

# Product Specification

## DC Flexible LED Strip

### 2835 6LEDs/unit Series

2835 Top LED 8mm FPC 120LEDs/M

WW-FLS102T23XW120X-24(WCP)-XR

&

WW-FLS102T23XW120X-24(WCP)-XR-EP



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<p><b>Product Features</b></p> <ul style="list-style-type: none"> <li>• High quality FPC, authentic 3M tape;</li> <li>• Self-encapsulated design 2835 LED;</li> <li>• Light source lifetime:50K hours(L70);</li> <li>• Meet (EU)2019/2020 ErP regulations.</li> <li>• Min. Bending Diameter: Φ60mm</li> <li>• Max. length(M): 5M</li> </ul>	
<p><b>Technology info</b></p> <ul style="list-style-type: none"> <li>• Lighting Technology: LED</li> <li>• DLS or NDLS: NDLS</li> <li>• MLS or NMLS: NMLS</li> </ul>	<p><b>Certification Standards</b></p> <ul style="list-style-type: none"> <li>• EN55015:2019</li> <li>• EN61547:2009</li> <li>• EN60598-1:2015</li> <li>• EN60598-2-20:2015</li> <li>• EN62493:2015</li> <li>• EN62471:2008</li> </ul>

<b>Non-ErP Waterproof Type</b>	 <b>B 20</b>	 <b>S 54</b>	 <b>K 54/65</b>	 <b>F 65</b>	 <b>R 67</b>	 <b>RW 67</b>	 <b>C 68</b>	 <b>E 67</b>	 <b>D 54</b>
	Naked Strip	Silicone Dropping	Silicone Extrusion	Silicone Tube	Silicone Extrusion	Silicone Extrusion	PU Dropping +PVC Extrusion	PVC Extrusion	PU Dropping
	5 Years Warranty	3 Years Warranty	5 Years Warranty	5 Years Warranty	5 Years Warranty	5 Years Warranty	1 Years Warranty	2 Years Warranty	2 Years Warranty

<b>ErP Waterproof Type</b>	 <b>B 20</b>	 <b>F 65</b>	 <b>R 67</b>
	Naked Strip	Silicone Tube	Silicone Extrusion
	5 Years Warranty	5 Years Warranty	5 Years Warranty

WW-FLS102T23XW120X-24(WCP)-XR

Parameters for non-Erp

IP Grade	Model NO.	CRI (Ra)	Rf	Rg	Typical Power (W/M)	Max. Power (W/M)	Color	LED Color Temp.(K) Wavelength(nm)*	3SDCM LED Color Temp.(K) Wavelength(nm)**	Typ. Luminous Flux LM/M(39.37in)	Rated voltage	
B 20	WW-FLS102T23XW120B-24(WCP)-HR	80	82	96	8.60	9.46	Warm White	2500K	/	862	DC 24V	
							Warm White	2700K	2700K	862		
							Warm White	3000K	3000K	930		
							Natural White	4000K	4000K	962		
							Standard White	6000K	/	954		
	WW-FLS102T23XW120B-24(WCP)-UR	90	90	100	8.60	9.46	Warm White	2700K	2700K	724	DC 24V	
							Warm White	3000K	3000K	756		
							Natural White	4000K	4000K	818		
							Standard White	6000K	/	828		
	S 54	WW-FLS102T23XW120S-24(WCP)-HR	80	82	96	8.60	9.46	Warm White	2500K	/	827	DC 24V
Warm White								2700K	2700K	828		
Warm White								3000K	3000K	846		
Natural White								4000K	4000K	827		
Standard White								6000K	/	768		
WW-FLS102T23XW120S-24(WCP)-UR		90	90	100	8.60	9.46	Warm White	2700K	2700K	656	DC 24V	
							Warm White	3000K	3000K	664		
							Natural White	4000K	4000K	734		
E 67		WW-FLS102T23XW120E-24(WCP)-HR	80	82	96	8.60	9.46	Warm White	2500K	/	774	DC 24V
								Warm White	2700K	2700K	792	
	Warm White							3000K	3000K	809		
	Natural White							4000K	4000K	867		
	Standard White							6000K	/	857		
	WW-FLS102T23XW120E-24(WCP)-UR	90	90	100	8.60	9.46	Warm White	2700K	2700K	592	DC 24V	
							Warm White	3000K	3000K	606		
							Natural White	4000K	4000K	685		
	K 54	WW-FLS102T23XW120K-24(WCP)-HR-TT	80	82	96	8.60	9.46	Warm White	2500K	/	836	DC 24V
								Warm White	2700K	2700K	865	
Warm White								3000K	3000K	884		
Natural White								4000K	4000K	936		
Standard White								6000K	/	936		
WW-FLS102T23XW120K-24(WCP)-UR-TT		90	90	100	8.60	9.46	Warm White	2700K	2700K	677	DC 24V	
							Warm White	3000K	3000K	701		
							Natural White	4000K	4000K	782		
F 65		WW-FLS102T23XW120F-24(WCP)-HR	80	82	96	8.60	9.46	Warm White	2500K	/	806	DC 24V
								Warm White	2700K	2700K	840	
	Warm White							3000K	3000K	910		
	Natural White							4000K	4000K	935		
	Standard White							6000K	/	930		
	WW-FLS102T23XW120F-24(WCP)-UR	90	90	100	8.60	9.46	Warm White	2700K	2700K	705	DC 24V	
							Warm White	3000K	3000K	735		
							Natural White	4000K	4000K	800		
							Standard White	6000K	/	805		
	R 67	WW-FLS102T23XW120R-24(WCP)-HR	80	82	96	8.60	9.46	Warm White	2500K	/	781	DC 24V
Warm White								2700K	2700K	840		
Warm White								3000K	3000K	900		
Natural White								4000K	4000K	935		
Standard White								6000K	/	920		
WW-FLS102T23XW120R-24(WCP)-UR		90	90	100	8.60	9.46	Warm White	2700K	2700K	700	DC 24V	
							Warm White	3000K	3000K	730		
							Natural White	4000K	4000K	800		
							Standard White	6000K	/	800		

