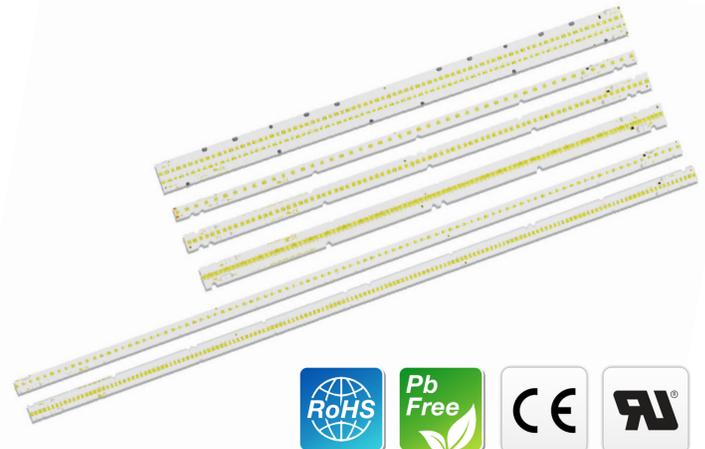


Reference Module - Value Series

The Value Series utilizes Seoul's high performing and cost effective 3528 "S" version LEDs to deliver efficacies up to 189 Lm/W at typical driving currents. The "S" version features an attached gold wire bond, providing for excellent thermal shock and anti-sulfur corrosion. In addition, this solution allows for greater uniformity of light and color while also enabling easy installation with a Zhaga compatible mounting pattern.



Applications:



Features:

- High efficacy, long life
- Industry standard mechanical attributes
- Optimized for industry standard power supplies
- 3 SDCM
- Multiple CCT option

Key Applications:

- Troffer Retrofit
- Linear lighting
- LED Panel
- Channel

Overview: SMJD-2413048C-XXS1 $I_F = 600\text{mA}$, $T_p = 45^\circ\text{C}$

CCT	CRI	Flux		Dimension	Order Code
		Min.	Typ.		
6500	80	2320	2450	560 x 18mm	SMJD-2413048C-XXS100C45A038All
5700					SMJD-2413048C-XXS100C48B038All
5000		2410	2480		SMJD-2413048C-XXS100C48C038All
4500					SMJD-2413048C-XXS100C48D038All
4000		SMJD-2413048C-XXS100C48E038All			
3500		2320	2450		SMJD-2413048C-XXS100C45F038All
3000		2260	2370		SMJD-2413048C-XXS100C37G038All
2700		2260	2330		SMJD-2413048C-XXS100C33H038All

Overview: SMJD-4826096C-XXS1 $I_F = 600\text{mA}$, $T_p = 45^\circ\text{C}$

CCT	CRI	Flux		Dimension	Order Code
		Min.	Typ.		
6500	80	4650	4900	1120 x 18mm	SMJD-4826096C-XXS100E90A038All
5700					SMJD-4826096C-XXS100E97B038All
5000		4820	4970		SMJD-4826096C-XXS100E97C038All
4500					SMJD-4826096C-XXS100E97D038All
4000		SMJD-4826096C-XXS100E97E038All			
3500		4650	4900		SMJD-4826096C-XXS100E90F038All
3000		4530	4740		SMJD-4826096C-XXS100E74G038All
2700		4530	4660		SMJD-4826096C-XXS100E66H038All

Overview: SMJD-2422080C-XXS1 $I_F = 1000\text{mA}$, $T_p = 45^\circ\text{C}$

CCT	CRI	Flux		Dimension	Order Code
		Min.	Typ.		
6500	80	3880	4080	560 x 18mm	SMJD-2422080C-XXS100E08A038AII
5700					SMJD-2422080C-XXS100E14B038AII
5000					SMJD-2422080C-XXS100E14C038AII
4500		4020	4140		SMJD-2422080C-XXS100E14D038AII
4000					SMJD-2422080C-XXS100E14E038AII
3500					SMJD-2422080C-XXS100E08F038AII
3000		3770	3950		SMJD-2422080C-XXS100D95G038AII
2700		3770	3890		SMJD-2422080C-XXS100D89H038AII

Overview: SMJD-4847160C-XXS1, SMJD-4847160C-XXSA $I_F = 1050\text{mA}$, $T_p = 45^\circ\text{C}$

CCT	CRI	Flux		Dimension	Order Code
		Min.	Typ.		
6500	80	8140	8560	S1 560 x 39mm SA 1120 x 18mm	SMJD-4847160C-XXS100I56A038AII
5700					SMJD-4847160C-XXS100I70B038AII
5000					SMJD-4847160C-XXS100I70C038AII
4500		8420	8700		SMJD-4847160C-XXS100I70D038AII
4000					SMJD-4847160C-XXS100I70E038AII
3500					SMJD-4847160C-XXS100I56F038AII
3000		7920	8290		SMJD-4847160C-XXS100I29G038AII
2700		7920	8150		SMJD-4847160C-XXS100I15H038AII

*Replace S1 in order code for SA

Overview: SMJD-2431112C-XXS1 $I_F = 1420\text{mA}$, $T_p = 45^\circ\text{C}$

CCT	CRI	Flux		Dimension	Order Code
		Min.	Typ.		
6500	80	5510	5790	560 X 18mm	SMJD-2431112C-XXS100F79A038AII
5700					SMJD-2431112C-XXS100F89B038AII
5000					SMJD-2431112C-XXS100F89C038AII
4500		5700	5890		SMJD-2431112C-XXS100F89D038AII
4000					SMJD-2431112C-XXS100F89E038AII
3500					SMJD-2431112C-XXS100F79F038AII
3000		5360	5610		SMJD-2431112C-XXS100F61G038AII
2700		5360	5520		SMJD-2431112C-XXS100F52H038AII

Notes:

[1] Above data tested with constant typical current at $T_p = 45^\circ\text{C}$.

[2] Φ_v is the total luminous flux output measured with an integrated sphere, tolerance is 7%.

[3] Correlated Color Temperature is derived from the CIE 1931 Chromaticity diagram.

[4] To use the module properly, recommend to drive the module by a Constant Current Source (CCS). But the Maximum output voltage of the CCS should be limited by referring this sheet.

Electro Optical Characteristics: SMJD-2413048C-XXS1 $I_F = 600\text{mA}, T_p = 45^\circ\text{C}$

Parameter	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Luminous Efficiency	LPW	188			Lm/W	B, C, D, E rank
		186				A, F rank
		180				G rank
		177				H rank
Correlated Color Temperature ^[3]	CCT	6000	6500	7000	K	A rank
		5300	5700	6000		B rank
		4700	5000	5300		C rank
		4200	4500	4700		D rank
		3700	4000	4200		E rank
		3200	3500	3700		F rank
		2900	3000	3200		G rank
		2600	2700	2900		H rank
CRI	Ra	80				
Input Voltage	V_F	21	22	23	V_{DC}	@600mA
Power Consumption	P	12	13.2	14	W	

Electro Optical Characteristics: SMJD-4826096C-XXS1 $I_F = 600\text{mA}, T_p = 45^\circ\text{C}$

Parameter	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Luminous Efficiency	LPW	186			Lm/W	B, C, D, E rank
		184				A, F rank
		178				G rank
		175				H rank
Correlated Color Temperature ^[3]	CCT	6000	6500	7000	K	A rank
		5300	5700	6000		B rank
		4700	5000	5300		C rank
		4200	4500	4700		D rank
		3700	4000	4200		E rank
		3200	3500	3700		F rank
		2900	3000	3200		G rank
		2600	2700	2900		H rank
CRI	Ra	80				
Input Voltage	V_F	43	44.5	46	V_{DC}	@600mA
Power Consumption	P	25	26.7	28	W	

