LED Module

LT-V562A
LT-V562B
LT-V282A
LT-V282B




Features& Benefits

- Cost effective solution, deliver better lm/$
- Same mechanical foot-print as existing M-series
- Good efficacy, 137 lm/W @ 4000K

Applications

Indoor Lighting:

- Troffer / Linear / Line fixtures

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Table of Contents

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1. Product Code Information

a)V562A

Nominal CCT (K)	Product Code
3000	SI-B8V11156CWW
3500	SI-B8U11156CWW
4000	SI-B8T11156CWW
5000	SI-B8R11156CWW

b)V562B

Nominal CCT (K)	Product Code
3000	SI-B8V15156CWW
3500	SI-B8U15156CWW
4000	SI-B8T15156CWW
5000	SI-B8R15156CWW

c)V282A

Nominal CCT (K)	Product Code
3000	SI-B8V06128CWW
3500	SI-B8U06128CWW
4000	SI-B8T06128CWW
5000	SI-B8R06128CWW

d)V282B

Nominal CCT (K)	Product Code
3000	SI-B8V08128CWW
3500	SI-B8U08128CWW
4000	SI-B8T08128CWW
5000	SI-B8R08128CWW

2. Characteristics

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

(a)V562A

Item	Nom. CCT (K)	Rating			Unit	Remark
		Min	Typ.	Max		
Luminous Flux (Φ_v)	3000	1213	1348	1484	lm	I_f = 420mA t_p = 50 ℃
	3500	1260	1400	1541		
	4000	1307	1452	1597		
	5000	1307	1452	1597		
Luminous Efficacy	3000	115	127	140	lm/W	
	3500	119	132	146		
	4000	124	137	151		
	5000	124	137	151		
CCT	3000	2980	3045	3110	K	
	3500	3360	3465	3570		
	4000	3830	3985	4130		
	5000	4810	5028	5240		
Color Consistency (initial)		-	3	-	Mac Adam step	
Color Rendering Index (Ra)		80	83	-	-	
Operating Current (I_f)		-	420	540	mA	-
Operating Voltage (V_f)		22.68	25.20	27.72	Vdc	I_f = 420 mA t_p = 50 ℃
Power Consumption		9.52	10.58	11.64	W	

Notes:

1) t_p: temperature at which performance is specified; measured at “tc point”.

2) Samsung maintains a measurement tolerance of: Luminous flux: ±5%,CRI: ±2.0, Voltage: ±0.3V, Power Consumption: ±0.3W

(b)V562B

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	3000	1841	2045	2250	lm	I_f = 630 mA t_p =50 ℃
	3500	1898	2109	2320		
	4000	1941	2157	2373		
	5000	1941	2157	2373		
Luminous Efficacy	3000	115	128	141	lm/W	
	3500	119	132	145		
	4000	121	135	148		
	5000	121	135	148		
CCT	3000	2980	3045	3110	K	
	3500	3360	3465	3570		
	4000	3830	3985	4130		
	5000	4810	5028	5240		
Color Consistency (initial)		-	3	-	Mac Adam step	
Color Rendering Index (Ra)		80	83	-	-	
Operating Current (I_f)		-	630	720	mA	-
Operating Voltage (V_f)		22.82	25.36	27.90	Vdc	I_f = 630 mA t_p = 50 ℃
Power Consumption		14.38	15.98	17.58	W	

Notes:

1) t_p: temperature at which performance is specified; measured at “tc point”.

2) Samsung maintains a measurement tolerance of: Luminous flux: ±5%, CRI: ±2.0, Voltage: ±0.3V, Power Consumption: ±0.5W

(c)V282A

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	3000	651	724	796	lm	
	3500	672	746	821		
	4000	692	769	846		
	5000	692	769	846		
Luminous Efficacy	3000	115	128	140	lm/W	I_f =450 mA t_p =50℃
	3500	119	132	145		
	4000	122	136	149		
	5000	122	136	149		
CCT	3000	2980	3045	3110	K	
	3500	3360	3465	3570		
	4000	3830	3985	4130		
	5000	4810	5028	5240		
Color Consistency (initial)		-	3	-	Mac Adam step	
Color Rendering Index (Ra)		80	83	-	-	
Operating Current (I_f)		-	450	540	mA	-
Operating Voltage (V_f)		11.34	12.60	13.86	Vdc	I_f =450 mA t_p = 50 ℃
Power Consumption		5.10	5.67	6.24	W	

Notes:

1) t_p: temperature at which performance is specified; measured at “tc point”.

2) Samsung maintains a measurement tolerance of: Luminous flux: ±5%, CRI: ±2.0, Voltage: ±0.3V, Power Consumption: ±0.3W

(d)V282B

Item	Nom. CCT (K)	Rating				Remark
		Min	Typ.	Max	Unit	
Luminous Flux (Φ_v)	3000	869	965	1062	lm	I_f =300 mA t_p =50 ℃
	3500	896	995	1095		
	4000	923	1026	1129		
	5000	923	1026	1129		
Luminous Efficacy	3000	115	128	141	lm/W	
	3500	119	132	145		
	4000	122	136	149		
	5000	122	136	149		
CCT	3000	2980	3045	3110	K	
	3500	3360	3465	3570		
	4000	3830	3985	4130		
	5000	4810	5028	5240		
Color Consistency (initial)		-	3	-	Mac Adam step	
Color Rendering Index (Ra)		80	83	-	-	
Operating Current (I_f)		-	300	360	mA	-
Operating Voltage (V_f)		22.68	25.20	27.72	Vdc	I_f = 300 mA t_p = 50℃
Power Consumption		6.80	7.56	8.32	W	

Notes:

1) t_p: temperature at which performance is specified; measured at “tc point”.

2) Samsung maintains a measurement tolerance of: Luminous flux: ±5%, CRI: ±2.0, Voltage: ±0.3V, Power Consumption: ±0.3W

Item	Nominal*	Life**	Max***	Unit
Temperature for V562A,	50 (t_p)	70($t_{p,\ 50}$)	80(t_c)	℃
Temperature for V562B,	50 (t_p)	70($t_{p,\ 50}$)	80(t_c)	℃
Temperature for V282A,	50(t_p)	70 ($t_{p,\ 50}$)	80(t_c)	℃
Temperature for V282B,	50(t_p)	70 ($t_{p,\ 50}$)	80(t_c)	℃

Notes:

* Temperature used to specify performance of the module (t_p).

