

Datasheet

MODEL NAME	TYPE	CCT	SEC CODE
Q-Series US Gen2	LT-Q562C	3000K	SI-B8V102560US
		3500K	SI-B8U102560US
		4000K	SI-B8T102560US
		5000K	SI-B8R102560US
	LT-QB22C	3000K	SI-B8V202B20US
		3500K	SI-B8U202B20US
		4000K	SI-B8T202B20US
		5000K	SI-B8R202B20US

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DEVELOP.	PRODUCT PLANNING	QA(DQA)	SALES	

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LED Module

LT-Q562C

LT-QB22C



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1. Product Code Information

- LT-Q562C

Nominal CCT (K)	Product Code
3000	SI-B8V102560US
3500	SI-B8U102560US
4000	SI-B8T102560US
5000	SI-B8R102560US

- LT-QB22C

Nominal CCT (K)	Product Code
3000	SI-B8V202B20US
3500	SI-B8U202B20US
4000	SI-B8T202B20US
5000	SI-B8R202B20US

2. Characteristics (If=450mA, tc=40 °C)

a) Basic Information

Item	Rating	Unit	Remark
Rated Lifetime	>50,000	hour	L70B50 @ tc <80°C, If=450mA
Ingress Protection (IP)	no rating	-	
Ambient / Operating Temperature (ta)	-20 ~ +50	°C	
Storage Temperature	-30 ~ +80	°C	

Notes

- ※ Rated Lifetime is calculated based on theoretical TM-21 calculations.
- ※ If: Forward current or Operating current
- ※ tc: Case temperature at "Tc point".
- ※ ta: ambient temperature

b) Electro-Optical Characteristics

- LT-Q562C

Item	Nom. CCT (K)	Rating			Unit	Remark
		Min	Typ.	Max		
Luminous Flux (Φv)	3000	1850	2005	-	lm	If = 450mA tc = 40°C
	3500	1900	2060	-		
	4000	1980	2120	-		
	5000	1980	2120	-		
Luminous Efficacy	3000	185	201	-	lm/W	
	3500	190	206	-		
	4000	198	212	-		
	5000	198	212	-		
Color Rendering Index (Ra)		80	-	-	-	
Operating Current (If)		60	450	1200	mA	
Operating Voltage (Vi)		21.0	22.2	23.5	Vdc	
Power Consumption		9.5	10.0	10.6	W	

Notes

- ※ Operating current tolerance may be ±5%.
- ※ Samsung maintains a measurement tolerance of Luminous flux ±7%, Ra ±3.0, Voltage ±5%.

- LT-QB22C

Item	Nom. CCT (K)	Rating			Unit	Remark
		Min	Typ.	Max		
Luminous Flux (Φ_v)	3000	3700	4010	-	lm	$I_F = 450\text{mA}$ $t_C = 40^\circ\text{C}$
	3500	3800	4120	-		
	4000	3960	4245	-		
	5000	3960	4245	-		
Luminous Efficacy	3000	187	203	-	lm/W	
	3500	192	208	-		
	4000	200	214	-		
	5000	200	214	-		
Color Rendering Index (Ra)		80	-	-	-	
Operating Current (I_i)		60	450	1200	mA	
Operating Voltage (V_i)		41.5	44.0	46.5	Vdc	
Power Consumption		18.7	19.8	20.9	W	

Notes

- ※ Operating current tolerance may be $\pm 5\%$.
- ※ Samsung maintains a measurement tolerance of Luminous flux $\pm 7\%$, Ra ± 3.0 , Voltage $\pm 5\%$.