Electro Optical Characteristics: SMJD-2422080C-XXS1 $I_F = 1000\text{mA}$, $T_p = 45^\circ\text{C}$

Parameter	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Luminous Efficiency	LPW	188			Lm/W	B, C, D, E rank
		185				A, F rank
		180				G rank
		177				H rank
Correlated Color Temperature ^[3]	CCT	6000	6500	7000	K	A rank
		5300	5700	6000		B rank
		4700	5000	5300		C rank
		4200	4500	4700		D rank
		3700	4000	4200		E rank
		3200	3500	3700		F rank
		2900	3000	3200		G rank
		2600	2700	2900		H rank
CRI	Ra	80				
Input Voltage	V_F	21	22	23	V_{DC}	@1000mA
Power Consumption	P	21	22	23	W	

Electro Optical Characteristics: SMJD-4847160C-XXS1, SMJD-4847160C-XXSA $I_F = 1050\text{mA}$, $T_p = 45^\circ\text{C}$

Parameter	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Luminous Efficiency	LPW	184			Lm/W	B, C, D, E rank
		181				A, F rank
		175				G rank
		172				H rank
Correlated Color Temperature ^[3]	CCT	6000	6500	7000	K	A rank
		5300	5700	6000		B rank
		4700	5000	5300		C rank
		4200	4500	4700		D rank
		3700	4000	4200		E rank
		3200	3500	3700		F rank
		2900	3000	3200		G rank
		2600	2700	2900		H rank
CRI	Ra	80				
Input Voltage	V_F	44	45	46	V_{DC}	@1050mA
Power Consumption	P	46	47.3	49	W	

Electro Optical Characteristics: SMJD-243112C-XXS1 $I_F = 1420\text{mA}$, $T_p = 45^\circ\text{C}$

Parameter	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Luminous Efficiency	LPW		189		Lm/W	B, C, D, E rank
			185			A, F rank
			180			G rank
			177			H rank
Correlated Color Temperature ^[3]	CCT	6000	6500	7000	K	A rank
		5300	5700	6000		B rank
		4700	5000	5300		C rank
		4200	4500	4700		D rank
		3700	4000	4200		E rank
		3200	3500	3700		F rank
		2900	3000	3200		G rank
		2600	2700	2900		H rank
CRI	Ra	80				
Input Voltage	V_F	21	22	23	V_{DC}	@1420mA
Power Consumption	P	29	31.2	33	W	

Notes:

[1] Above data tested with constant typical current at $T_p = 45^\circ\text{C}$.

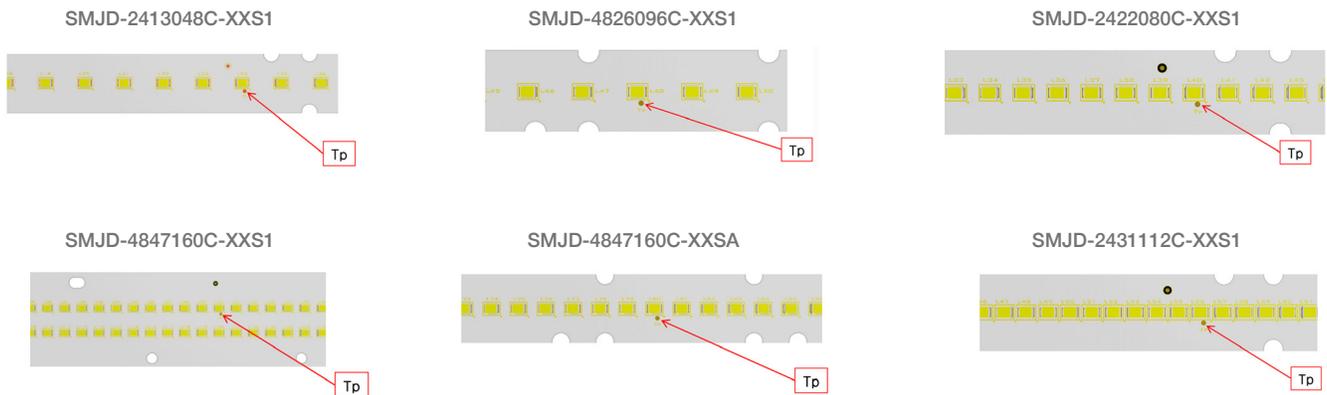
[2] Φ_v is the total luminous flux output measured with an integrated sphere, tolerance is 7%.

[3] Correlated Color Temperature is derived from the CIE 1931 Chromaticity diagram.

[4] To use the module properly, recommend to drive the module by a Constant Current Source (CCS). But the Maximum output voltage of the CCS should be limited by referring this sheet.

Absolute Maximum Operating Specification: $T_p = 45^\circ\text{C}$

Model	Parameter	Symbol	Unit	Value	Remark
SMJD-2413048C-XXS1	Power Consumption	P	W	18.5	Typical VF of module is around 22VDC and VF_MAX is around 23VDC, respectively.
	Forward Voltage	V_F	V	22	
	Driving Current ⁽²⁾	I_F	mA	840	
SMJD-4826096C-XXS1	Power Consumption	P	W	37	Typical VF of module is around 44.5VDC and VF_MAX is around 46VDC, respectively.
	Forward Voltage	V_F	V	44.5	
	Driving Current ⁽²⁾	I_F	mA	840	
SMJD-2422080C-XXS1	Power Consumption	P	W	30	Typical VF of module is around 22VDC and VF_MAX is around 23VDC, respectively.
	Forward Voltage	V_F	V	22	
	Driving Current ⁽²⁾	I_F	mA	1400	
SMJD-4847160C-XXS1	Power Consumption	P	W	63	Typical VF of module is around 45VDC and VF_MAX is around 46VDC, respectively.
	Forward Voltage	V_F	V	45	
	Driving Current ⁽²⁾	I_F	mA	1400	
SMJD-4847160C-XXSA	Power Consumption	P	W	63	Typical VF of module is around 45VDC and VF_MAX is around 46VDC, respectively.
	Forward Voltage	V_F	V	45	
	Driving Current ⁽²⁾	I_F	mA	1400	
SMJD-2431112C-XXS1	Power Consumption	P	W	43	Typical VF of module is around 22VDC and VF_MAX is around 23VDC, respectively.
	Forward Voltage	V_F	V	22	
	Driving Current ⁽²⁾	I_F	mA	2000	
All	Operating Temperature ⁽³⁾	T_p	$^\circ\text{C}$	-40 ~ 85	Reference point
	Storage Temperature	T_{ctg}	$^\circ\text{C}$	-40 ~ 100	With no power
	ESD Sensitivity	-	KV	± 8 ± 4	IEC Air HBM

Illustration: How to predict components temperature

Notes:

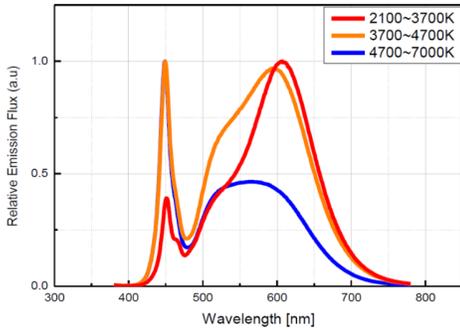
- [1] All guarantee are based on the Absolute Maximum Ratings listed.
- [2] Please use a Constant Current Source (CCS) to drive the module, the typical V_F of each module is listed in remark section.
- [3] Operating temperature was tested at the assigned T_c point on the PCB.
- [4] To ensure the module works properly, DO NOT let T_p rise above 85°C .