** Rated maximum performance temperature at which lifetime is specified ($t_{p,\ 50}$).

*** 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.

3. Structure and Assembly

a) Appearance

V562A

V562B

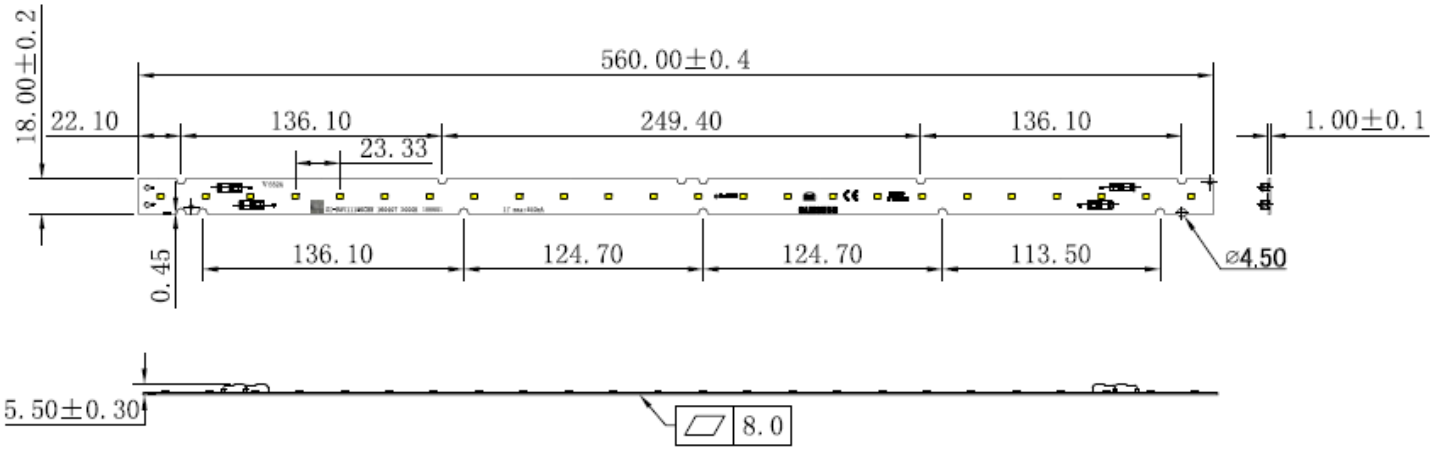
V282A

V282B

b) Dimension

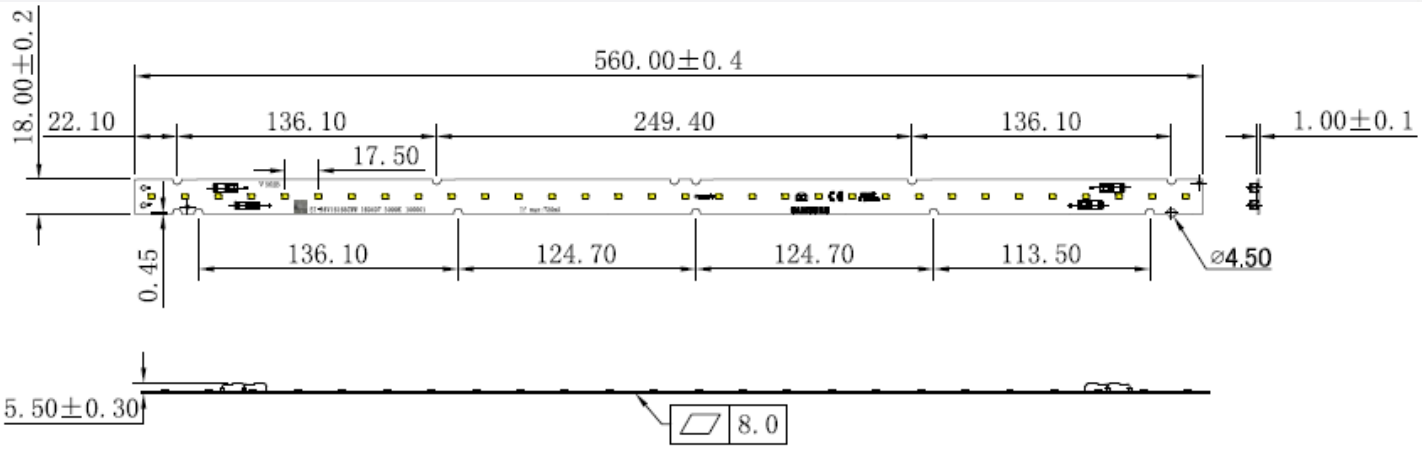
V562A

Dimension	Specification	Tolerance	Unit
Module Length	560	±0.4	mm
Module Width	18	±0.2	mm
Module Height	5.5	±0.3	mm
PCB Thickness	1.0	±0.1	mm
Module Weight	24.94	±1.5	g



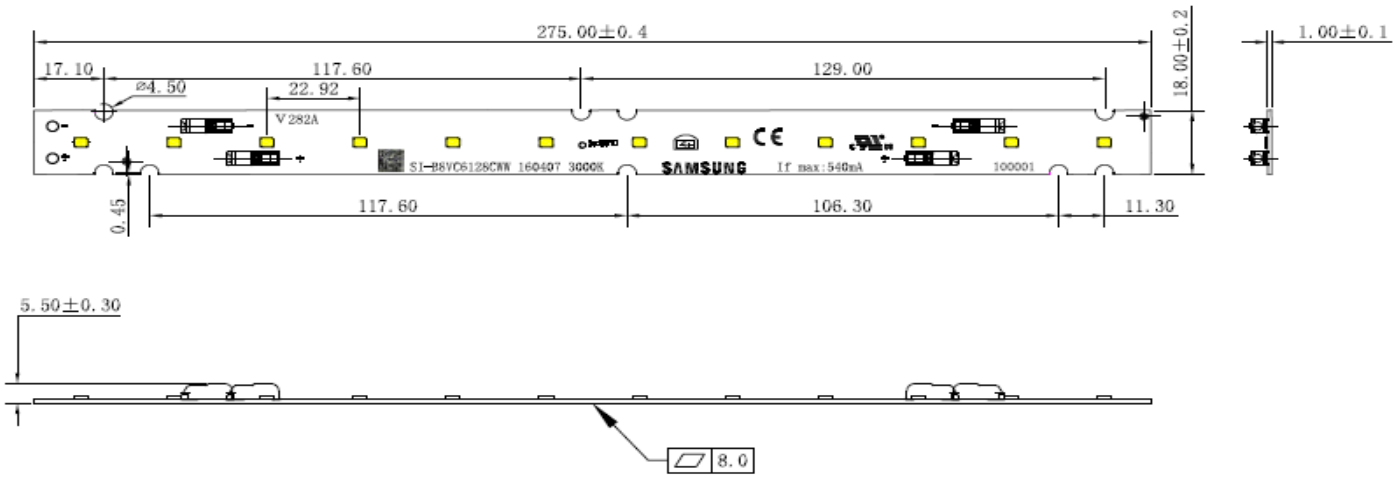
V562B

Dimension	Specification	Tolerance	Unit
Module Length	560	±0.4	mm
Module Width	18	±0.2	mm
Module Height	5.5	±0.3	mm
PCB Thickness	1.0	±0.1	mm
Module Weight	24.86	±1.5	g



