

SPECIFICATIONS for ELECTRA+ UVC LIGHT

Model: TZ18WUVC-001

Date: 2020/12/20

NO: SZTZ-LB-001

Part NO: F. LB.00001

TZ18WUVC-001 Datasheet

This 18W/m UVC soft lamp strip module adopts constant

current drive for each light source, and every 3 lights are cut to any length in a group.

This 18W/m UVC flexible light strip module adopts constant-current drive for each light source, and every 3 LEDs can be cut as one group.

RoHS
Compliant



FEATURES:

Deep UV LED with emission wavelength between 270-280nm

and 395-400nm

Constant current circuit

Low thermal resistance/

Wide viewing angle at 120°120°

Superior ESD protection

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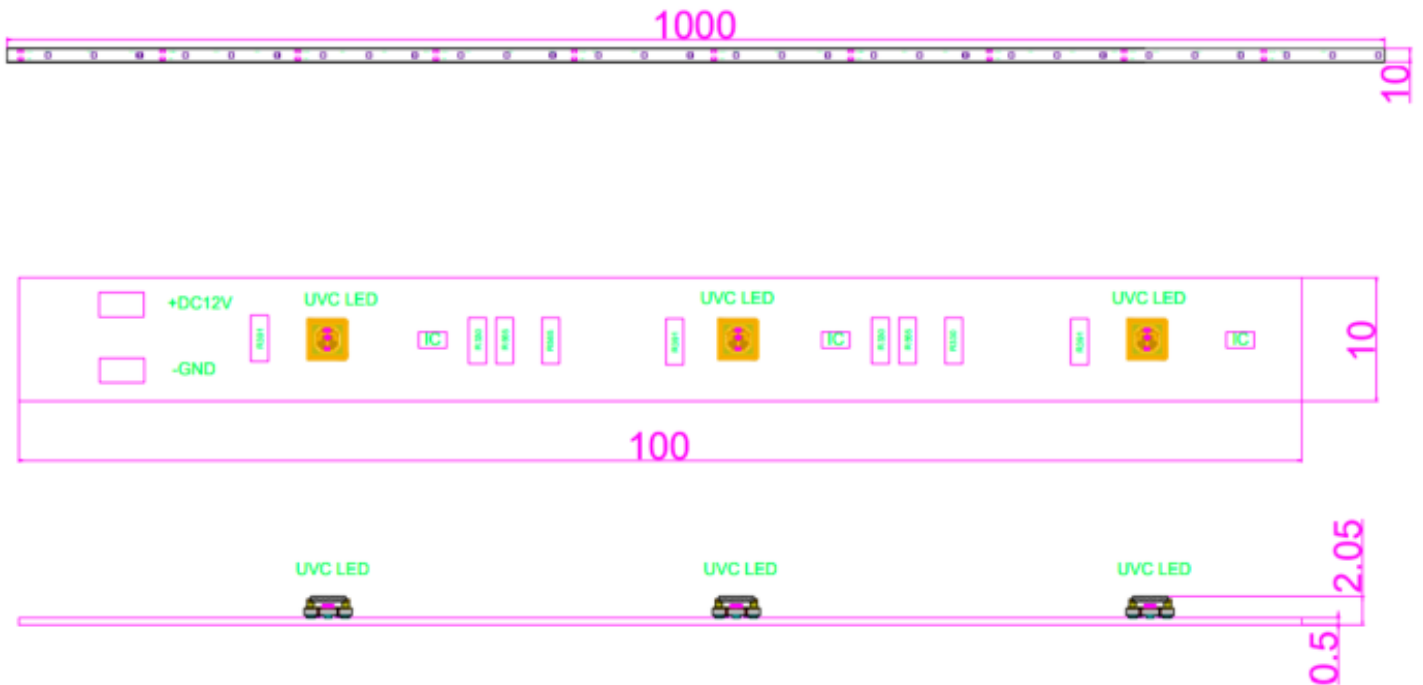
Environmentally safe materials, RoHS compliant

APPLICATIONS:

- + Personal hygiene
- + Portable devices
- + Water disinfection
- + Surface disinfection
- + Air disinfection

Note: The information in this document is subject to change.