Relative Spectral Distribution

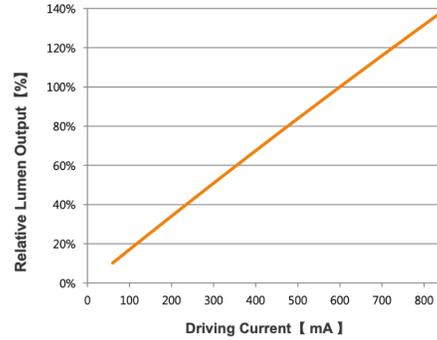
• Relative Spectral Distribution vs. Wavelength

SMJD-2413048C-XXS1 + SMJD-4826096C-XXS1

Relative Spectral Distribution vs. Wavelength Characteristic

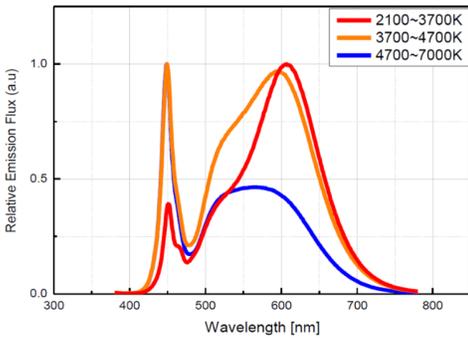


Forward Current vs. Relative Luminous Flux, T_p=45°C

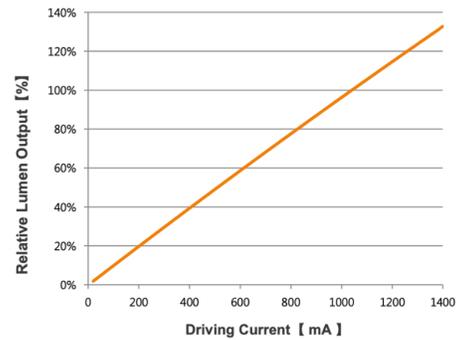


SMJD-4847160C-XXS1 + SMJD-4847160C-XXSA

Relative Spectral Distribution vs. Wavelength Characteristic

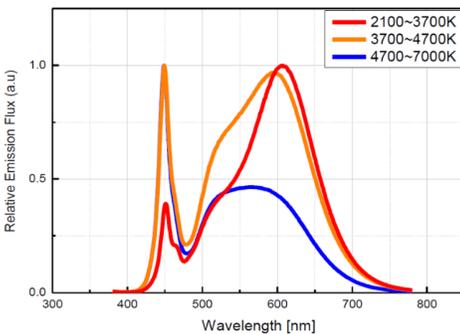


Forward Current vs. Relative Luminous Flux, T_p=45°C

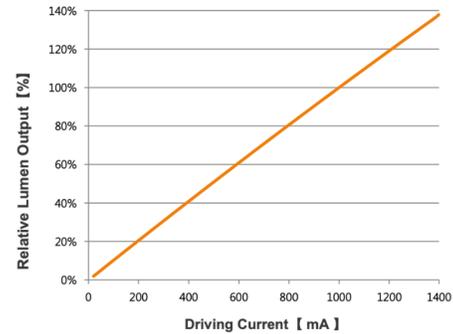


SMJD-2422080C-XXS1

Relative Spectral Distribution vs. Wavelength Characteristic

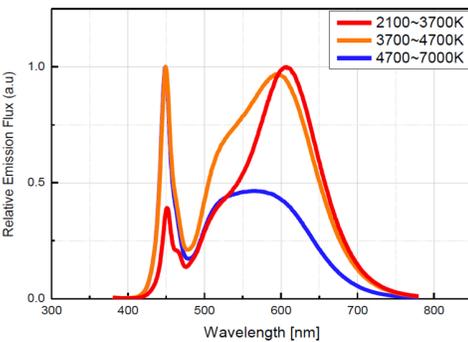


Forward Current vs. Relative Luminous Flux, T_p=45°C

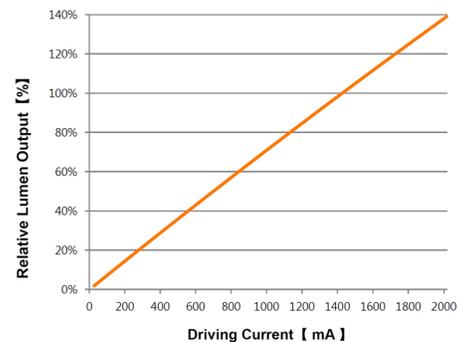


SMJD-243112C-XXS1

Relative Spectral Distribution vs. Wavelength Characteristic

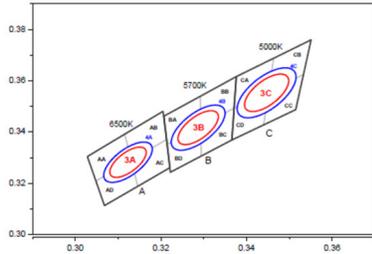


Forward Current vs. Relative Luminous Flux, T_p=45°C



Color Bin Structure

• CIE Chromaticity Diagrams



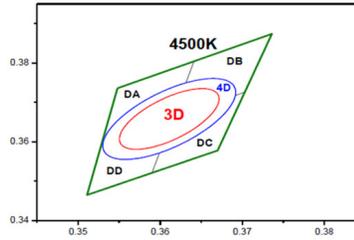
6500K 3Step		5700K 3Step		5000K 3Step	
3A		3B		3C	
Center point	0.3123 : 0.3282	Center point	0.3287 : 0.3417	Center point	0.3447 : 0.3553
Major Axis a	0.00669	Major Axis a	0.00746	Major Axis a	0.00822
Minor Axis b	0.00285	Minor Axis b	0.00320	Minor Axis b	0.00354
Ellipse		Ellipse		Ellipse	
Rotation Angle	58.57	Rotation Angle	59.09	Rotation Angle	59.62

6500K 4Step		5700K 4Step		5000K 4Step	
4A		4B		4C	
Center point	0.3123 : 0.3282	Center point	0.3287 : 0.3417	Center point	0.3447 : 0.3553
Major Axis a	0.00892	Major Axis a	0.00995	Major Axis a	0.01096
Minor Axis b	0.00380	Minor Axis b	0.00427	Minor Axis b	0.00472
Ellipse		Ellipse		Ellipse	
Rotation Angle	58.57	Rotation Angle	59.09	Rotation Angle	59.62

AA		AB		AC		AD	
CIE X	CIE Y						
0.3028	0.3304	0.3115	0.3393	0.3131	0.329	0.3048	0.3209
0.3048	0.3209	0.3131	0.329	0.3146	0.3187	0.3068	0.3113
0.3131	0.329	0.3213	0.3371	0.3221	0.3261	0.3146	0.3187
0.3115	0.3393	0.3205	0.3481	0.3213	0.3371	0.3131	0.329

BA		BB		BC		BD	
CIE X	CIE Y						
0.3207	0.3462	0.3292	0.3539	0.3293	0.3423	0.3215	0.3353
0.3215	0.3353	0.3293	0.3423	0.3294	0.3306	0.3222	0.3243
0.3293	0.3423	0.3371	0.3493	0.3366	0.3369	0.3294	0.3306
0.3292	0.3539	0.3376	0.3616	0.3371	0.3493	0.3293	0.3423