RW 67	WW-FLS102T23XW120R-24(WCP)-HR-W	80	82	96	8.60	9.46	Warm White	2500K	/	818	DC 24V
							Warm White	2700K	2700K	837	
							Warm White	3000K	3000K	856	
							Natural White	4000K	4000K	906	
							Standard White	6000K	/	896	
C 68	WW-FLS102T23XW120C-24(WCP)-UR-W	90	90	100	8.60	9.46	Warm White	2700K	2700K	698	DC 24V
							Warm White	3000K	3000K	686	
							Natural White	4000K	4000K	750	
C 68	WW-FLS102T23XW120C-24(WCP)-HR	80	82	96	8.60	9.46	Warm White	2500K	/	774	DC 24V
							Warm White	2700K	2700K	783	
							Warm White	3000K	3000K	781	
							Natural White	4000K	4000K	758	
	D 54	WW-FLS102T23XW120C-24(WCP)-UR	90	90	100	8.60	9.46	Warm White	2700K	2700K	620
Warm White								3000K	3000K	642	
Natural White								4000K	4000K	660	
D 54	WW-FLS102T23XW120D-24(WCP)-HR	80	82	96	8.60	9.46	Warm White	2500K	/	845	DC 24V
							Warm White	2700K	2700K	865	
							Warm White	3000K	3000K	846	
							Natural White	4000K	4000K	798	
	D 54	WW-FLS102T23XW120D-24(WCP)-UR	90	90	100	8.60	9.46	Warm White	2700K	2700K	677
Warm White								3000K	3000K	701	
Natural White								4000K	4000K	725	

Remarks:

- \*The above color temperature is the color temperature of LED source.
- \*\*Indicates SDCM<3 model is available, part number will add the suffix "-3S".
- The typ. Luminous flux tolerance range is  $\pm 10\%$  (subject to the manufacturer's instrument test).

Test condition of above technical data:

- Surrounding temperature: 26°C.
- Test while turning on.