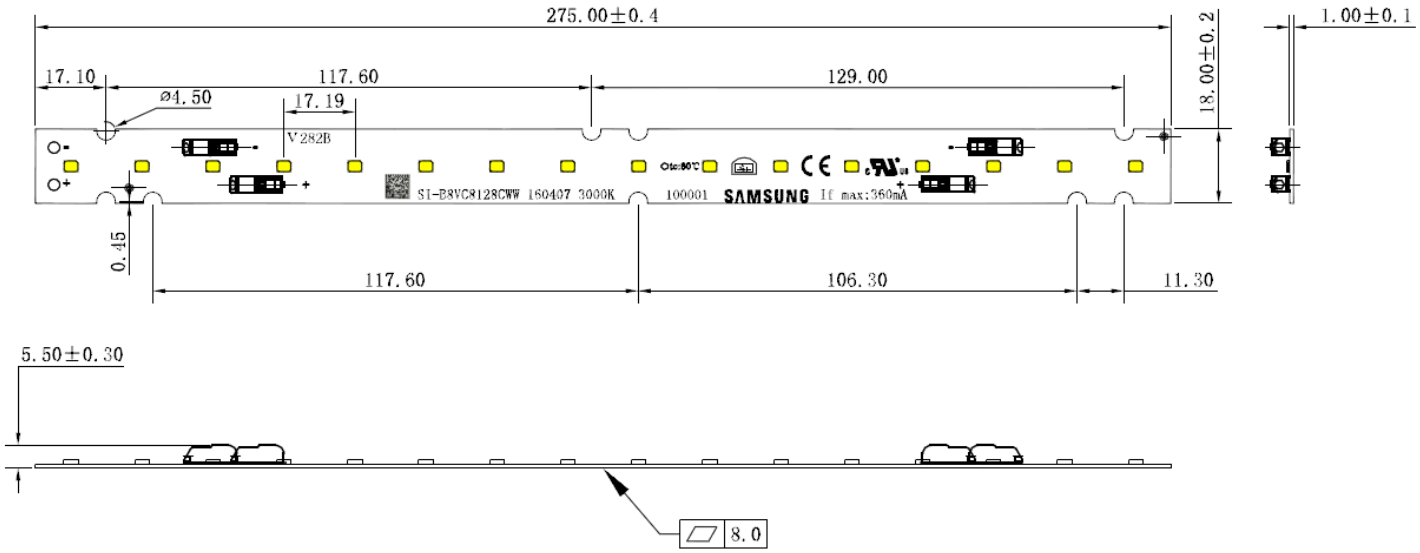
V282A

Dimension	Specification	Tolerance	Unit
Module Length	275	±0.4	mm
Module Width	18	±0.2	mm
Module Height	5.5	±0.3	mm
PCB Thickness	1.0	±0.1	mm
Module Weight	12.60	±1.5	g



V282B

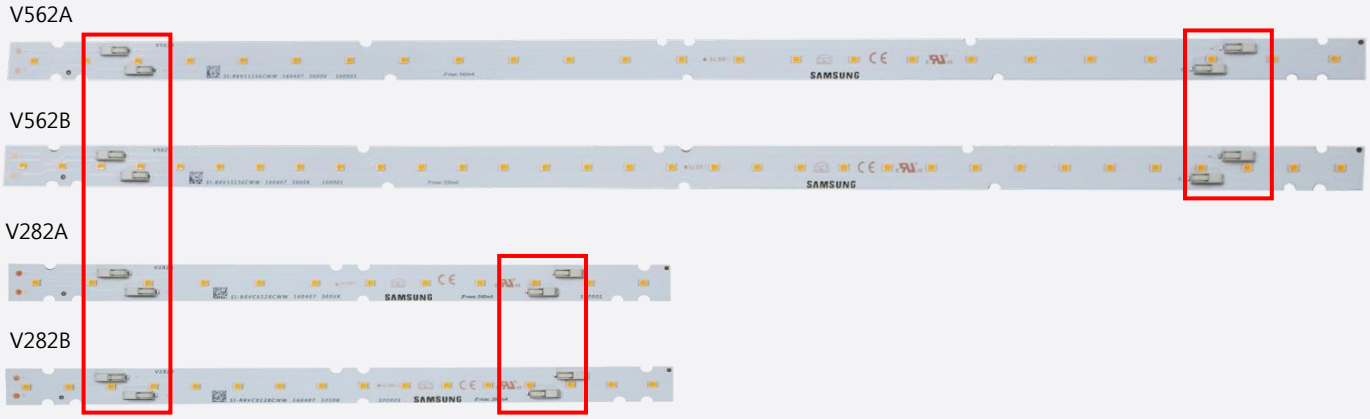
Dimension	Specification	Tolerance	Unit
Module Length	275	±0.4	mm
Module Width	18	±0.3	mm
Module Height	5.5	±0.2	mm
PCB Thickness	1.0	±0.1	mm
Module Weight	12.54	±1.5	g