PACKAGE DIMENSIONS



Notes:

1. All dimensions in millimeters.
2. Thickness tolerance of copper plate is $\pm 0.02\text{mm}$.
3. Thickness tolerance of product is $\pm 0.05\text{mm}$.
4. Tolerance is $\pm 0.1\text{mm}$ unless otherwise noted.

30 lamp electric parameters per meter (Ta=25°C)

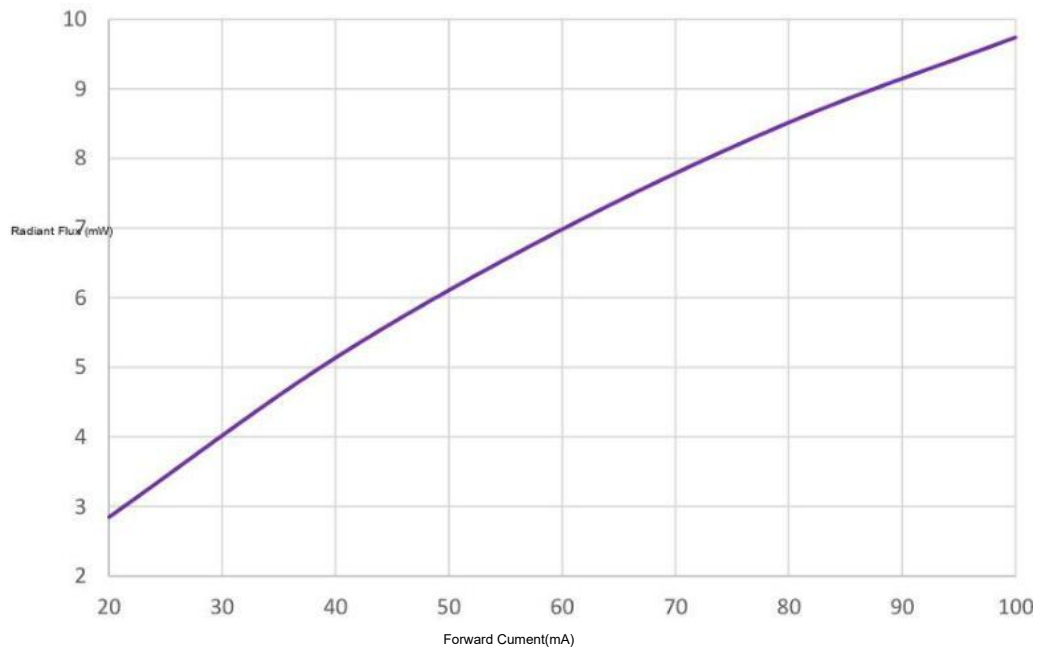