CA		CB		CC		CD	
CIE X	CIE Y						
0.3376	0.3616	0.3463	0.3687	0.3452	0.3558	0.3371	0.3493
0.3371	0.3493	0.3452	0.3558	0.344	0.3428	0.3366	0.3369
0.3452	0.3558	0.3533	0.3624	0.3514	0.3487	0.344	0.3428
0.3463	0.3687	0.3551	0.376	0.3533	0.3624	0.3452	0.3558

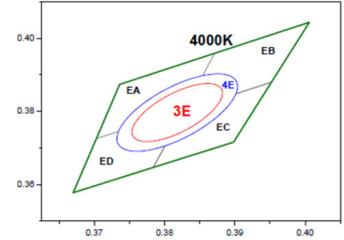


4500K 3Step	
3D	
Center point	0.3611, 0.3658
Major Axis a	0.009
Minor Axis b	0.0039
Ellipse	
Rotation Angle	55

4500K 4Step	
4D	
Center point	0.3611, 0.3658
Major Axis a	0.012
Minor Axis b	0.0052
Ellipse	
Rotation Angle	55

DA		DB	
CIE X	CIE Y	CIE X	CIE Y
0.3548	0.3736	0.3641	0.3804
0.3530	0.3601	0.3616	0.3663
0.3616	0.3663	0.3703	0.3726
0.3641	0.3804	0.3736	0.3874

DC		DD	
CIE X	CIE Y	CIE X	CIE Y
0.3616	0.3663	0.3530	0.3601
0.3590	0.3521	0.3511	0.3465
0.3670	0.3578	0.3590	0.3521
0.3703	0.3726	0.3616	0.3663

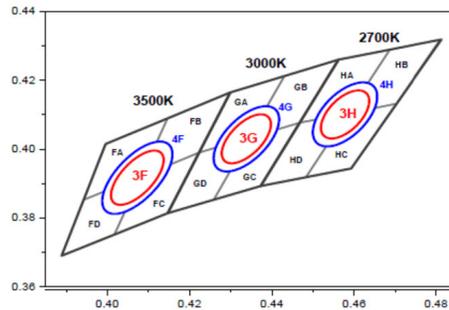


4000K 3Step	
3E	
Center point	0.3818 : 0.3797
Major Axis a	0.00939
Minor Axis b	0.00402
Ellipse	
Rotation Angle	53.72

4000K 4Step	
4E	
Center point	0.3818 : 0.3797
Major Axis a	0.01252
Minor Axis b	0.00536
Ellipse	
Rotation Angle	53.72

EA		EB	
CIE X	CIE Y	CIE X	CIE Y
0.3736	0.3874	0.3871	0.3959
0.3703	0.3726	0.3828	0.3803
0.3828	0.3803	0.3952	0.388
0.3871	0.3959	0.4006	0.4044

EC		ED	
CIE X	CIE Y	CIE X	CIE Y
0.3828	0.3803	0.3703	0.3726
0.3784	0.3647	0.367	0.3578
0.3898	0.3716	0.3784	0.3647
0.3952	0.388	0.3828	0.3803



3500K 3Step		3000K 3Step		2700K 3Step	
3 Step		3 Step		3 Step	
Center point	0.4073 : 0.3917	Center point	0.4338 : 0.4030	Center point	0.4578 : 0.4101
Major Axis a	0.00927	Major Axis a	0.00834	Major Axis a	0.00810
Minor Axis b	0.00414	Minor Axis b	0.00408	Minor Axis b	0.00420
Ellipse		Ellipse		Ellipse	
Rotation Angle	54.00	Rotation Angle	53.22	Rotation Angle	53.70

3500K 4Step		3000K 4Step		2700K 4Step	
4 Step		4 Step		4 Step	
Center point	0.4073 : 0.3917	Center point	0.4338 : 0.4030	Center point	0.4578 : 0.4101
Major Axis a	0.01236	Major Axis a	0.01112	Major Axis a	0.01080
Minor Axis b	0.00552	Minor Axis b	0.00544	Minor Axis b	0.00560
Ellipse		Ellipse		Ellipse	
Rotation Angle	54.00	Rotation Angle	53.22	Rotation Angle	53.70

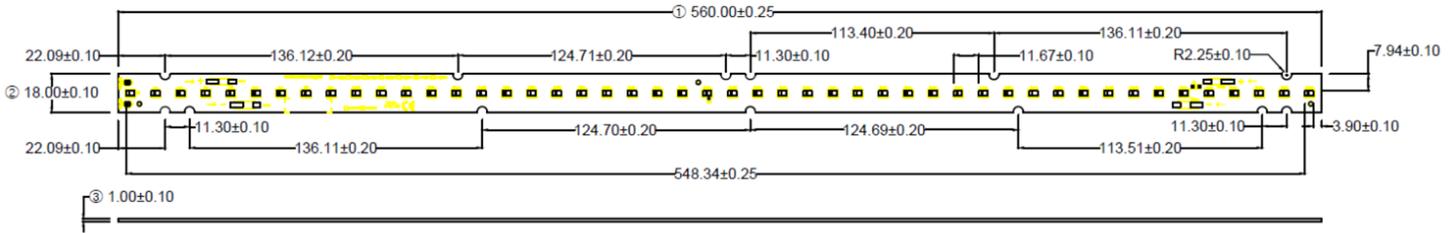
FA		FB		FC		FD	
CIE X	CIE Y						
0.3996	0.4015	0.4146	0.4089	0.4082	0.392	0.3643	0.3853
0.3943	0.3853	0.4082	0.392	0.4017	0.3751	0.3889	0.369
0.4082	0.392	0.4223	0.399	0.4147	0.3814	0.4017	0.3751
0.4146	0.4089	0.4299	0.4165	0.4223	0.399	0.4082	0.392

GA		GB		GC		GD	
CIE X	CIE Y						
0.4299	0.4165	0.443	0.4212	0.4345	0.4033	0.4223	0.399
0.4223	0.399	0.4345	0.4033	0.4259	0.3853	0.4147	0.3814
0.4345	0.4033	0.4488	0.4077	0.4373	0.3893	0.4259	0.3853
0.443	0.4212	0.4562	0.426	0.4488	0.4077	0.4345	0.4033

HA		HB		HC		HD	
CIE X	CIE Y						
0.4562	0.426	0.4687	0.4289	0.4585	0.4104	0.4468	0.4077
0.4468	0.4077	0.4585	0.4104	0.4483	0.3919	0.4373	0.3893
0.4585	0.4104	0.4703	0.4132	0.4593	0.3844	0.4483	0.3919
0.4687	0.4289	0.481	0.4319	0.4703	0.4132	0.4585	0.4104