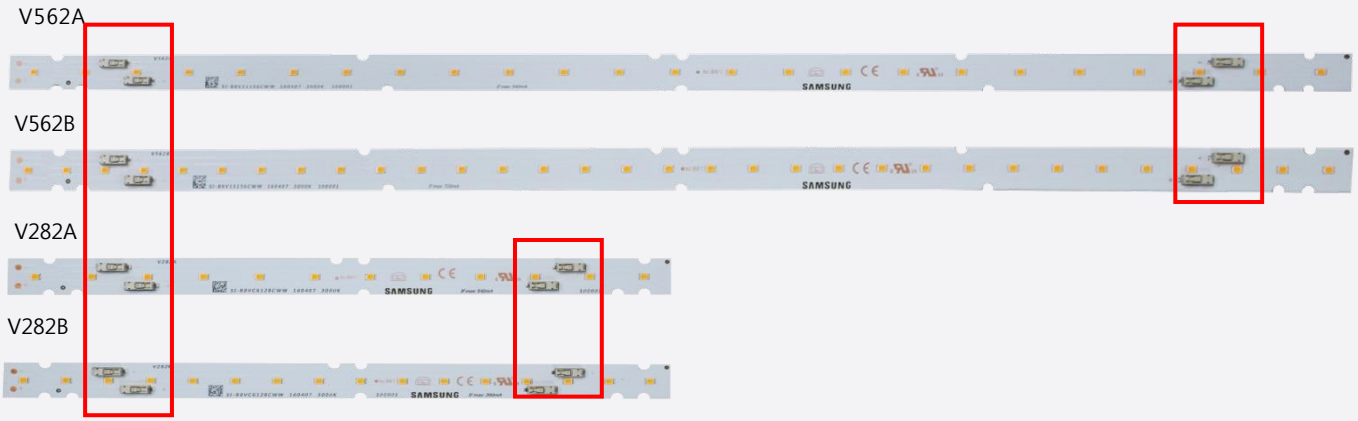


c) Assembly

Connectors on the board are provided for easy wiring with the LED driver and between modules

[Front connector]



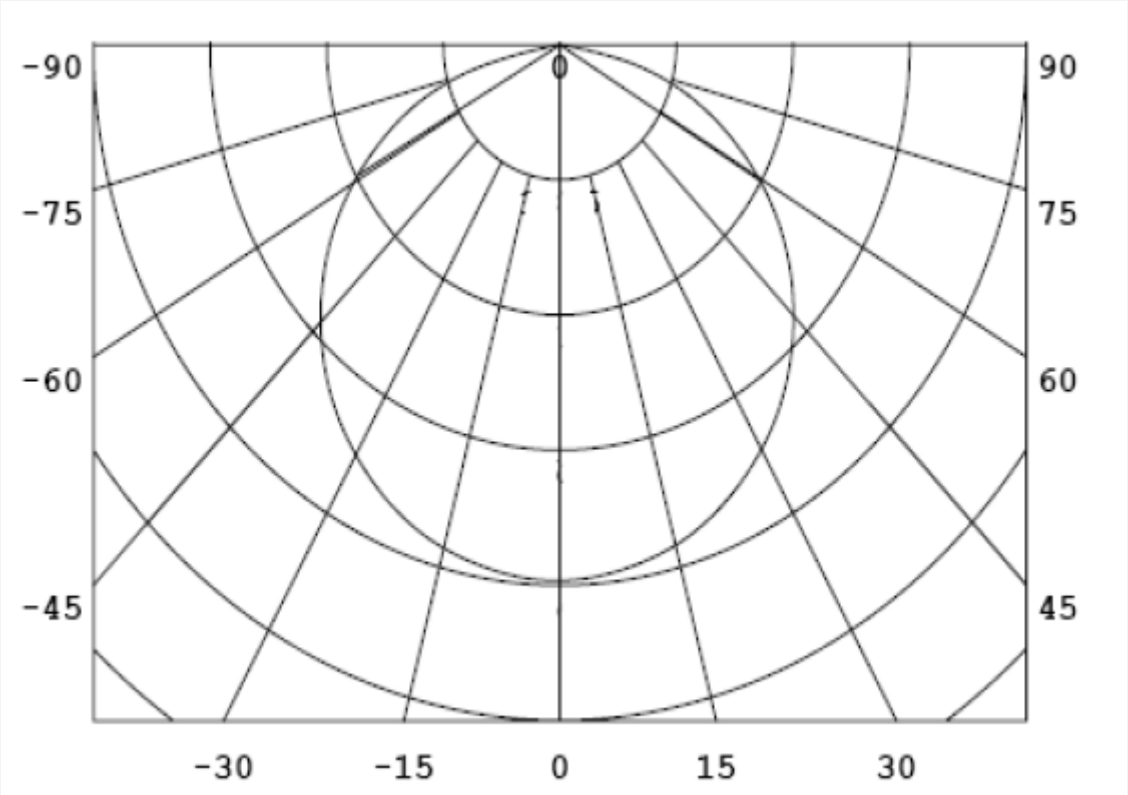


d) Structure

Item	Specification
LED	SMD2835 Middle power LED
PCB	Material: CEM-3,copper double layer
Connector	Reworkable poke-in connector type
Wire	18-22AWG; terminal strip length of 7.5-8.5mm