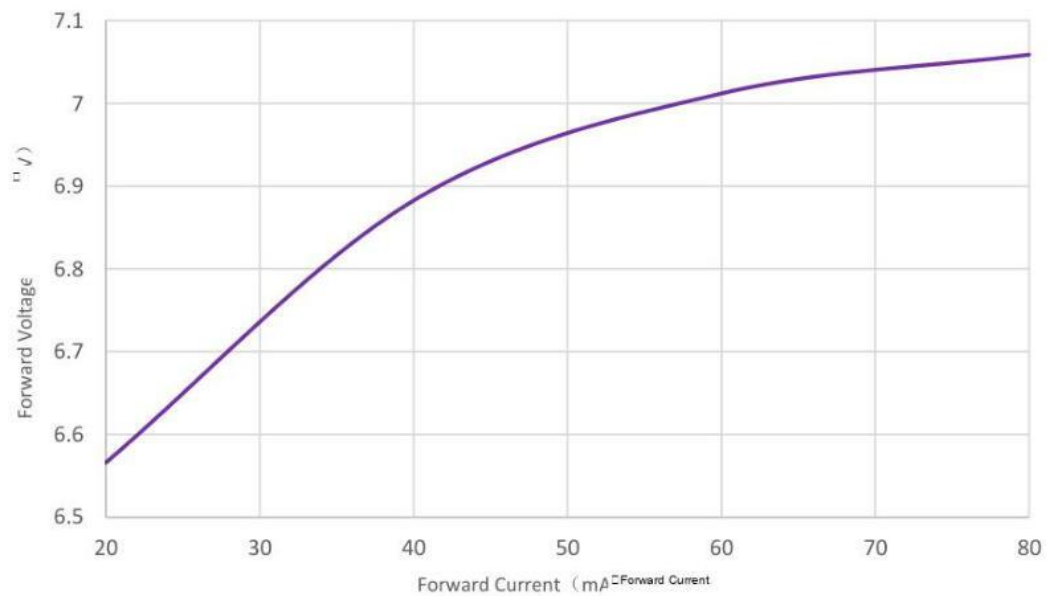
Parameter	Symbol	Value	Unit
Parameter	Symbol	Value	Unit
Forward current Forward Current	IF	1500	mA
Power Dissipation	Pd	18000	mW
Operating Temperature	Topr	-25~+110	°C
Storage Temperature	Tstg	-40~+80	°C
Soldering Temperature	Tsld	Reflow Soldering:260°C for 10 seconds	
Junction Temperature□Junction Temperature□	T ₅	80	°C