c) Color Coordinate

Model Code	Nom. CCT (K)	CIE 1931 Chromaticity Coordinates				Remark	
SI-B8V102560US SI-B8V202B20US	3000	CIE x	0.4239	0.4361	0.4436	0.4309	I _F = 450mA t _c = 25°C
		CIE y	0.3890	0.3932	0.4086	0.4041	
		Center	0.4336		0.3987		
SI-B8U102560US SI-B8U202B20US	3500	CIE x	0.3985	0.4113	0.4179	0.4046	
		CIE y	0.3770	0.3832	0.3998	0.3932	
		Center	0.4080		0.3883		
SI-B8T102560US SI-B8T202B20US	4000	CIE x	0.3736	0.3865	0.3910	0.3776	
		CIE y	0.3635	0.3713	0.3867	0.3785	
		Center	0.3822		0.3750		
SI-B8R102560US SI-B8R202B20US	5000	CIE x	0.3388	0.3398	0.3505	0.3492	
		CIE y	0.3396	0.3523	0.3608	0.3479	
		Center	0.3446		0.3501		

Notes

* Samsung maintains a measurement tolerance of CIE_x / CIE_y ± 0.005

d) Light Distribution

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

e) Temperature Characteristics

Item	Nominal*	Life**	Max***	Unit
Temperature	40	80	90	°C

Notes

- * Nominal value at which typical performance is specified
- ** Value at which rated lifetime is specified
- *** Maximum value, highest permissible temperature to avoid safety risk

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

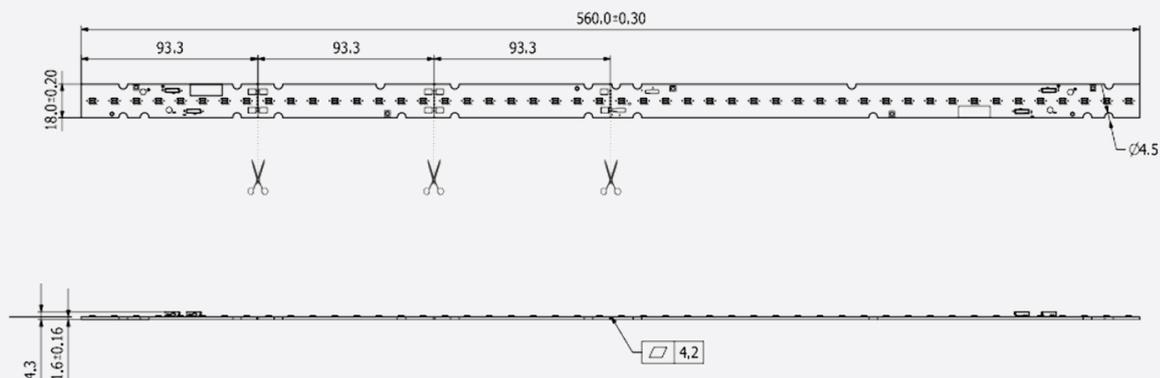
Performance temperatures are measured on "Tc point" as indicated on the module.



3. Appearance and Structure

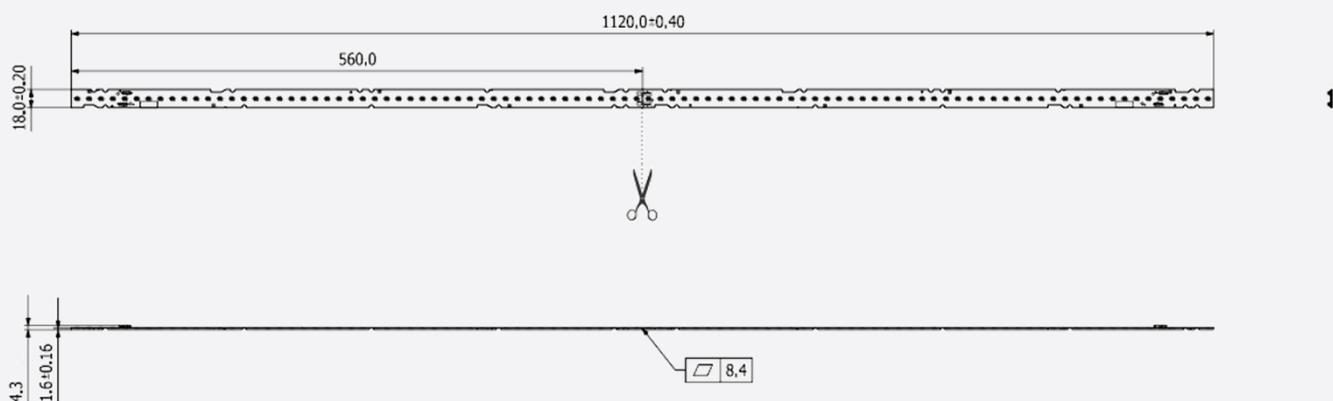
a) Appearance & Dimension

- LT-Q562C



Dimension	Specification	Tolerance	Unit
Module Length	560.0	±0.30	mm
Module Width	18.0	±0.20	mm
PCB Thickness	1.6	±0.16	mm
Module Height	Ref. 4.3	-	mm