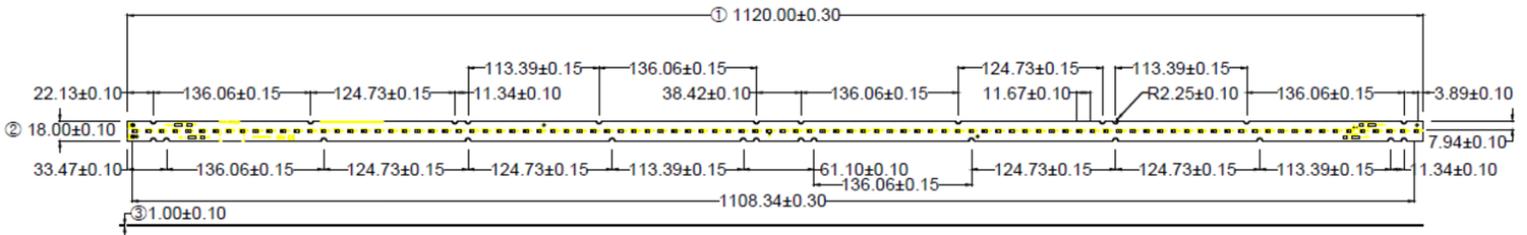
Mechanical Dimensions

SMJD-2413048C-XXS1



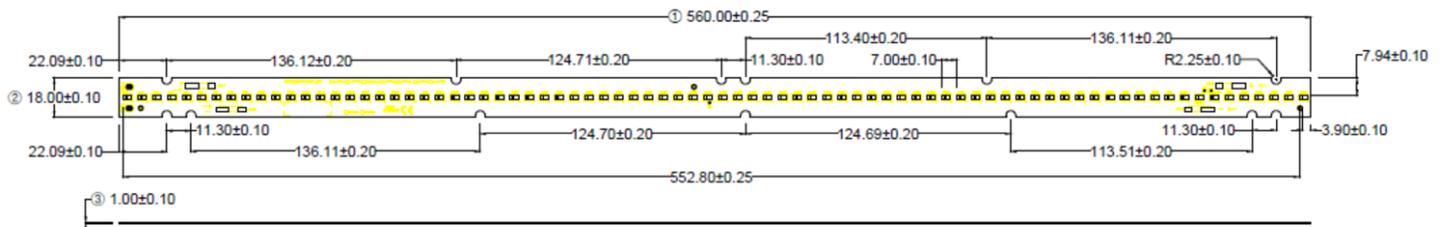
Dimension	Specification	Tolerance	Unit
Module Length	560	±0.25	mm
Module Width	18	±0.1	
PCB Thickness	1.0	±0.1	

SMJD-4826096C-XXS1



Dimension	Specification	Tolerance	Unit
Module Length	1120	±0.3	mm
Module Width	18	±0.1	
PCB Thickness	1.0	±0.1	

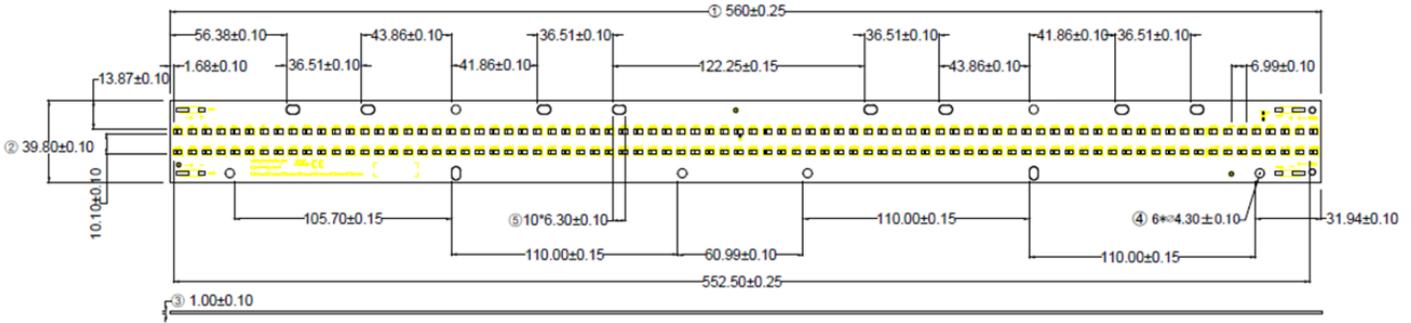
SMJD-2422080C-XXS1



Dimension	Specification	Tolerance	Unit
Module Length	560	±0.25	mm
Module Width	18	±0.1	
PCB Thickness	1.0	±0.1	

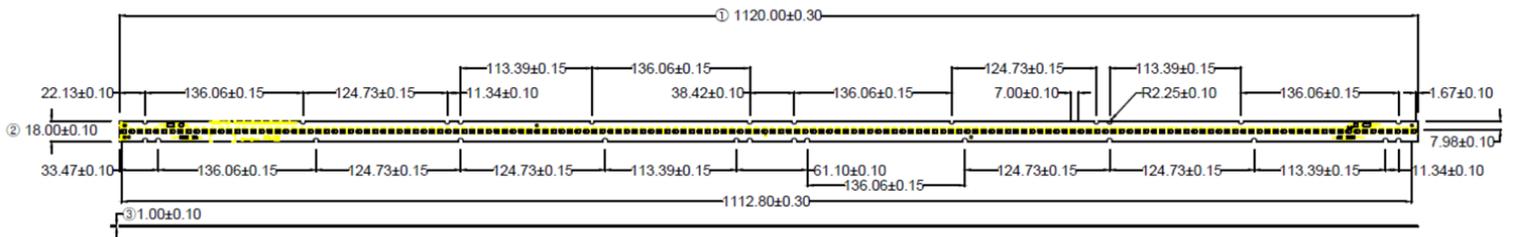
Mechanical Dimensions

SMJD-4847160C-XXS1



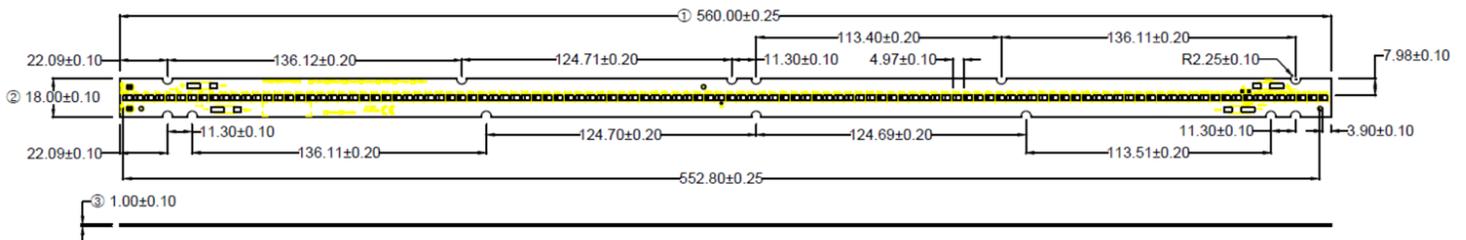
Dimension	Specification	Tolerance	Unit
Module Length	560	±0.25	mm
Module Width	39	±0.1	
PCB Thickness	1.0	±0.1	

SMJD-4847160C-XXSA



Dimension	Specification	Tolerance	Unit
Module Length	1120	±0.3	mm
Module Width	18	±0.1	
PCB Thickness	1.0	±0.1	