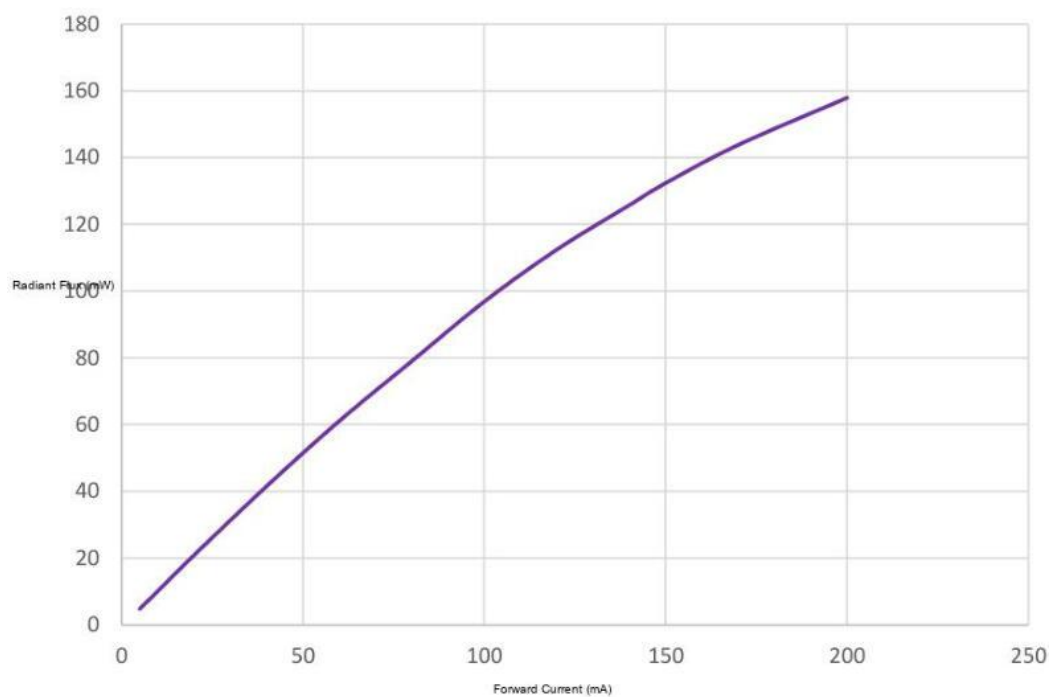
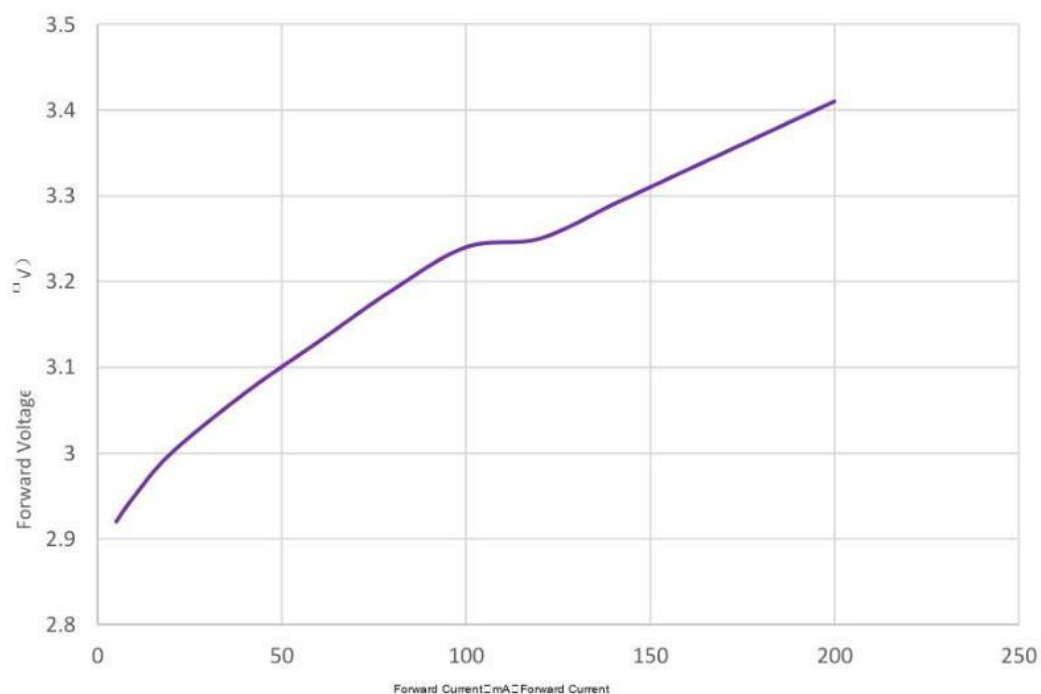
CHARACTERISTIC SP (Ta=25°C)