- LT-QB22C



Dimension	Specification	Tolerance	Unit
Module Length	1120.0	±0.40	mm
Module Width	18.0	±0.20	mm
PCB Thickness	1.6	±0.16	mm
Module Height	Ref. 4.3	-	mm

b) Structure

Item	Specification
LED	3030 Middle Power LED
PCB	CEM
Connector	1pin poke-in

c) Schematic Circuit

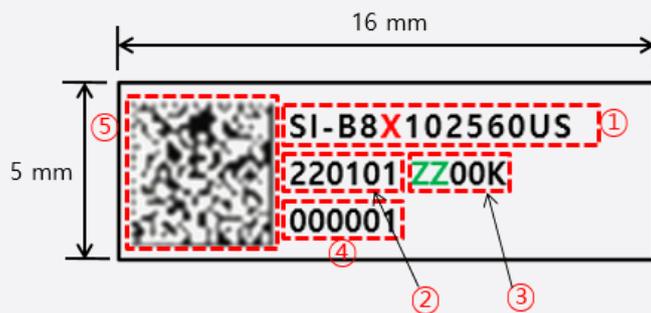
- LT-Q562C : 8S x 6P
- LT-QB22C : 16S x 6P

4. Certification and Declaration

Item	Compliant to	Remark
Certification	UL/cUL	E344519
Declaration	RoHS	Hazardous Substance & Material
	REACH	Hazardous Substance & Material

5. Label Structure

a) Module Label



Number	Item	Remark
①	Product code	Refer to page 3
②	Date of Manufacture	YYMMDD
③	Color temperature	ZZ = 30, 35, 40, 50
④	Serial No.	000001~999999; Setting "000001" every working day
⑤	QR Code	SI-B8X102560US YYMMDD ZZ00K 000001

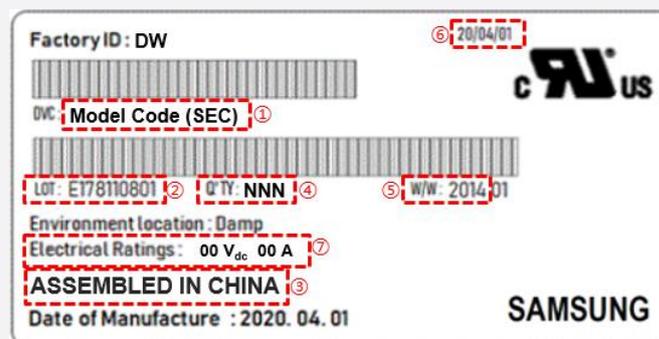


b) Tray & MBB bag Label



Number	Item	Remark
①	Model Code	Refer to page 3
②	LOT ID	
③	Quantity	Refer to page 13
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 13
⑤	Describe production week	
⑥	Date of Issue	
⑦	Electrical Ratings	LT-Q562C : 25 V _{dc} 1.2A LT-QB22C : 50 V _{dc} 1.2A

6. Packing Structure

Product	Packing	Quantity (ea)	Weight (kg)	Remark
LT-Q562C	Tray	48	9.3	Weight (includes Modules, Trays and a Box)
	Outer Box	336		
	Pallet	6720	-	
LT-QB22C	Tray	20	12.5	Weight (includes Modules, Trays and a Box)
	Outer Box	200		
	Pallet	2400	-	

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 cleaning is required, IPA is recommended as the cleaning agent. Some solvent-based cleaning agent may damage the silicone resins used in the product.
- 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 carefully selected.
- 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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