e) Light Distribution

Polar Intensity Diagram: Beam Angle120±5°



f) Thermal Management

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

V562A

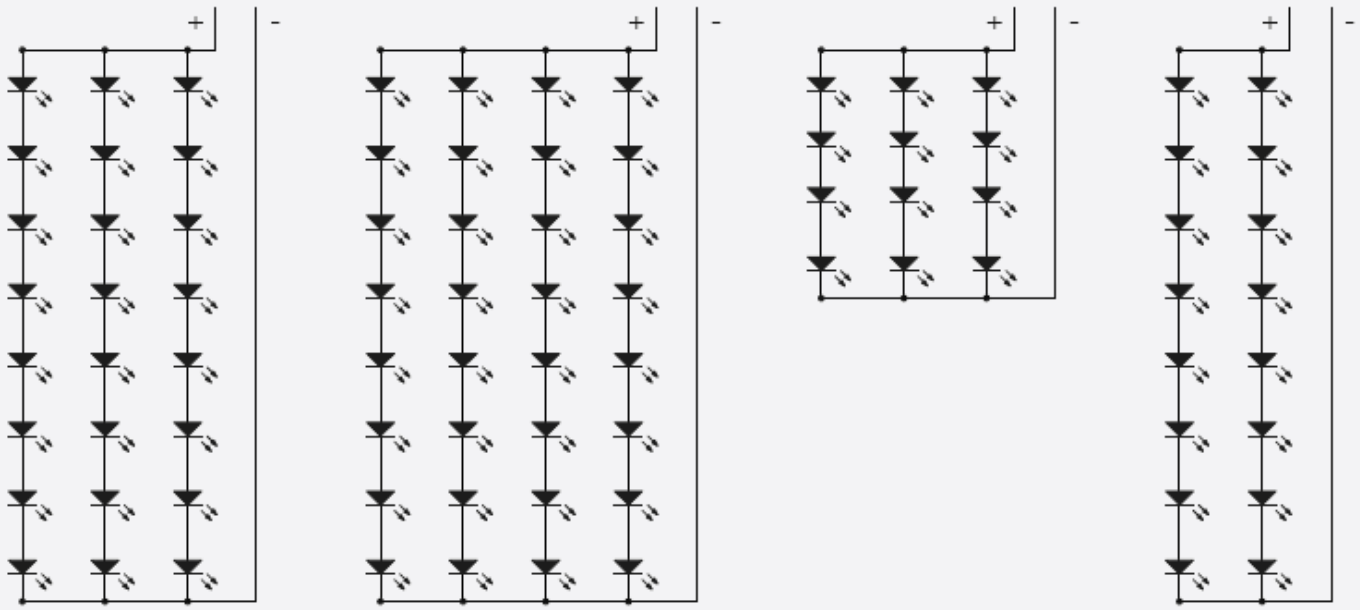
V562B

V282A

V282B

g) Schematic Circuit

V562A	V562B	V282A	V282B
8S×3P	8S×4P	4S×3P	8S×2P



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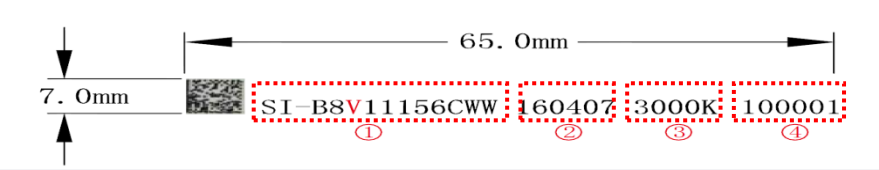
4. Certification and Declaration

Item	Compliant to	Remark
Test & Certification	CE	IEC / EN 62031, IEC / EN 62471
	ENEC	-
	VDE	-
	UL	E344519
	cUL	E344519
	Photo biological Safety(LED)	IEC / EN 62471
Declaration	RoHS	Hazardous Substance & Material
	REACH	Hazardous Substance & Material

5. Label Structure

a) Module Label

[Printing Label]



[Information of Barcode]

① Model code: SI-B8V11156CWW

V: V(3000K), U(3500K), T(4000K), R(5000K)

② Date of manufacture:

③ Color temperature:

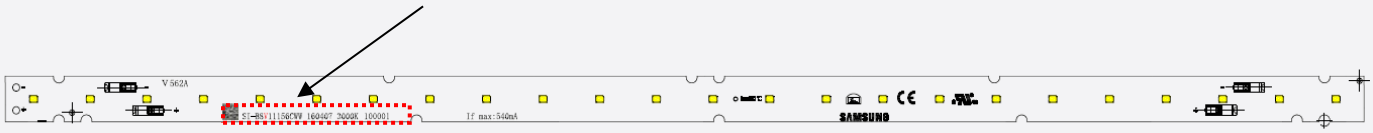
④Series number:

[QR CODE Information]

①Example: SI-B8V11156CWW YYMMDD 3000K

②27digits:Modelcode(14)+Space(1)+SMT date(6)+Space(1)+Color temperature(5)

Model CODE	SI-B8V11156CWW
QR CODE Information	SI-B8V11156CWW YYMMDD 3000K



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b) Box Label

- 100mm x 50mm

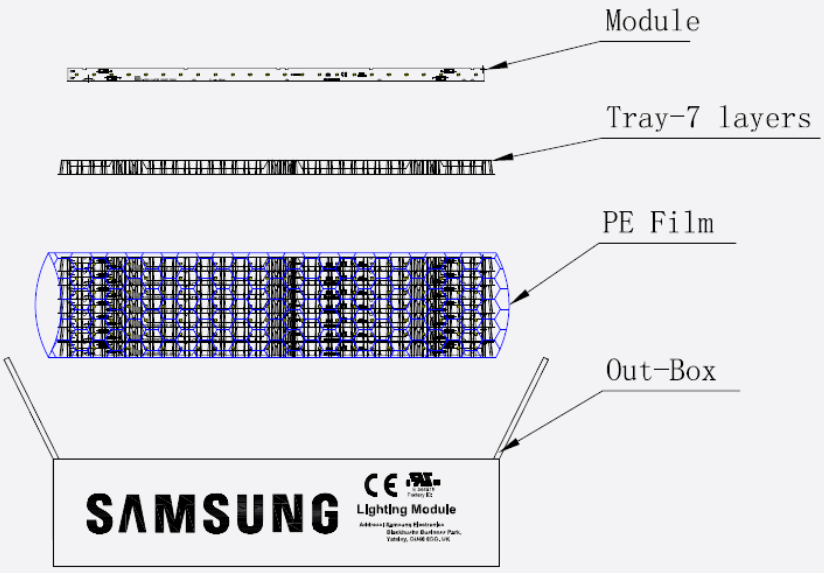
Ex)

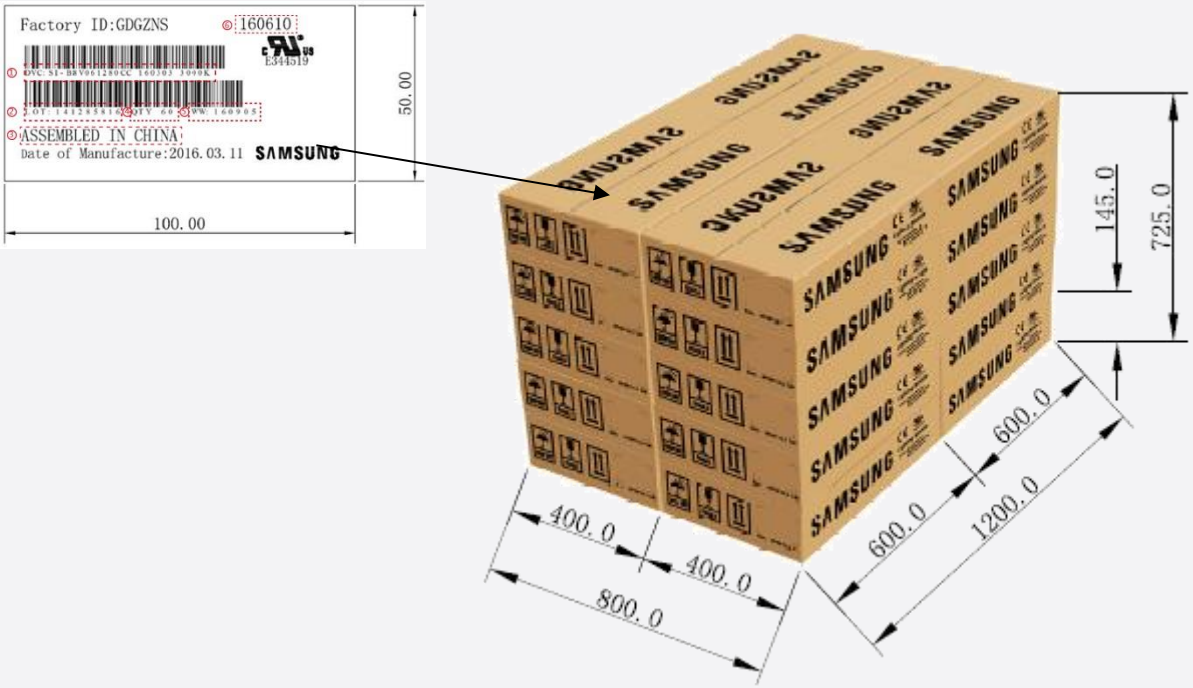
The lot number is composed of the following characters:

① Product code
② Lot ID
③ Place of origin
④ Quantity
⑤ Describe production week
⑥ Date of Issue

6. Packing Structure

ARTICLE	TRAY	BOX	PALLET	REMARKS
Quantity	40ea	280ea	5600ea	V562A,V562B
Quantity	40ea	560ea	11200ea	V282A,V282B





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.

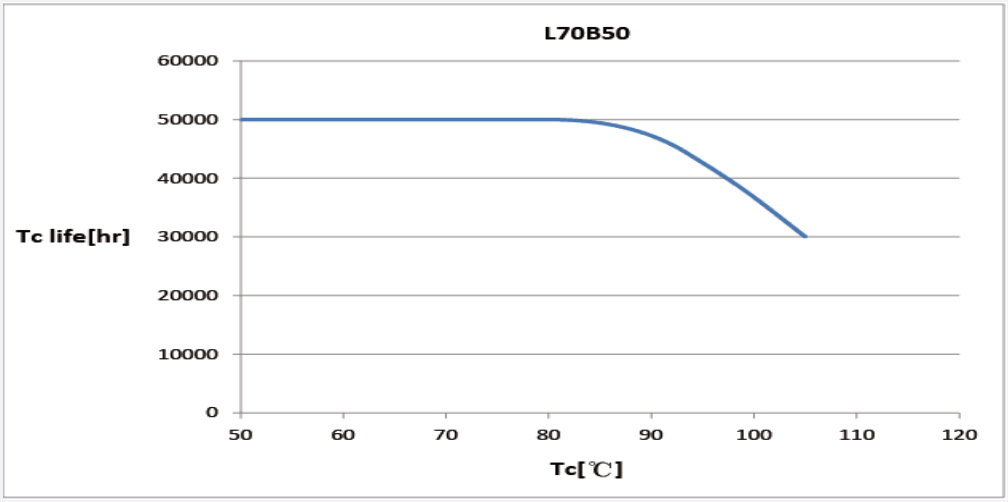
D. Static Electricity
Static electricity or surge voltage damages the LED Lighting Modules. Please keep the working
process anti-static electricity condition to prevent the Lighting from destroying, as following.
(1) Anyone who handles the unit should be well grounded.(earth ring or anti-static glove)
(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