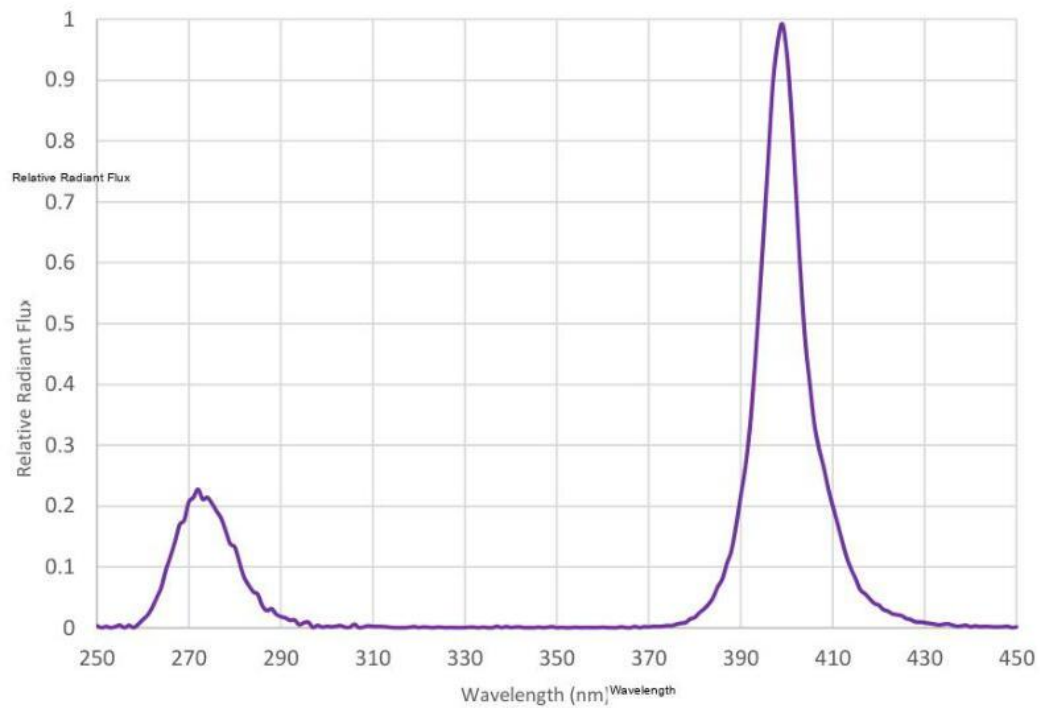
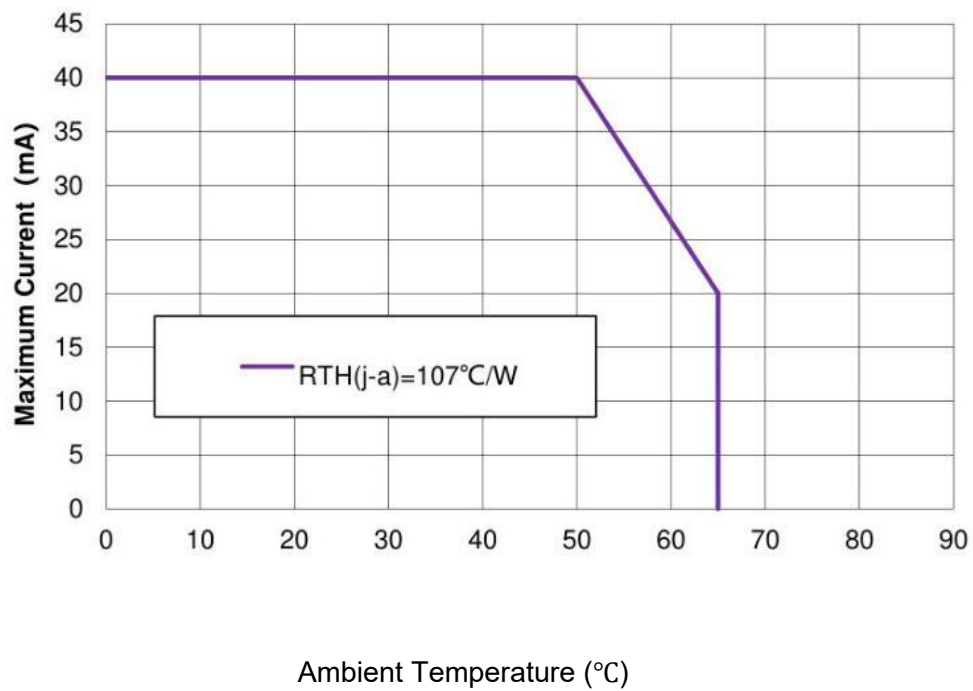
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Parameter	Unit	Condition	Min	Typ	Max	Unit
Reverse Current	IR	VR=12V	-	-	3	uA
Forward voltage	VF	IF=1500mA		12		V
Viewing Angle	2θ _{1/2}	IF=1500mA	-	120	-	deg.
UVC Radiant Flux	φ _e	IF=1500mA		150		mW
peak wavelength	λP1	IF=1500mA	390	395	400	nm
peak wavelength	λP2	IF=1500mA	270	275	280	nm

