UV Module Solution

specification

Product Brief

Description

- CMW-PS-C01 is disinfection Module with UV LED mounted on the Metal PCB. It can be easily connected electrically by putting in the connector.
- UV module is suitably designed for water and surface sterilization.

Features and Benefits

- Deep ultraviolet LED
- Low thermal resistance
- Simple BOM
- Miniaturization
- Lead Free Product

Key Applications

- Disinfection

Table 1. Product

Product type	Input Voltage[Vin]	Φe [mW]	Wp [nm]		Remark
			Min	Max	
CMW-PS-C01	12	3.0	270	280	Constant Voltage

** Above data base on DC Power Supply*

Refer to the below test condition.

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Performance Characteristics

Table 2. Electro Optical Characteristics, T_a=25℃

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Peak wavelength[1]	λp	270	275	280	nm
Input Voltage	V_{in}		12		Vdc
Power Consumption	P		0.36		W
Radiant Flux[2]	Φe[3]		3.0		mW
Spectrum Half Width	$\Delta\lambda$		10		nm
Weight	g		10.0±0.1		g

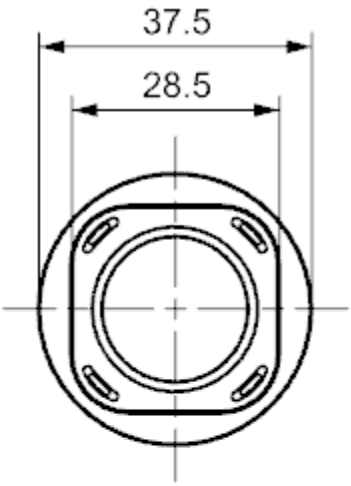
Notes : (1) Peak Wavelength Measurement tolerance : ±3nm
(2) Radiant Flux Measurement tolerance : ±10%
(3) Φe is the Total Radiant Flux as measured with an integrated sphere.
(4) All measurements were made under the standardized environment of Seoulviosys

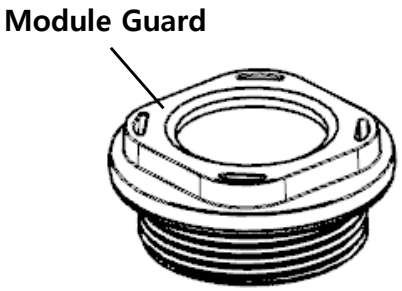
Part list

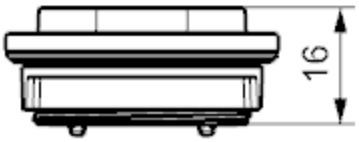
Table 3. Part List

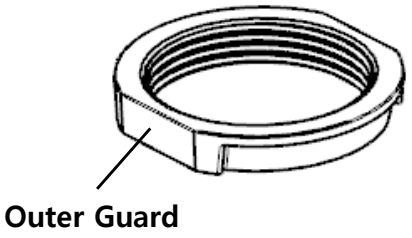
No	Product type	Item Specification	Quantity
1	CMW-PS-C01	MODULE GUARD (Material : PP)	1
		INNER GUARD (Material : PP)	1
		OUTER GUARD (Material : PP)	1
		LED GUARD (Material : PP)	1
		QUARTZ GLASS	1
		SILICONE ORING_1	1
		SILICONE ORING_2	1
		LED PCB ASSY'_(275nm AAP PKG)	1
		Wire_200mm	1

Mechanical Dimensions









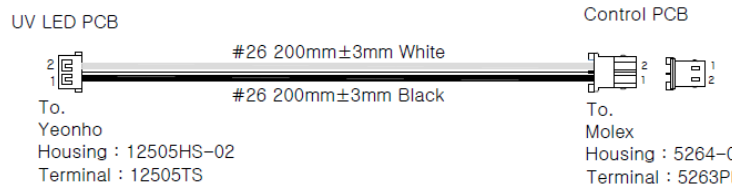
Notes :

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

Mechanical Dimensions

NO.	TITLE	NOTE	MAKER
1	UV LED_Housing	12505HS-02 (White)	
2	UV LED Terminal	12505TS	
3	Control_Housing	5264-02P (Ivory)	
4	Control_Terminal	5263PBT	
5	Wire	#26 200mm±3mm White	
6	Wire	#26 200mm±3mm Black	
7			
8			
9			

CLASS / RANGE	TOLERANCES A	B	C
~ 5 below	±0.05	±0.1	±0.2
5 over ~ 10 below	±0.1	±0.2	±0.3
10 over ~ 20 below	±0.2	±0.3	±0.4
20 over ~ 50 below	±0.3	±0.4	±0.6
50 over ~ 100 below	±0.4	±0.5	±0.8
100 over ~ 200 below	±0.5	±0.6	±1.0
200 over ~ 300 below	±0.6	±0.8	±1.2
300 over ~	±0.8	±1.0	±1.4



NOTE
1. 심선의 단선률은 10% 미만일 것
2. 절연저항 : DC500V 절연 저항계로 측정하여 100MΩ 이상일 것
3. 절연내력 : 절연저항 실험 직 후 AC1500V 에서 1분간 견딜것
4. TERMINAL의 압축 강도는 수평 방향으로 3.0kg/f의 힘으로 15초간 인장 시켰을때 WIRE의 빠짐, 단선 없을 것
5. 외관에는 수축,흠,BURR등이 없을 것
6. TERMINAL, HOUSING, WIRE는 규격품을 사용 할 것
7. 기타 자세한 사항은 별도 협의에 준 함.