APPENDIX 1.Tc vs Lifetime

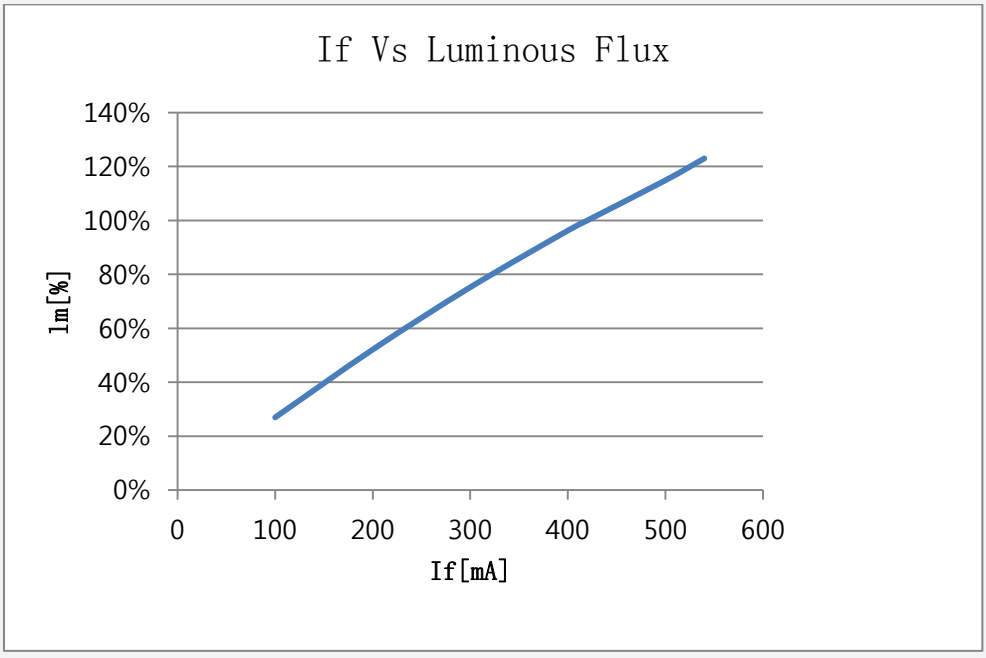
V562A, V562B, V282A, V282B



@150mA/LED

APPENDIX 2.If vs Luminous Flux

(a)V562A



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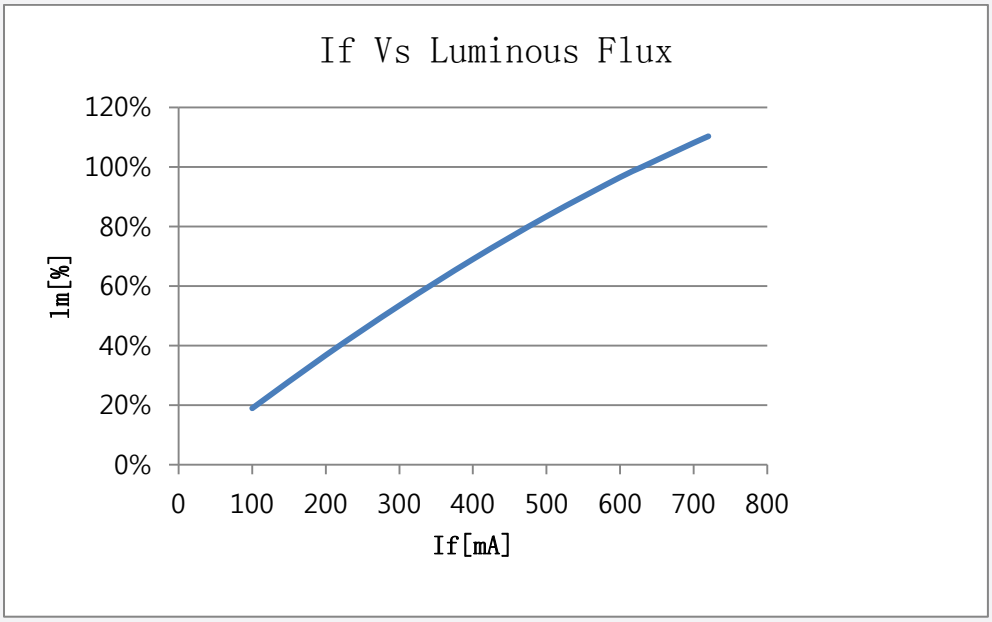
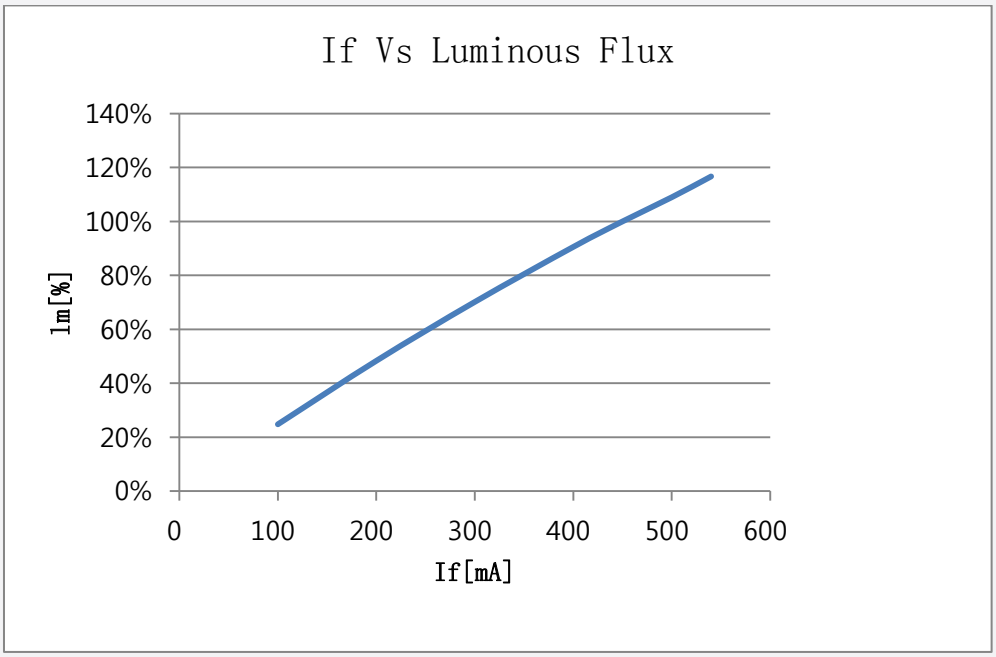
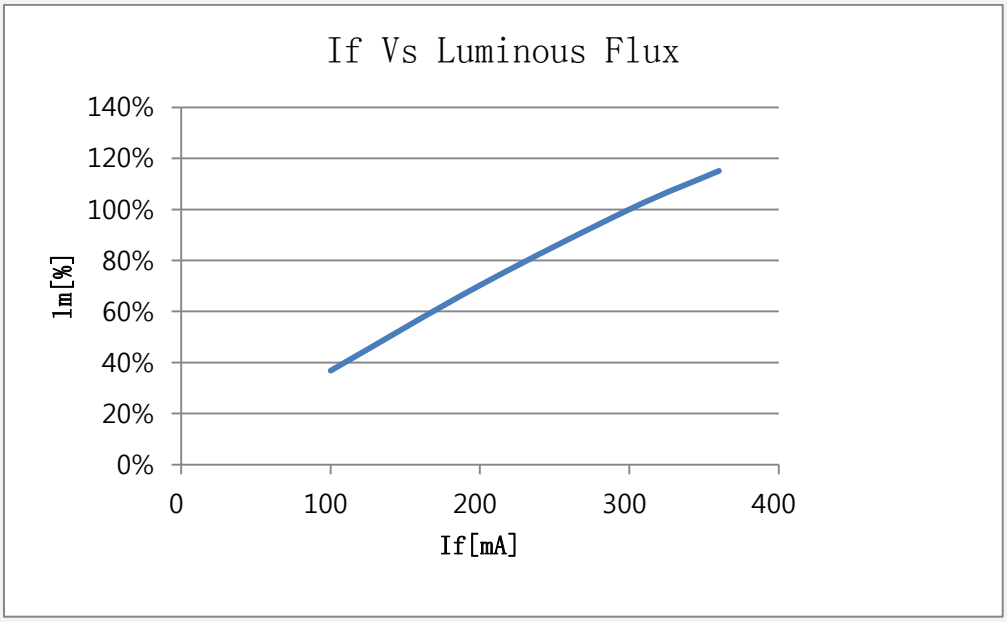
(b)V562B



