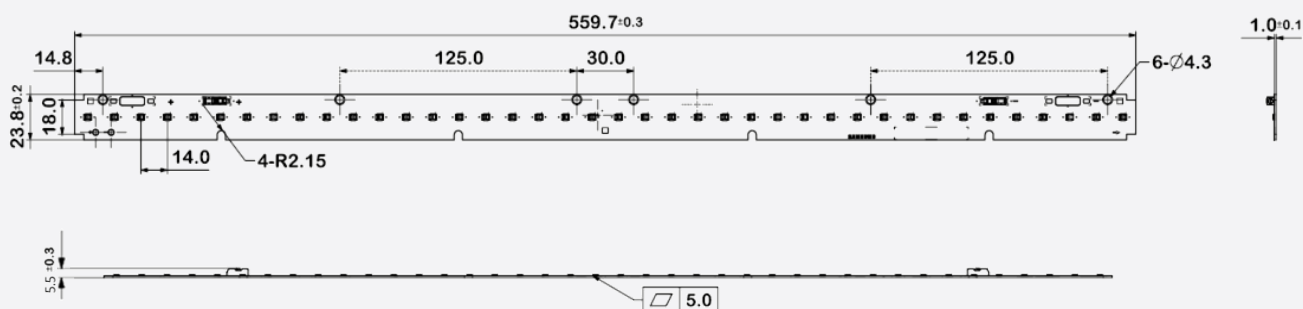
a) Appearance & Dimension

- LT-Q282B



Dimension	Specification	Tolerance	Unit
Module Length	279.7	±0.3	mm
Module Width	23.8	±0.2	mm
Module Height	5.5	±0.3	mm
PCB Thickness	1.0	±0.1	mm
Module Weight	13.8	±0.69	g

- LT-Q562B



Dimension	Specification	Tolerance	Unit
Module Length	559.7	±0.3	mm
Module Width	23.8	±0.2	mm
Module Height	5.5	±0.3	mm
PCB Thickness	1.0	±0.1	mm
Module Weight	27.1	±1.36	g

b) Structure

Item	Specification
LED	LM301B Middle Power LED
PCB	Material : copper, solder mask, epoxy
Connector	Wago 2060-451
Wire	24~18 AWG ; terminal strip length of 7.0~9.0 mm (Appendix 1)

c) Schematic Circuit

- LT-Q282B : 10S x 2P
- LT-Q562B : 20S x 2P

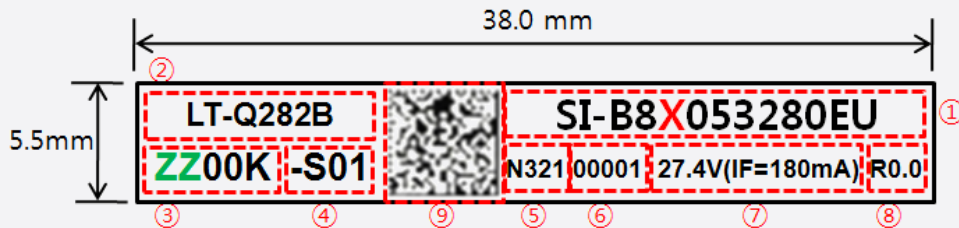
4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification	CE	IEC / EN 62031, IEC / EN 62471
	ENEC	IEC / EN 62031, IEC / EN 62471
Declaration	RoHS	Hazardous Substance & Material
	REACH	Hazardous Substance & Material