NO.	DESCRIPTION	DATE	NAME
4			
3			
2			
1			

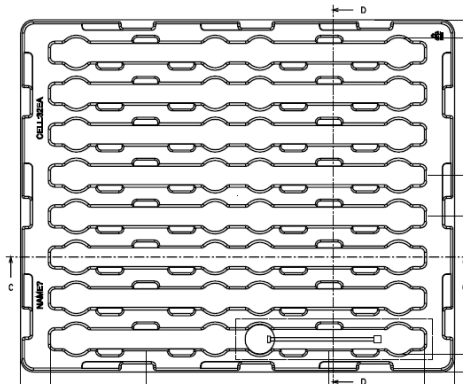
CUSTOMERS:
TITLE: 200mm wire
12505HS-02 <-> 5264-02P, AWG26, 200mm
DIMENSION: mm
TOLERANCES CLASS: B
SCALE: N.S
DWG NO.

	DRAWN	CHECKED	APPROVED
DATE	2017.12.05		2017.12.05
NAME	S.C.Ju		J.H.Choi
SIGN			

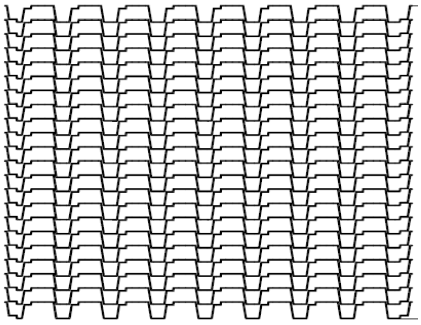
SEOULVIOSYS

REV: 4
SHEET: 1/1

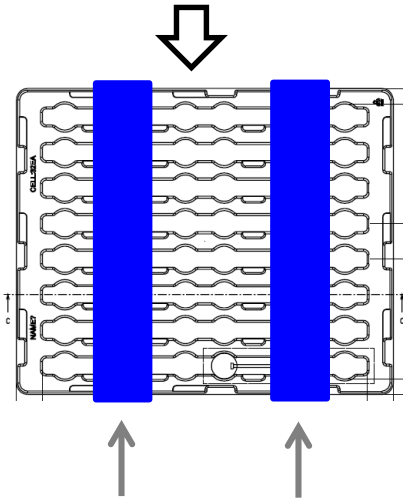
Packing



*32ea UV LED modules packed per tray

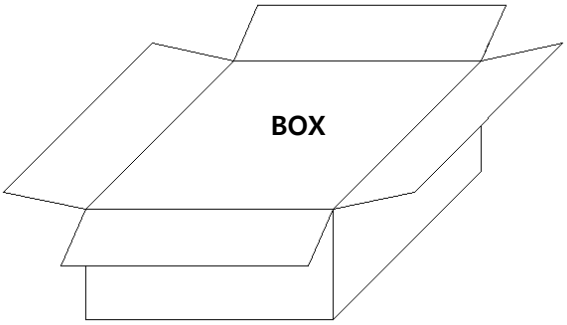


* UV LED Module 20ea Trays and additional 1 dummy tray each up of box



* Tapping 21ea Trays.

Pack the tray in a box

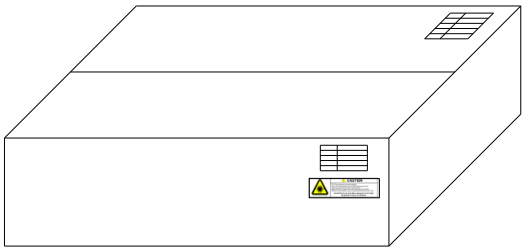


*1BOX : 32ea per tray x 20Trays = 640ea

*TOTAL : 640ea per 1BOX

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

* Labeling



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℃ and 30℃ 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.

Precaution for Use

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.

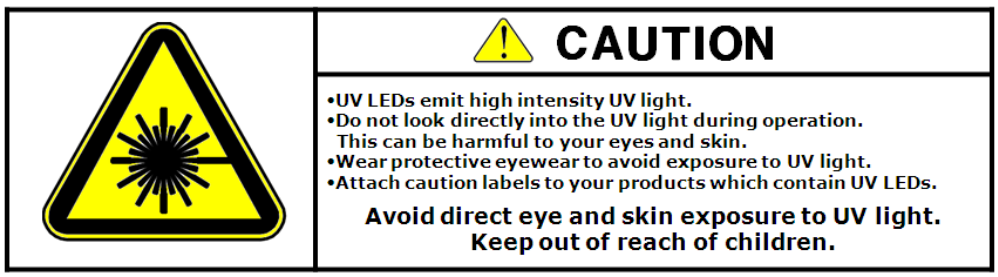
4) Cleaning

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

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 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



Revision History

Revision	Date	Page	Remarks
00	01. Dec. 2017	All	The first edition