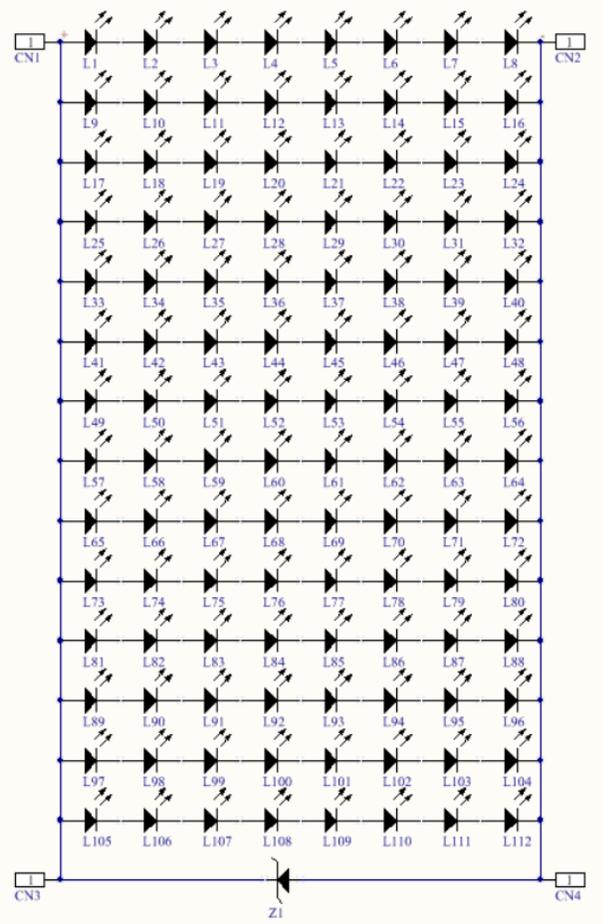
SMJD-243112C-XXS1



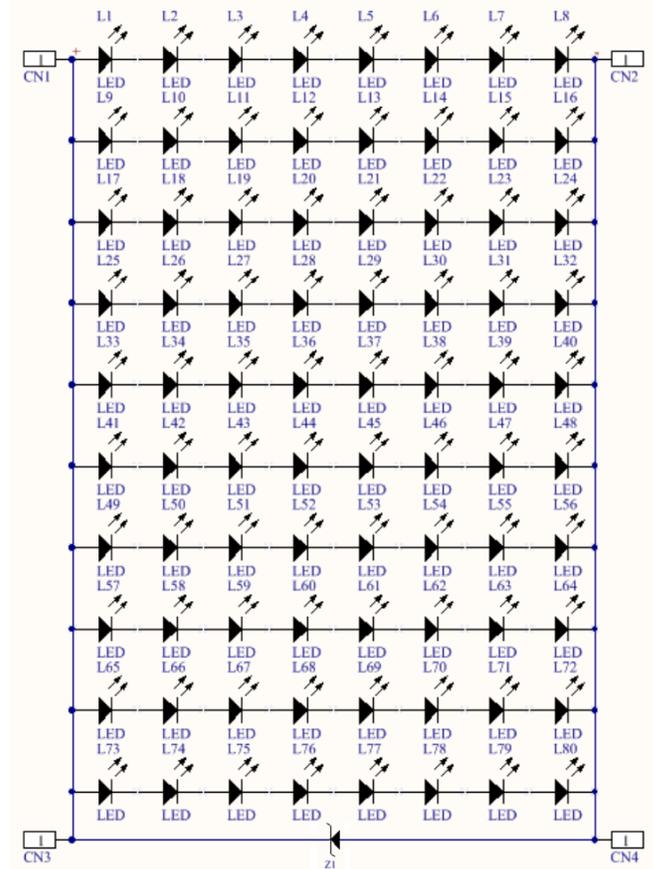
Dimension	Specification	Tolerance	Unit
Module Length	560	±0.25	mm
Module Width	18	±0.1	
PCB Thickness	1.0	±0.1	