WW-FLS102T23XW120X-24(WCP)-XR-EP

Parameters for Erp

IP Grade	Model NO.	CRI (Ra)	Rf	Rg	Typical Power (W/M)	Max. Power (W/M)	Color	LED Color Temp.(K) Wavelength(nm)*	Luminous Flux LM/M(39.37')	Lumen/watt	Energy Efficiency class	Rated voltage
E 20	WW-FLS102T23XW120B-24(WCP)-HR-EP	80	82	96	8.70	9.57	Warm White	2700K	931	107	F	DC 24V
							Warm White	3000K	1007	116	E	
							Natural White	4000K	1044	120	E	
							Standard White	6000K	1035	119	E	
	WW-FLS102T23XW120B-24(WCP)-UR-EP	90	90	100	8.70	9.57	Warm White	2700K	785	90	F	DC 24V
							Warm White	3000K	815	94	F	
							Natural White	4000K	888	102	F	
							Standard White	6000K	895	103	F	
F 65	WW-FLS102T23XW120F-24(WCP)-HR-EP	80	82	96	8.70	9.57	Warm White	2700K	910	105	F	DC 24V
							Warm White	3000K	981	113	E	
							Natural White	4000K	1020	117	E	
							Standard White	6000K	1013	116	E	
	WW-FLS102T23XW120F-24(WCP)-UR-EP	90	90	100	8.70	9.57	Warm White	2700K	768	88	F	DC 24V
							Warm White	3000K	796	91	F	
							Natural White	4000K	862	99	F	
							Standard White	6000K	877	101	F	
R 67	WW-FLS102T23XW120R-24(WCP)-HR-EP	80	82	96	8.70	9.57	Warm White	2700K	901	104	F	DC 24V
							Warm White	3000K	979	113	E	
							Natural White	4000K	1007	116	E	
							Standard White	6000K	1003	115	E	
	WW-FLS102T23XW120R-24(WCP)-UR-EP	90	90	100	8.70	9.57	Warm White	2700K	757	87	F	DC 24V
							Warm White	3000K	789	91	F	
							Natural White	4000K	858	99	F	
							Standard White	6000K	867	100	F	

Remarks:

- \*The above color temperature is the color temperature of LED source.
- While SDCM<3 model is available, part number will add the suffix "-3S".

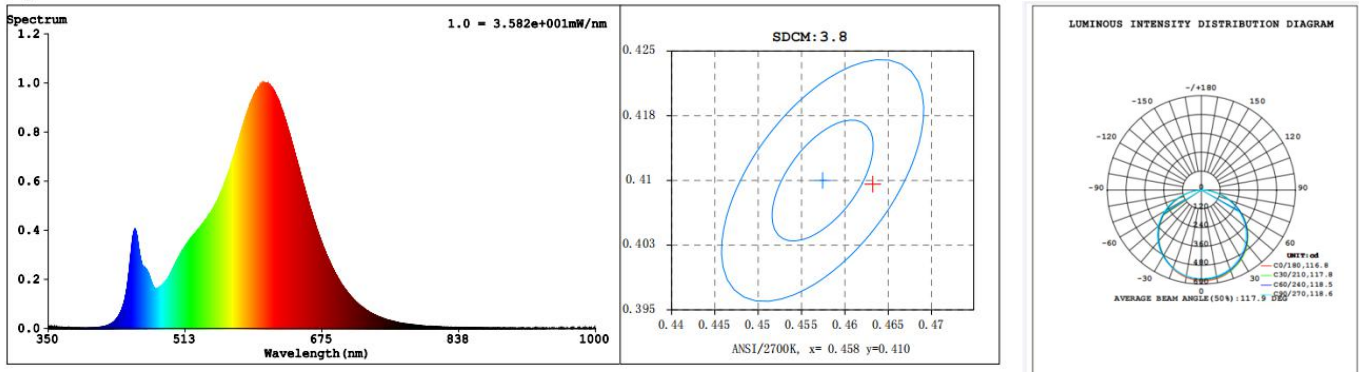
Test condition of above technical data:

- Surrounding temperature: 26 °C.
- Test after 10 mins turned on.

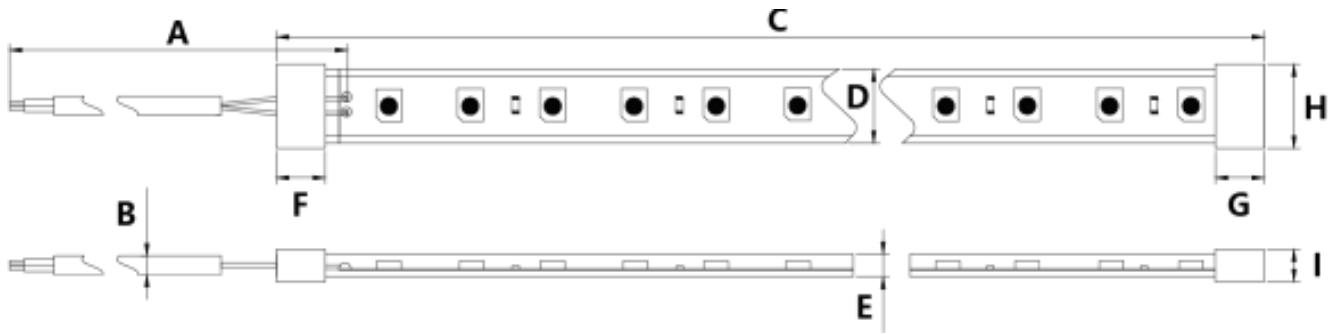
ErP Note:

- According to the new ErP 2019/2020 regulation for each 0.5m or nearest 0.5m strip, the following requirements must be met:
- Measured power ≤ Pon +5% ;
- Measured lumen ≥Useful luminous flux -10%;
- Measured CRI ≥ Declared CRI-2
- The above technical data, including typical power are based on the test of 0.5m.

Optical Test Diagram



## Dimension Drawing

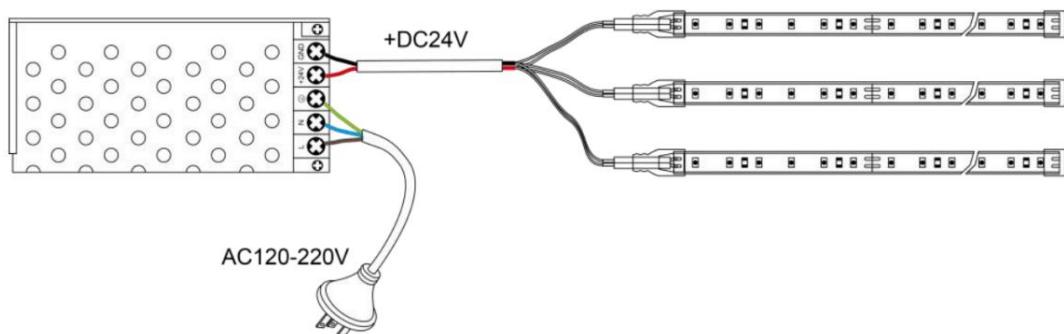


IP Grade	A Cable Length	B cable diameter	C Strip length	D Strip width	E Strip thickness	F Front cap length	G End cap length	H Cap width	I Cap thickness
B 20	300±10mm	Φ4.0±0.2mm	5000±50mm	8±0.5mm	1.2±0.5mm	/	/	/	/
	11.81±0.39in	0.16±0.01in	196.85±1.97in	0.32±0.02in	0.047±0.02in	/	/	/	/
D 54	300±10mm	Φ4.0±0.2mm	5000±50mm	8±0.5mm	2.6±0.5mm	/	/	/	/
	11.81±0.39in	0.16±0.01in	196.85±1.97in	0.32±0.02in	0.102±0.02in	/	/	/	/
S 54	300±10mm	Φ4.0±0.2mm	5000±50mm	8±0.2mm	2.3±0.5mm	/	/	/	/
	11.81±0.39in	0.16±0.01in	196.85±1.97in	0.32±0.008in	0.091±0.02in	/	/	/	/
K 54	300±10mm	Φ4.0±0.2mm	5020±50mm	9.2±0.2mm	4±0.2mm	/	/	/	/
	11.81±0.39in	0.16±0.01in	197.64±1.97in	0.32±0.008in	0.16±0.01in	/	/	/	/
F 65	300±10mm	Φ4.0±0.5mm	5000±50mm	10±0.5mm	4.0±0.5mm	22.5±0.5mm	10±0.5mm	12.5±0.5mm	6.0±0.5mm
	11.81±0.39in	0.16±0.02in	196.85±1.97in	0.39±0.02in	0.16±0.02in	0.89±0.02in	0.39±0.02in	0.49±0.02in	0.24±0.02in
E 67	300±10mm	Φ4.0±0.2mm	5020±50mm	10.5±0.5mm	5.5±0.5mm	27.5±0.5mm	12.5±0.5mm	13.5±0.5mm	7.5±0.5mm
	11.81±0.39in	0.16±0.01in	197.64±1.97in	0.41±0.02in	0.22±0.02in	1.08±0.02in	0.49±0.02in	0.53±0.02in	0.30±0.02in
R 67	300±10mm	Φ5±0.5mm	5000±50mm	10±0.25mm	5±0.25mm	30±2mm	11±0.5mm	12±0.5mm	7.0±0.5mm
	11.81±0.39in	0.235±0.02 in	196.85±1.97in	0.39±0.01in	0.20±0.01in	1.18±0.08in	0.43±0.02in	0.47±0.02in	0.28±0.02in
RW 67	300±10mm	Φ5.8±0.2mm	5020±50mm	10±0.5mm	5±0.5mm	30±0.5mm	11±0.5mm	12.0±0.5mm	7.0±0.5mm
	11.81±0.39in	0.23±0.008 in	197.64±1.97in	0.39±0.02in	0.20±0.02in	1.18±0.02in	0.43±0.02in	0.47±0.02in	0.28±0.02in
C 68	300±10mm	Φ4.0±0.2mm	5020±50mm	11.5±0.5mm	4.5±0.5mm	27.5±0.5mm	12.5±0.5mm	13.5±0.5mm	7.5±0.5mm
	11.81±0.39in	0.16±0.008in	197.64±1.97in	0.45±0.02in	0.18±0.02in	1.08±0.02in	0.49±0.02in	0.53±0.02in	0.30±0.02in