(c)V282A

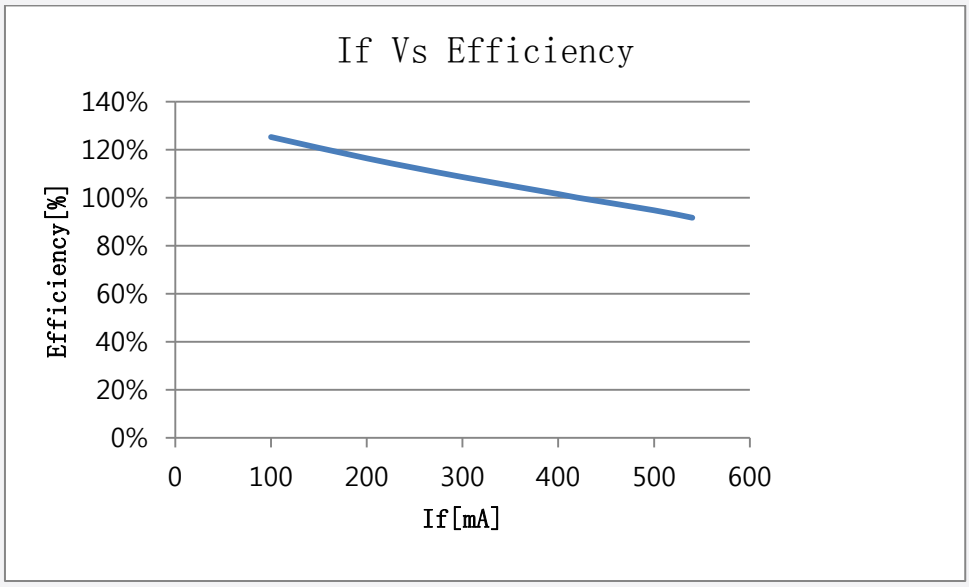


(d)V282B

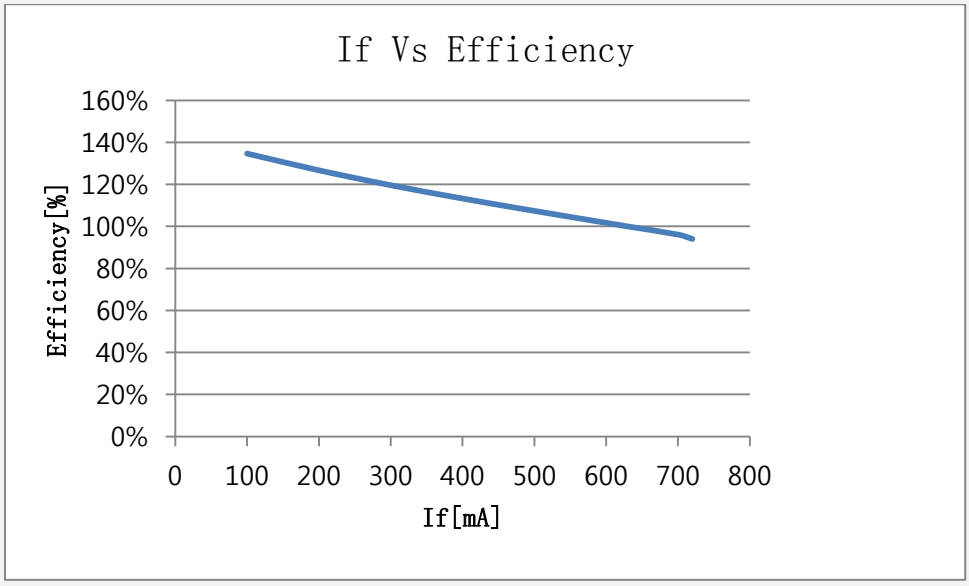


APPENDIX 3. If vs Efficiency

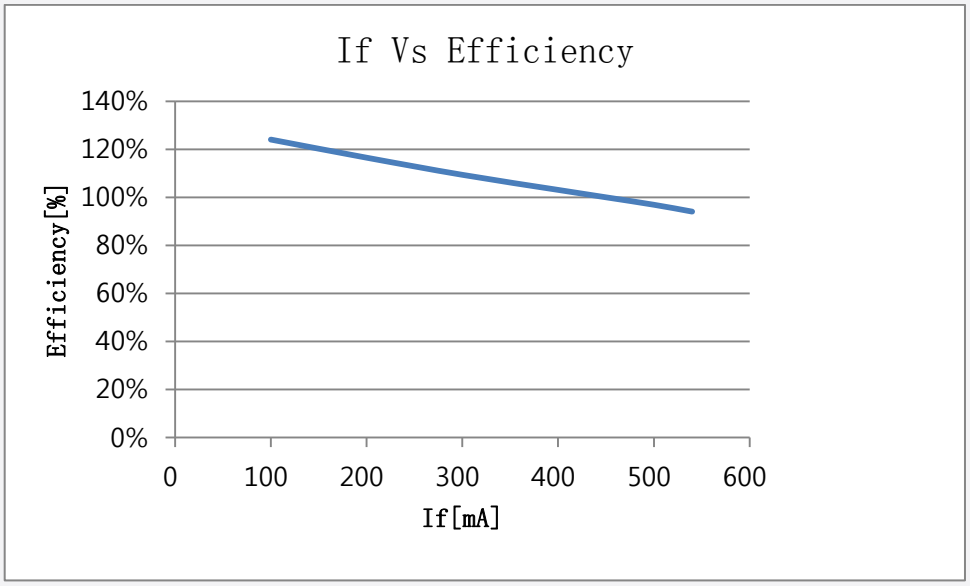
(a)V562A



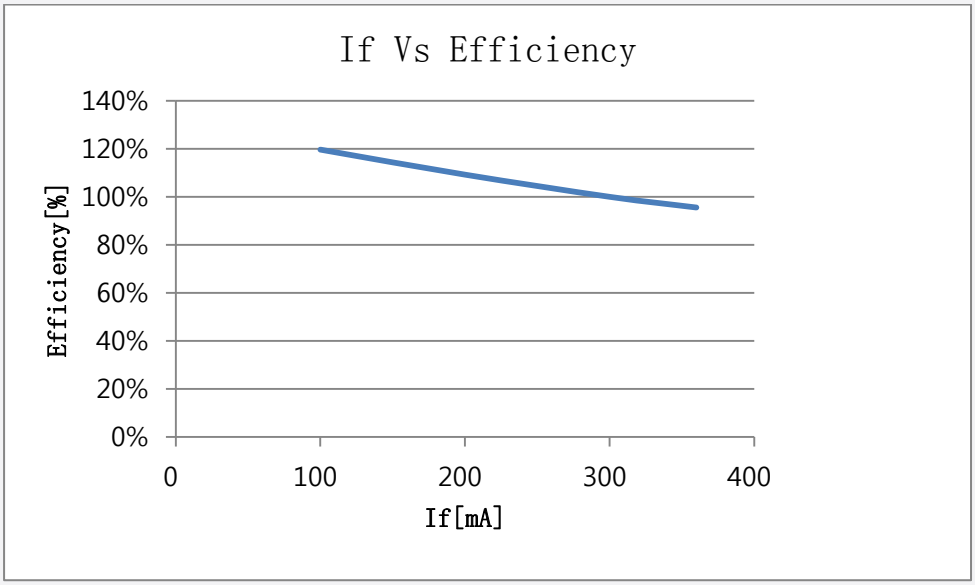
(b)V562B



(c)V282A



(d)V282B



Legal and additional information.

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