

Disinfection Module Solution

Specification

CMD-T5C-CO1A



Product Brief

Description

- This module is designed for disinfection.

Features and Benefits

- UVC LED
- Low thermal resistance
- Simple BOM
- Miniaturization
- Lead Free Product

Key Applications

- Disinfection

Table 1. Product

Model	Input Current [mA]	Φ_e [mW]	Wp [nm]			Remark
			MIN	TYP	MAX	
CMD-T5C-CO1A	100	12	270	275	280	Constant Current

Part List

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Performance Characteristics

Table 2. Electro Optical Characteristics at 100mA (Constant Current)

(T_a=25°C RH=30%)

Parameter`	Symbol	Value			Unit
		Min.	Typ.	Max.	
Peak wavelength ^[1]	λ_p	270	275	280	nm
Forward Voltage ^[5]	V _F	5.0	6.0	8.0	V
Power Consumption	P _d ^[2]	0.5	0.6	0.8	W
Radiant Flux ^[3]	Φ_e ^[4]	10.0	12.0		mW

Notes :

[1] Peak Wavelength Measurement tolerance : $\pm 3\text{nm}$

[2] P_d can be changed by surrounding temperature and current.

[3] Radiant Flux Measurement tolerance : $\pm 10\%$

[4] Φ_e is the Total Radiant Flux as measured with an integrated sphere.

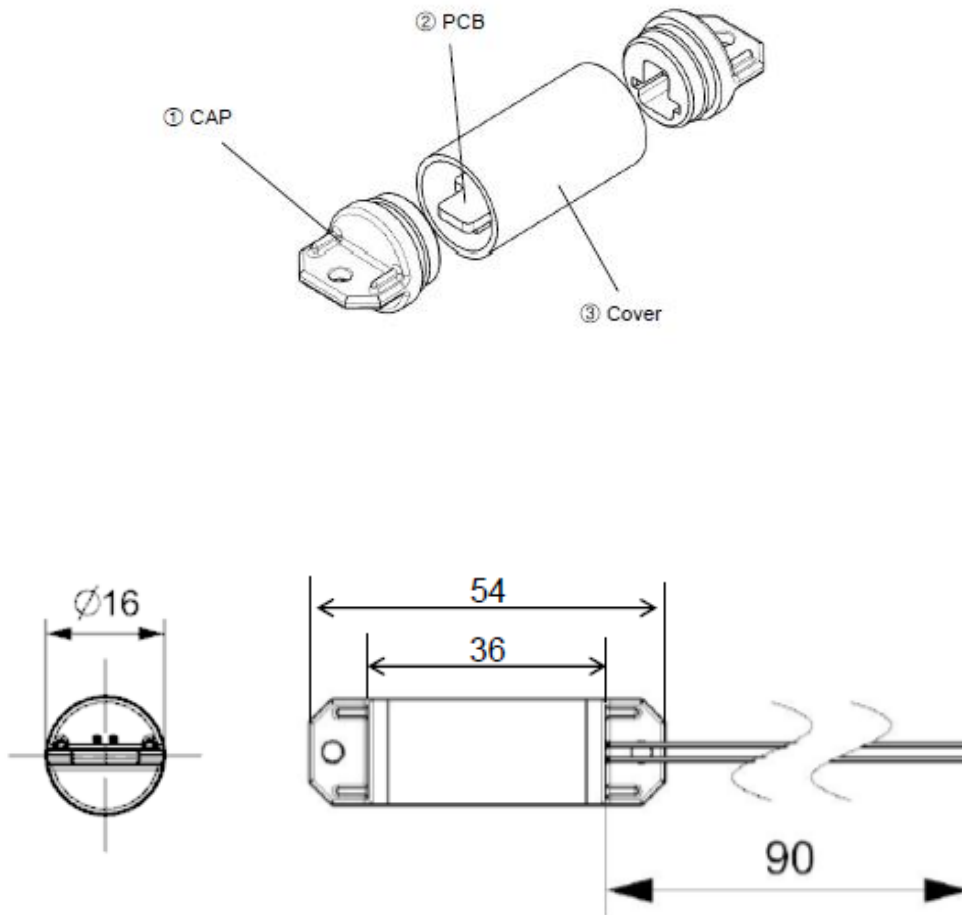
[5] Forward Voltage Measurement tolerance : $\pm 3\%$

Table 3. Absolute Maximum Ratings

Parameter	Symbol	Unit	Value
Operating Temperature	T _{opr}	°C	-20 ~ +40
Storage Temperature	T _{stg}	°C	-20 ~ +60

Drawing

[Unit: mm]

