

## UV Module Solution specification



## Product Brief

### Description

- YL-Φ37.5F(135)-275nM(2mW) 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	
YL-Φ37.5F(135) -275nM(2mW)	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,  $T_a=25^\circ\text{C}$**

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

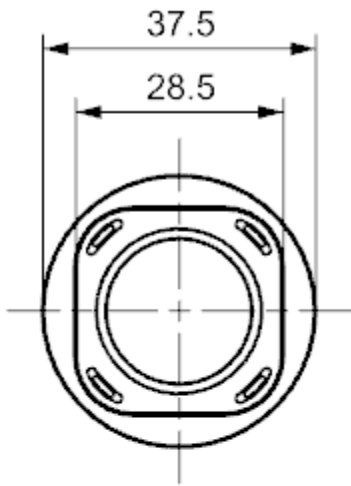
- Notes :**
- (1) Peak Wavelength Measurement tolerance :  $\pm 3\text{nm}$
  - (2) Radiant Flux Measurement tolerance :  $\pm 10\%$
  - (3)  $\Phi_e$  is the Total Radiant Flux as measured with an integrated sphere.
  - (4) All measurements were made under the standardized environment of YesLED

## Part list

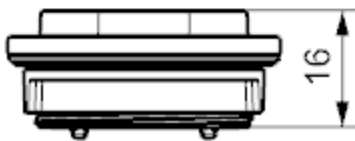
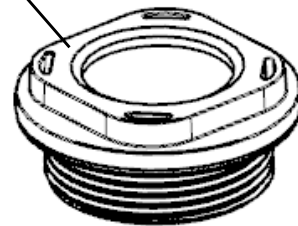
Table 3. Part List

No	Product type	Item Specification	Quantity
1	YL-Φ37.5F(135)- 275nM(2mW)	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

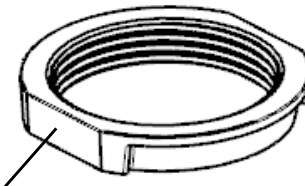
## Mechanical Dimensions



Module Guard



Outer Guard



### Notes :


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

## Mechanical Dimensions

NO.	TITLE	NOTE	MAKER	TOLERANCES		
				RANGE	CLASS	TOLERANCES
1	UV_LED_Housing	12505HS-02 (White)		A	±0.1	±0.2
2	UV_LED_Terminal	12505TS		B	±0.05	±0.1
3	Control_Housing	5264-02P (Ivory)		C	±0.1	±0.2
4	Control_Terminal	5263PBT		A	±0.1	±0.2
5	Wire	#26 200mm±3mm White		B	±0.2	±0.3
6	Wire	#26 200mm±3mm Black		C	±0.3	±0.4
7				A	±0.4	±0.5
8				B	±0.5	±0.6
9				C	±0.6	±0.8

UV LED PCB

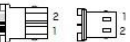


To.  
Yeonho  
Housing : 12505HS-02  
Terminal : 12505TS

#26 200mm±3mm White

#26 200mm±3mm Black

Control PCB

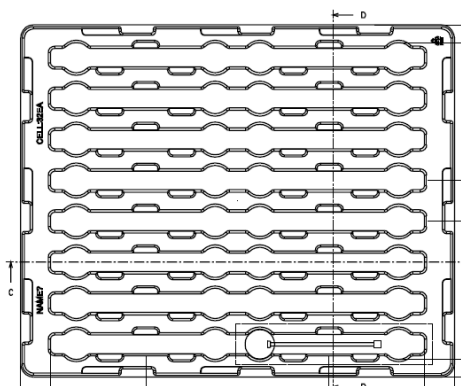


To.  
Molex  
Housing : 5264-02P  
Terminal : 5263PBT

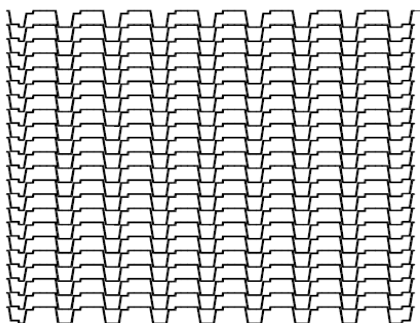
  

NO.	DESCRIPTION	DATE	NAME	CUSTOMERS	DIMENSION	TOLERANCE CLASS	DRAWN	CHECKED	APPROVED	REV
1	200mm wire				mm	B	DATE	2017.12.05	2017.12.05	4
					SCALE	N.S	NAME			SHEET
					QWTS NO.		SIGN			1/1

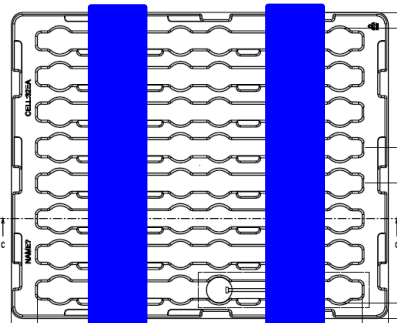
## Packing



\*32ea UV LED modules  
packed per tray



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

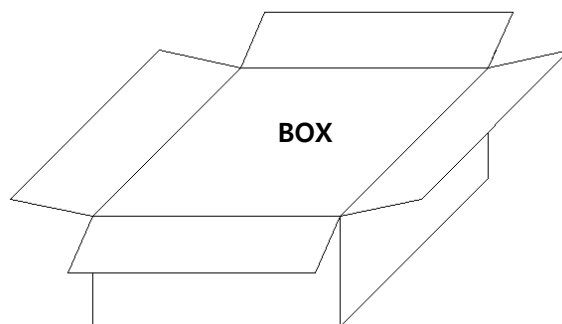


Tapping

Tapping

\* Tapping 21ea Trays.

Pack the tray in a box



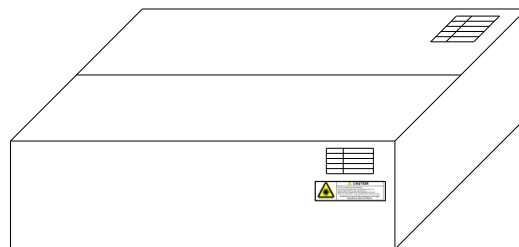
\*1BOX : 32ea per tray x 20Trays = 640ea

\*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°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 YesLED, 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