**Remarks:**

- If you need further information, please contact our sales manager.

## Circuit Diagram

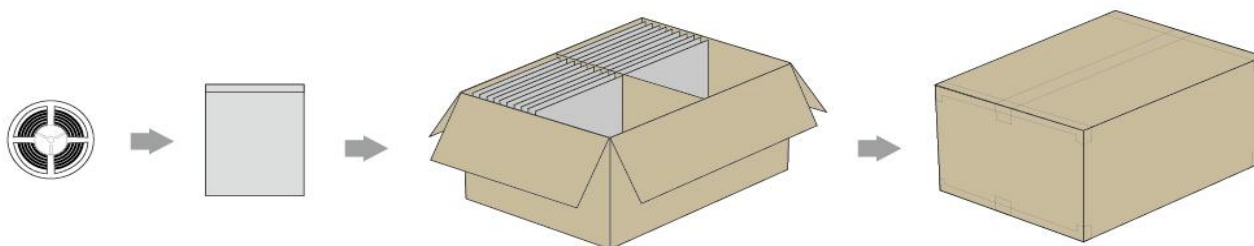


## Standard Accessories

IP Level	Category	Description	Picture	Part No.	Application
E 20	/	/	/	/	/
	/	/	/	/	/
D 54	/	/	/	/	/
	/	/	/	/	/
S 54	/	/	/	/	/
	/	/	/	/	/
K 54/65	/	/	/	/	/
	Installation Accessories	Installation Buckle+Screws		WW-FLS102JJA-MC	Waterproof strip
F 65	Connection Accessories	Front cap+End cap+Cable		WW-FLS102F-CW (10mm)	8mm Type F
	Installation Accessories	Installation Buckle+Screws		WW-FLS102JJA-MC	Waterproof strip
E 67	Connection Accessories	Front cap+End cap+Cable		WW-FLS102E-CW (10mm)	8mm Type E
	Installation Accessories	Installation Buckle+Screws		WW-FLS102JJA-MC	Waterproof strip
R 67	Connection Accessories	Front cap+End cap+Cable		WW-FLS102F-CW (10mm)	8mm Type R
	Installation Accessories	Installation Buckle+Screws		WW-FLS102JJA-MC	Waterproof strip
RW 67	Connection Accessories	Front cap+End cap+Cable		WW-FLS102F-CW (10mm)	8mm Type RW
	Installation Accessories	Installation Buckle+Screws		WW-FLS102JJA-MC	Waterproof strip
C 68	Connection Accessories	Front cap+End cap+Cable		WW-FLS102F-CW (10mm)	8mm Type C
	Installation Accessories	Installation Buckle+Screws		WW-FLS102JJA-MC	Waterproof strip