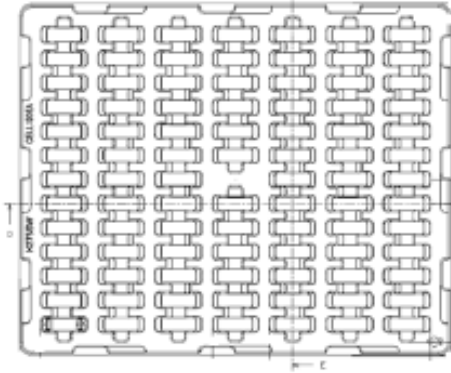


Notes :

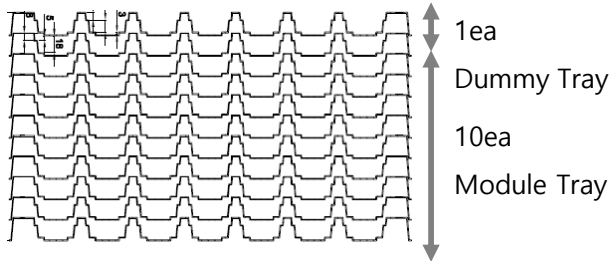
- Module Dimensions of the indicated maximum value, and to allow a tolerance : ± 0.5 [mm]
- Wire Dimensions of the indicated maximum value, and to allow a tolerance : ± 5 [mm]

Packing

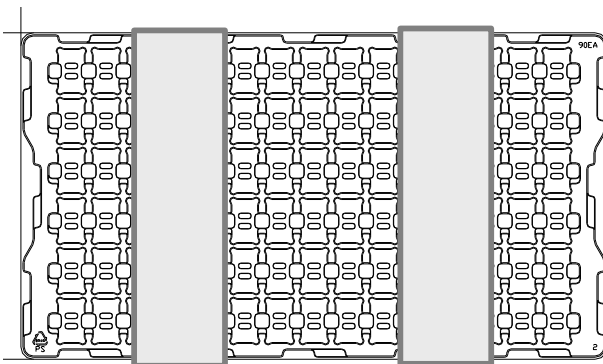
Tray



- | | |
|----------------|---------------------------------|
| Note 1. | 1 Tray = 90 pcs of products |
| Note 2. | Stacking 11 Trays |
| Note 3. | (The top tray is an empty Tray) |



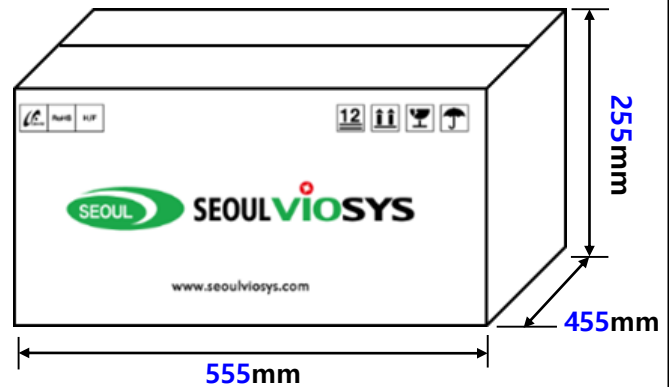
- | | |
|----------------|--|
| Note 1. | 10 tray X 90 pcs = 900 pcs (1Tray=dummy) |
| Note 2. | 1 tray pack 90 pcs |
| Note 3. | Total Quantity : 900 pcs |



Tray Tapping Tray Tapping

- | | |
|----------------|-------------------------|
| Note 1. | Tapping 11 Tray to fix. |
|----------------|-------------------------|

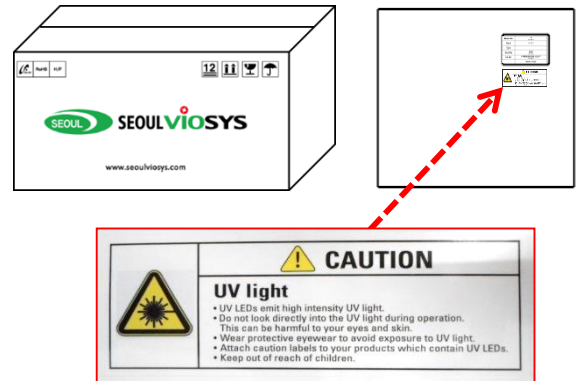
Pack the tray in a box



- | | |
|----------------|---|
| Note 1. | 1BOX : 90 pcs per tray x 10 Trays = 900 pcs |
| Note 2. | TOTAL : 900 pcs per 1BOX (1dummy Tray) |