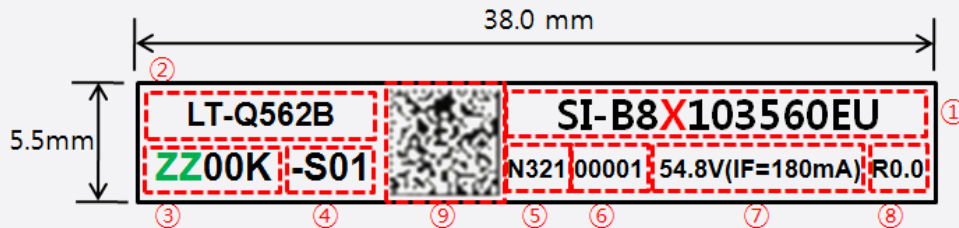
5. Label Structure

a) Module Label

- LT-Q282B



-LT-Q562B



Number	Item	Remark
①	Model code	Refer to page 3 X = V, T
②	Product name	Refer to page 3
③	Color temperature	ZZ = 30, 40
④	LED maker & Bin rank	-S (Samsung) 00-ZZ
⑤	SMT date	N321 (2013-March-21th)
⑥	Serial No.	00001~99999; Setting "00001" every working day
⑦	Voltage (IF).	
⑧	Product Revision	
⑨	QR Code	Q282B : SI-B8X053280EU_N321100001ZZ00K-S01 Q562B : SI-B8X103560EU_N321100001ZZ00K-S01

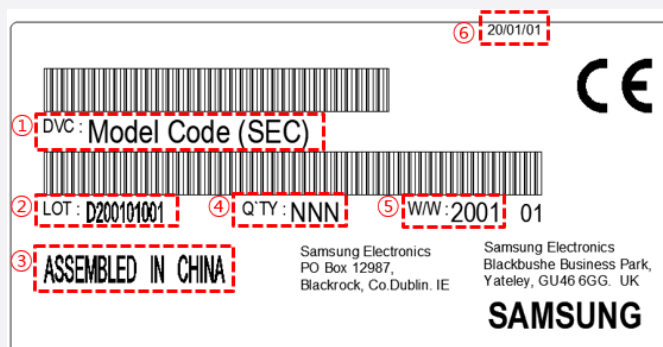


b) Tray & MBB bag Label



Number	Item	Remark
①	Model Code	Refer to page 3
②	LOT ID	
③	Quantity	Refer to page 12
④	Date of production	
⑤	Date of Issue	

c) Box Label



Number	Item	Remark
①	Model Code	Refer to page 3
②	LOT ID	
③	Place of origin	
④	Quantity	Refer to page 12
⑤	Describe production week	
⑥	Date of Issue	

6. Packing Structure

Product	Packing	Quantity (modules)	Dimension (mm)		
			Length	Width	Height
LT-Q282B	Tray	30 EA	380	355	32.3
	Outer Box	240 EA	385	360	225
	Pallet	5760 EA	1200	800	130
LT-Q562B	Tray	30 EA	580	380	34
	Outer Box	240 EA	585	385	225
	Pallet	3840 EA	1200	800	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

Please be careful when taking a product out from packaging.

Appendix

1. Applicable Solid Wires

a) Strip details

Wiring method	Push In
Cross section [solid]	0.2-0.75mm ²
Cross Section [AWG]	24-18
Strip length	8.0 ±1mm
Conductor entry angle to the PCB	0 °

※ outside insulation diameter Φ2.1mm Max.

b) Material details

Temperature stability	-40°C ~ +105°C
Flammability category, based on UL94	V0
Insulating material group	I
Insulating material	PPA-GF

c) Important processing notes

Depending on the SMD soldering process and associated parameters a minor discoloration might occur. However, this will not influence the functionality.

Legal and additional information.

[About Samsung Electronics Co., Ltd.](#)

Samsung Electronics Co., Ltd. is a global leader in technology, opening new possibilities for people everywhere. Through relentless innovation and discovery, we are transforming the worlds of TVs, smartphones, tablets, PCs, cameras, home appliances, printers, LTE systems, medical devices, semiconductors and LED solutions. We employ 286,000 people across 80 countries with annual sales of US\$216.7 billion. To discover more, please visit www.samsungled.com.

Copyright © 2019 Samsung Electronics Co., Ltd. All rights reserved.
Samsung is a registered trademark of Samsung Electronics Co., Ltd.
Specifications and designs are subject to change without notice. Non-metric weights and measurements are approximate. All data were deemed correct at time of creation. Samsung is not liable for errors or omissions. All brand, product, service names and logos are trademarks and/or registered trademarks of their respective owners and are hereby recognized and acknowledged.

Samsung Electronics Co., Ltd.
95, Samsung 2-ro
Giheung-gu
Yongin-si, Gyeonggi-do, 446-711
KOREA

www.samsungled.com

SAMSUNG