Notes:

1. Radiant Flux is measured with an accuracy of ±5%. ±5%.
2. Peak wavelength is measured with an accuracy of ±5%.
3. All measurements were made under the standardized environment of Tuozhan
All measurements were made under a standardized environment.

RELATIVE RADIANT FLUX VS. CURRENT vs($T_j=25^{\circ}\text{C}$)——UVC**ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}\text{C}$)--UVC**

RELATIVE RADIANT FLUX VS. CURRENT vs ($T_j=25^\circ\text{C}$)--UVA**ELECTRICAL CHARACTERISTICS ($T_j=25^\circ\text{C}$)--UVA**

RELATIVE SPECTRAL POWER DISTRIBUTION (T_j=25°C)**CURRENT VS. AMBIENT TEMPERATURE**

Reliability Test Items

Test Items	Test Duration	Number of Dama
Steady State Operating Life at High Temperature (HTOL) Ts=85□, IF= Max High Temperature Operating LifeTs=85□, IF= Max	1000hrs	0/20
Steady State Operating Life at Low Temperature (LTOL) Ta=-40°C,IF= Max Low Temperature Operating LifeTs=-40□, IF= Max	1000hrs	0/20
Pulse Wet Operating Life at High Temperature (PWHTOL)High Temperature/ Humidity Pulse 60°C/90%RH, IF 30mins ON /30min OFF	500hrs	0/20
High Temperature Storage (HTS) High Temperature Storage-80□	1000hrs	0/20
Low Temperature Storage (LTS) Low Temperature Storage-40□	1000hrs	0/20
Thermal Shock (TS) - 45°C~125°C 30min dwell 20sec transferThermal Shock-45□ 30min~125□30min□20	100cycles	0/20
Solder Resistance (SR) 265°C. 3X MSL Solder Resistance (after 3X MSL)	5sec	0/20
Solder Ability (SA) 245□5sec,95% coverage Solder Ability95%	5sec	0/11
Mechanical Shock (MS) 1500G 0.5msec pulse shock Mechanical Shock(MS) 1500G 0.5msec pulse shock	Each6 axis	0/6
Random Vibration (RV) Random Vibration 6G RMS,10-2000Hz, 10min	Per axis	0/6
Variable Vibration Frequency (VVF) 10-2000-10Hz, log or linear sweep rate.20 G for 1 min.1.5mm each apply 3x per axis over Variable Vibration Frequency(V VF) 10-2000-10Hz□log or linear sweep rate□20G, 1□ 1.5mm □ 3x per axis or above	6hrs	0/6
Salt Spread (SS) 35°C, 30g/m2/ day Salt Spray Test35□,30//	48hrs	0/11

Item	Symbol	Test Condition	Criteria for Judgment	
			Min.Min.	Max.Max.
Forward Voltage	VF	IF=Typical Current		U. S. L ×1.1
Radiant Flux Radiant Flux	mW	IF= Typical Current	L. S. L ×0.7	
peak wavelength	nm	IF= Typical Current		U. S. L ×1.1

PRECAUTION FOR USE

- (1) This device should not be used in any type of fluid such as water, oil, organic solvent, etc. When washing is required, IPA should be used. This device must not be used in water, oil, organic solvents or other fluids.

Use IPA when cleaning is required.

- (2) When the LEDs are illuminating, operating current should be decided after considering the ambient maximum temperature.

When LEDs are operating, the current should be determined according to the maximum ambient temperature.

- (3) LEDs must be stored to maintain a clean atmosphere. If the LEDs are stored for 3 months or more after being shipped, a sealed container with a nitrogen atmosphere should be used for storage.

LED storage environment must be kept clean. If stored for 3 months or longer, use a nitrogen cabinet.

- (4) The LEDs must be used within seven days after opening the moisture proof packing.

Repack unused Products with anti-moisture packing, fold to close any opening and then store in a dry place.

LEDs must be used within seven days after opening moisture-proof packing.

Repack unused products and store in a dry place.

- (5) The appearance and specifications of the product may be modified for improvement without notice.

Product appearance and specifications may be modified for improvement without prior notice.

- (6) This LED is sensitive to the static electricity and surge. It is recommended to use a wrist Band or anti-electrostatic glove

when handling the LEDs.

LEDs are sensitive to static electricity and surge. Use anti-static protection when handling LEDs.

- (7) On manual soldering, a solder tip must be needed as grounded for usage. If over voltage which exceeds the absolute

maximum rating is applied to LEDs, it will cause damage LEDs and result in destruction. Damaged LEDs will somewhat

turn-on as voltage becomes lower and the LEDs are totally defective at very low current.

During manual soldering, the soldering tip must be grounded. Over-voltage may damage LEDs.

Damaged LEDs may show abnormal characteristics such as increased leakage current or failure to light at low current.

- (8) Warning prompt: " UV may damage eyes, Do not stare at the light source "