## Packaging Diagram













## Packaging information

















Ingress protection rating	Bag size	Inner carton		Outer carton		N.W	G.W	Outer carton volume
		Size	Reel/ctn	Size	Reel/ctn			
E 20	250*270*0.14mm	/	/	440*400*260mm	60	4.8KG ±10%	9.53 KG ±10%	0.04576m³
	9.84*10.63*0.0056 in	/	/	17.32*15.75*10.24 in	60	10.58 Lbs ±10%	20.966Lbs ±10%	1.616ft³
D 54	250*270*0.14mm	/	/	440*400*260mm	60	10.23KG ±10%	13.68KG ±10%	0.05m³
	9.84*10.63*0.0056 in	/	/	17.32*15.75*10.24 in	60	22.5 Lbs ±10%	30.096Lbs ±10%	1.62ft³
S 54	250*270*0.14mm	/	/	440*400*260mm	50	10.15KG ±10%	11.44KG ±10%	0.05m³
	9.84*10.63*0.0056 in	/	/	17.32*15.75*10.24 in	50	22.37 Lbs ±10%	25.22Lbs ±10%	1.62ft³
K 54/65	250*270*0.14mm	/	/	440*400*260mm	50	6.95KG ±10%	13.30KG ±10%	0.05m³
	9.84*10.63*0.0056 in	/	/	17.32*15.75*10.24 in	50	15.32Lbs ±10%	29.23Lbs ±10%	1.62ft³
F 65	250*270*0.14mm	/	/	440*400*260mm	40	11.2KG ±10%	14.95KG ±10%	0.05m³
	9.84*10.63*0.0056 in	/	/	17.32*15.75*10.24 in	40	24.69Lbs ±10%	32.969Lbs ±10%	1.62ft³
E 67	270*300*0.14mm	/	/	520*370*300mm	36	8.28KG ±10%	13.57KG ±10%	0.06m³
	10.63*11.81*0.0055 in	/	/	20.47*14.57*11.81in	36	18.216Lbs ±10%	29.85Lbs ±10%	2.04ft³
R 67	270*300*0.14mm	/	/	520*370*300mm	36	10.03KG ±10%	15.71KG ±10%	0.06m³
	10.63*11.81*0.0055 in	/	/	20.47*14.57*11.81in	36	22.111 Lbs ±10%	34.63Lbs ±10%	2.04ft³
RW 67	270*300*0.14mm	/	/	520*370*300mm	36	6.935KG ±10%	15.49 KG ±10%	0.06m³
	10.63*11.81*0.0055 in	/	/	20.47*14.57*11.81in	36	15.27 Lbs ±10%	34.15 Lbs ±10%	2.04ft³
C 68	270*300*0.14mm	/	/	520*370*300mm	36	11.52KG ±10%	15.73KG ±10%	0.06m³
	10.63*11.81*0.0055 in	/	/	20.47*14.57*11.81in	36	25.34Lbs ±10%	34.61Lbs ±10%	2.04ft³


### Remarks :


- Please contact our sales manager for customized package (color box, blister etc.)


 **Cautions**

IP20	IP54	IP65	IP67	IP68
				
Do not press the surface of LED	Pay attention to high temperature environment	Do not use in strong water waves environment	Resist strong water waves impact	Can apply to underwater do not deeper than 1m
				
Pay attention to damp-proof and dustproof	Do not apply to rainy environment	Can be applied to rainy environment	Do not apply to underwater environment for a long time	No direct sunlight

							
Do not tie a knot	Do not winding	Do not twist	Do not cut when it is working	Recommended the continuous working time do not exceed 12 hours daily	-20°C~+45°C (-4°F~+113°F)	0°C~+60°C (32°F~+140°F)	Operated by professionals
							
Pay attention to the application environment	IP Level will change after cutting	Do not pull and crash	Connected to power supply every 5 meters	Power supply must be connected to ground(GND)	The minimum bending diameter > 60mm	Power supply retain > 20%	Note the positive and negative poles

 For cutting LED strip operation, it is necessary to use the standard accessories provided by Dilux (e.g. DC wire, end-cap, front-cap, adhesive, etc.), and according to the correct cutting and connecting method for the installation.

 For avoiding LED get vulcanized, LED strip should be installed in the environment where does not has oil and corrosive substances. Such as these substances which contain Sulphur, Bromine, Iodine and Chlorine. Some other chemical elements which will cause Aromatic hydrocarbons releasing(such as: methylbenzene, xylene, methyl acetoacetate Ethyl acetate etc.),The environment in which includes strong acid and strong base.

 During the warranty period, only defective products are acceptable to be replaced by the factory. Factory is not responsible for other expenses because of replacement, such as transportation fee, installation fee, etc..

**\*\* If you do not follow the above "Cautions" to operate and result in damaging the product, the factory will not accept maintenance and return. \*\*The right of final interpretation is owned by Dilux.**