If it is not a full box, apply the buffer material to fix the product

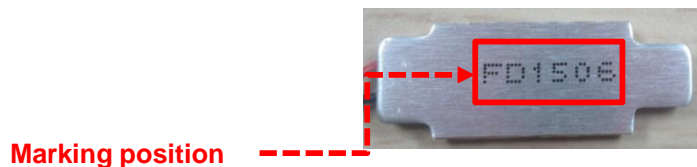
Labeling



- | | |
|----------------|---|
| Note 1. | Trays should be packed with sealing bag. |
| Note 2. | Sealing bag must be made with ESD protection characteristics. |
| Note 3. | Each sealing bag must have 1ea silica gel pouch to keep humidity under control. |

Marking Information

1) Marking location



2) CODE information

EX) ED 18 29

Year		Month		Day		LED rank	
1 digit		1 digit		2 digits		2~7 digits	
E	2021	D	April	18	18	29	H29

Year	2017	2018	2019	2020	2021	2022
Code	A	B	C	D	E	F
	2023	2024	2025	2026	2027	2028
	G	H	I	J	K	L
	2029	2030	2031	2032	2033	2034
	M	N	O	P	Q	R
	2035					
	S					

Month	1	2	3	4	5	6
Code	A	B	C	D	E	F
	7	8	9	10	11	12
	G	H	I	J	K	L

Day	1	2	3	4	...	31
Code	1	2	3	4	...	31

Note* :Explain LED rank

1) Old rank LED **XX** : **H01~HXX**.(2 digits).

2) New Rank LED **27C1860** (7digits)

+ Wp (nm) bin:= 27A or 27B or 27C or 27D. (3digit)

+ Radiant Flux (mW) bin = 18 (W018) or 13 (W013)...

+ Vf of LED(V) bin= 54(V540) or Or 62 (V620)

Example:

27C1860 = 27CW018V600.

Precaution for Use

1) Storage

- To avoid moisture penetration, we recommend storing UV-Module in a dry box with a desiccant. The recommended temperature and Relative humidity are between 5°C and 30°C and below 50% respectively.
- UV-Module must be stored properly to maintain the device. If the UV-Module is stored for 3 months or more after being shipped from SVC, a sealed container with a nitrogen atmosphere should be used for storage.
- Replace the remained UV-Module into the moisture-proof bag and reseal the bag after work to avoid those UV-Module being exposed to moisture. Prolonged exposure to moisture can adversely affect the proper functioning of the UV-Module.

2) Handling Precautions

- VOCs (Volatile organic compounds) emitted from materials used in the construction of fixtures can penetrate products and discolor them when exposed to heat and photonic energy. The result can be a significant loss of light output from the fixture. Knowledge of the properties of the materials selected to be used in the construction of fixtures can help prevent these issues.
- In case of attaching UV-Module, do not use adhesives that outgas organic vapor.
- Please do not use(or storage) together with the materials containing Sulfur.
- Do not use inflammable material nearby the products.
- Do not touch the products with wet hand
- Do not fix or remodel the products.
- Do not drop the machine, or give strong impact on the products.
- The UV-Module is encapsulated with special material for the highest flux efficiency. So it needs to be handled carefully as below
 - Avoid touching quartz glass parts especially with sharp tools such as Tweezers
 - Avoid leaving fingerprints cover parts.
 - UV-Module will attract dust so use covered containers for storage.
 - It is not recommend to cover the UV-Module with other materials (epoxy, urethane, etc)

3) Safety for eyes and skin

- The Products emit high intensity ultraviolet light which can make your eyes and skin harmful, So do not look directly into the UV light and wear protective equipment during operation.

4) Cleaning

- After assembly the product, empty the water and then wipe the UV-Module with a dry towel.



Precaution for Use

5) Others

- Be sure to turn On / Off after module is connected.

When connecting the module in the power on state, LED can be damaged by the influence of the inrush voltage / current.

- The driving circuit must be designed to allow forward voltage or current only when it is ON or OFF. If the reverse voltage is applied to UV-Module, migration can be generated resulting in LED damage.
- Do not handle this product with acid or sulfur material in sealed space
- Please handle using equipment that prevents static electricity.
- Do not touch unless ESD protection is used.
- Ionizer, grounding and keeping appropriate humidity are necessary for work environment.
- The appearance and specifications of the product may be modified for improvement without notice

	 CAUTION
	<ul style="list-style-type: none"> •UV LEDs emit high intensity UV light. •Do not look directly into the UV light during operation. This can be harmful to your eyes and skin. •Wear protective eyewear to avoid exposure to UV light. •Attach caution labels to your products which contain UV LEDs. <p>Avoid direct eye and skin exposure to UV light. Keep out of reach of children.</p>