Circuit Diagrams

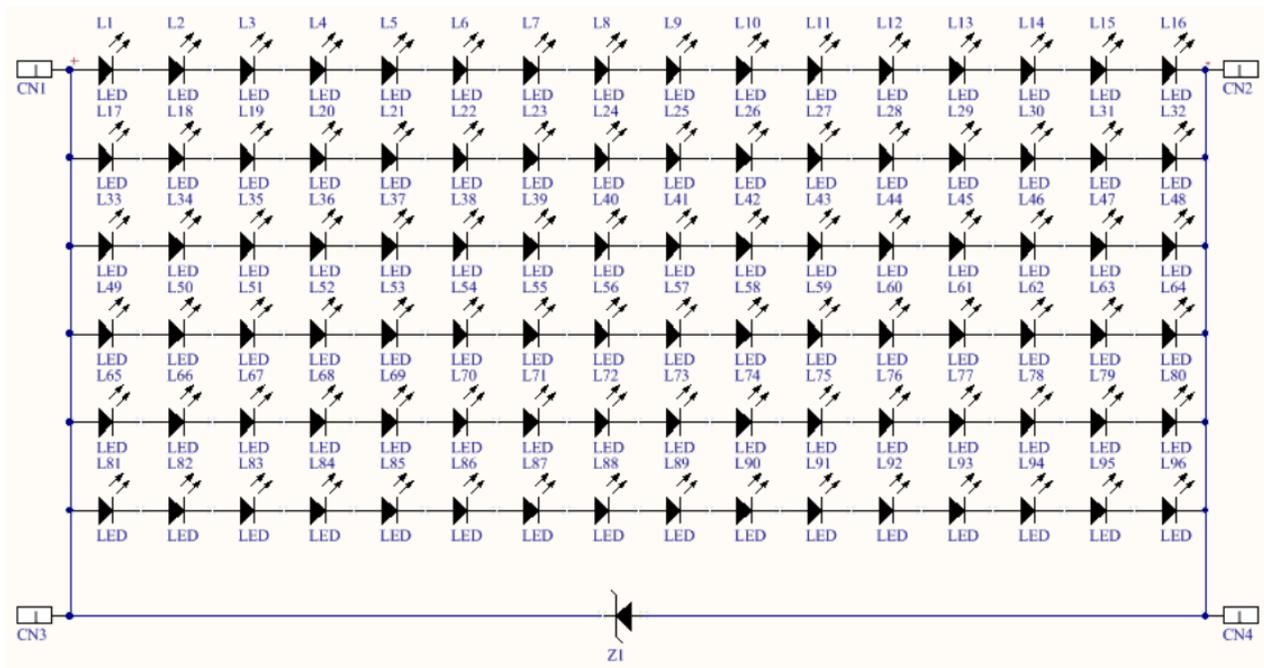
SMJD-243112C-XXS1



SMJD-2422080C-XXS1

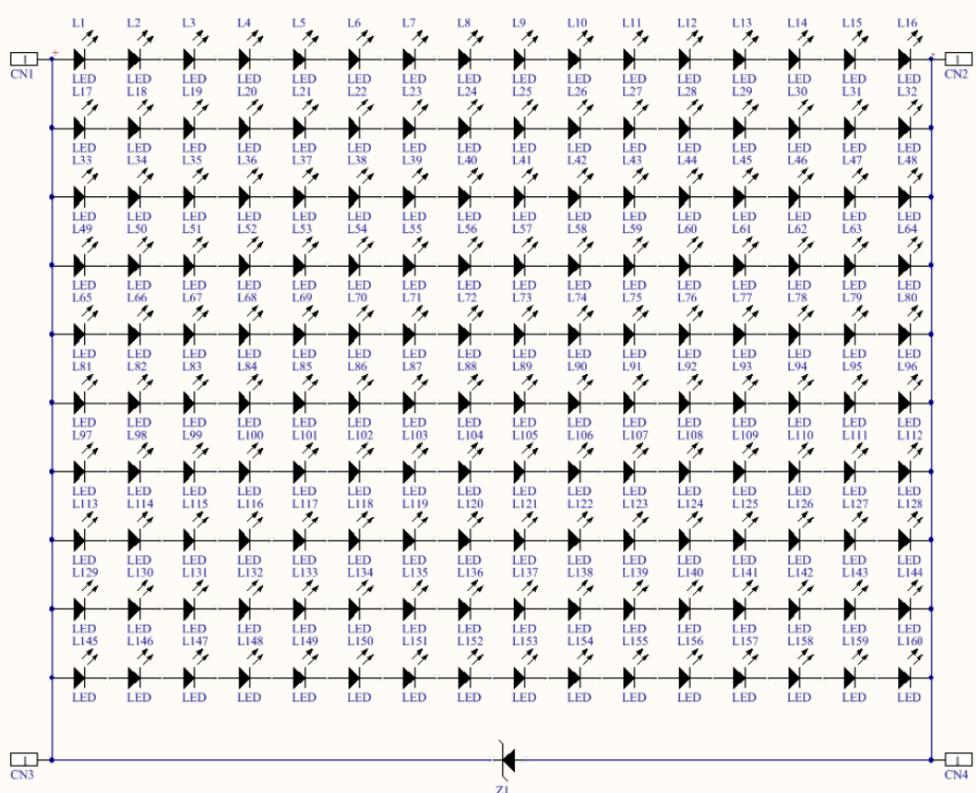


SMJD-4826096C-XXS1

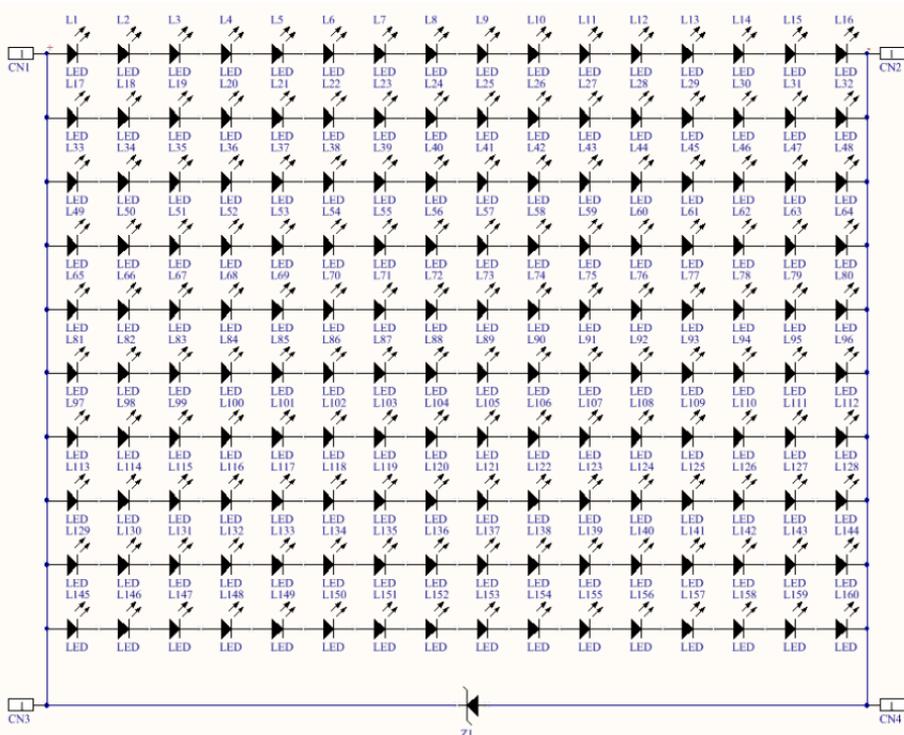


Circuit Diagrams

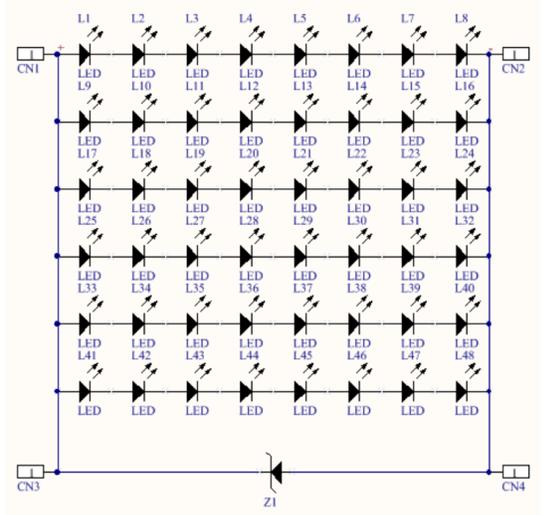
SMJD-4847160C-XXS1



SMJD-4847160C-XXSA



SMJD-2413048C-XXS1



Product Nomenclature: Product Name Rule

*Please refer to the following chart for example:

S M J D - 24 13 048 C - XX S 1

Seoul DC Module (A) (B) (C) (D) (E) (F) (G)

Voltage		Power		LED Qty			Type	Custom	Dimming	Etc
2	4	1	3	0	4	8	C	XX	N	1
0 0V	0 0V	0 0W	0 0W	0 0ea	0 0ea	0 0ea	C 3528	XX ref	N Norm	1 vers
1 10V	1 1V	1 10W	1 1W	1 100ea	1 10ea	1 1ea			D Dim	
2 20V	2 2V	2 20W	2 2W	2 200ea	2 20ea	2 2ea			S STW8A2PD E1(F)(S)	
3 30V	3 3V	3 30W	3 3W	3 300ea	3 30ea	3 3ea			E etc	
-	-	-	-	-	-	-				
9 90V	9 9V	9 90W	9 9W	9 900ea	9 90ea	9 9ea				
A 100V		A 100W		A 1000ea						
B 110V		B 110W		B 1100ea						
-		-		-						

Product Nomenclature: Binning

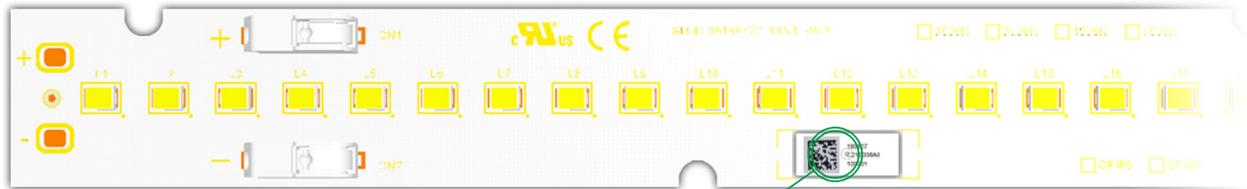
*Please refer to the following chart for example:

00 C48 E03 8 ALL

(A) (B) (C) (D) (E)

Lens Type	Flux Bin	CCT Bin	CRI Bin	VF Bin
00	D30	E03	8	ALL
00 No Lens	C48 2480 lm	A03 6500k - 3 step	8 CRI 80	All 21 ~ 23V
	C45 2450lm	B03 5700k - 3 step		
	C37 2370 lm	C03 5000k - 3 step		
	C33 2330 lm	D03 4500k - 3 step		
		E03 4000k - 3 step		
		F03 3500k - 3 step		
		G03 3000k - 3 step		
		H03 2700k - 3 step		

Marking Information



Marking point

QR Code Information



No.	Item	Information	Digits	Remark
	Date	YYMMDD	6 Digit	SMT date
<input type="checkbox"/>	Flux ⁽¹⁾	C48	3 Digit	C48=2480lm
<input type="checkbox"/>	CCT	X03 3-step	3 Digit	X=A,B,C,D,E,F,G,H
<input type="checkbox"/>	CRI	8	1 Digit	CRI=80
<input type="checkbox"/>	V _F	All	3 Digit	Y1L or Y1H
<input type="checkbox"/>	Lot No.	1	1 Digit	0~9,A~Z
	Sequence No.	00001	5 Digit	00001 ~ 99999
<input type="checkbox"/>	QR Code	QR Code	-	Please refer to below table

Note:

⁽¹⁾Flux Bin - please refer to following chart for definitions:

Flux Bin Definitions

Symbol	lm	Symbol	lm	Symbol	lm	Symbol	lm
B65	1650	O50	14500	R50	17500	U50	20500
M20	12200	P50	15500	S50	18500	V20	21200
N00	13000	Q50	16500	T50	19500	W00	22000

Module QR Code Information

		QR Code Information						
Items	Factory	SAP Code	SMT Date	MP Information	Line No.	Lot No.	Product	Note
Digits	1 Digit	7 Digits	6 Digits	10 Digits	1 Digit	1 Digit	5 Digits	Total count is 31 Digits
Information	*	*****	YYMMDD	C48E038ALL	1~9, A~Z	1~9, A~Z	00001	

Notes:

- [1] The QR code information is comprised of characters explained in the table above.
- [2] The size of the QR code shall be no smaller than 4.5mm x 4.5mm and have a minimum QR code grade of 'C'.
Please note that QR code grade 'A' is preferred.
- [3] If the component is too small to have a full label, the QR code may be printed on a label with a minimum size of 6mm X 6mm.
- [4] The length of the QR code is 31 digits and includes all characters combined without spaces.

Example: ***** 191112C48E038ALL1100001

Label Information

PO Number 	XXXXXX
Supplier Part Number 	SMJD-2413048C-XXS100C48E038ALL⁽¹⁾
Bin Code 	C48E038ALL⁽²⁾
Quantity 	XX
Country of Origin 	XX⁽³⁾
Date Code 	YYYYWW⁽⁴⁾
Lot Code 	YYMDDXXXX- XXXXXX⁽⁵⁾
	SEoul SEMICONDUCTOR CO.,LTD.

Notes:

- [1] & [2] Please refer to spec page
- [3] Country of Origin: 2 digit code. For example: Chinese
Code: CN
- YYMDD : Packing Date (Oct. : A, Nov. : B, Dec. : C)
- X = Initial of Manufacturer
- XXXX = Sealing Pack No.
- XXXXXXX = SSC SAP Code

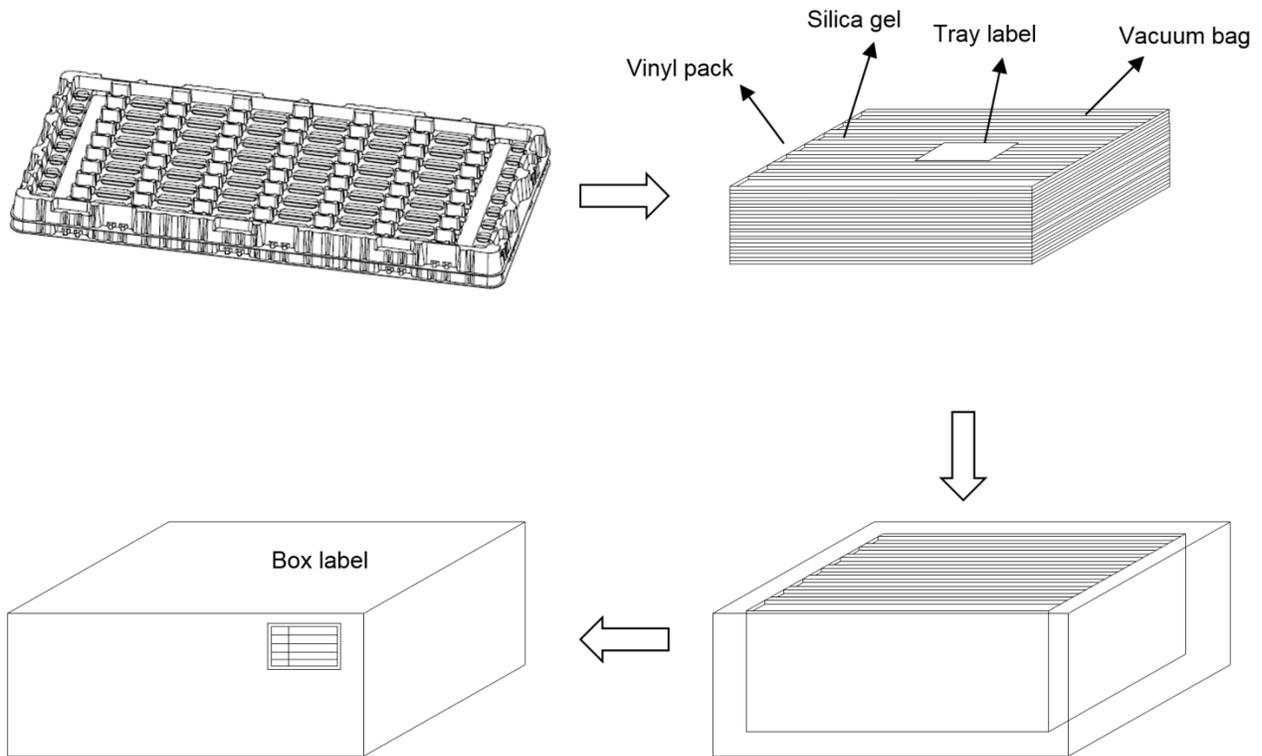
TOTAL Quantity XXX
SEoul SEMICONDUCTOR CO.,LTD.

Notes:

- [1] Attached to the bottom right corner of the carton box.

Packaging Specification

Model	Tray		Box		Pallet	
	Size (mm)	Q'ty per tray	Size (mm)	Q'ty per box	Size (mm)	Q'ty per pallet
SMJD-2413048C-XXS1						
SMJD-2422080C-XXS1	610 x 300 x 30	18	625 x 325 x 220	180	1100x1100x150	4320
SMJD-2431112C-XXS1						
SMJD-4847160C-XXS1	630 x 350 x 25.4	10	650 x 370 x 290	14	1100 x 1100	2800
SMJD-4826096C-XXS1	1230 x 285 x 23	16	1260 x 305 x 183	144	1300x1100x150	3024
SMJD-4847160C-XXSA						



*1 Box = 10 (11) Trays = 180 bars (MAX)

Storage before use

1. When storing devices for a long period of time before usage, please following these guidelines.
 - The devices should be stored in the anti-static bag that it was shipped in from Seoul-Semiconductor with opening
 - If the anti-static bag has been opened, re-seal preventing air and moisture from being present in the bag.



SEOUL SEMICONDUCTOR

Company Information

Seoul Semiconductor (SeoulSemicon.com) manufactures and packages a wide selection of light emitting diodes (LEDs) for the automotive, general illumination/lighting, appliance, signage and back lighting markets. The company is the world's fifth largest LED supplier, holding more than 10,000 patents globally, while offering a wide range of LED technology and production capacity in areas such as "nPola", deep UV LEDs, "Acrich", the world's first commercially produced AC LED, and "Acrich MJT - Multi-Junction Technology", a proprietary family of high-voltage LEDs. The company's broad product portfolio includes a wide array of package and device choices such as Acrich, high-brightness LEDs, mid-power LEDs, side-view LEDs, through-hole type LED lamps, custom displays, and sensors. The company is vertically integrated from epitaxial growth and chip manufacture in its fully owned subsidiary, Seoul Viosys, through packaged LEDs and LED modules in three Seoul Semiconductor manufacturing facilities. Seoul Viosys also manufactures a wide range of unique deep-UV wavelength devices.

Legal Disclaimer

Information in this document is provided in connection with Seoul Semiconductor products. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Seoul Semiconductor hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party. The appearance and specifications of the product can be changed to improve the quality and/or performance without notice.