



unicornlite



REPORT

Quality Within Your Reach

Test report of in situ temperature measurement

REPORT NO: UN2112TM003

Client..... : Shenzhen Unicorn Lighting Co.,Ltd

Address..... : Floor 5-7, Building B, Huixin Intelligent Industrial Park,Guiyuan Road 23,
guanlan , Longhua ,518109 China

Product..... : LED STREET LIGHT

Model..... : ST050ME1H

Rating..... : 100-277V/AC, 50/60Hz, 50W

Test by: Kang yufu	Check by: Harold Liu	Reviewed by: Nicolas Zhang
Signature:	Signature:	Signature:
Test date: March 14, 2022	Check date: March 14, 2022	Reviewed date: March 14, 2022

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1. General

1.1 Product Information

Product description.....:	Outdoor, led street light
Model Number	ST050ME1H
Rated Inputs... ..:	100-277V/AC, 50/60Hz
Rated Power	50W
Declared CCT.....:	5000K
LED Manufacturer.....:	PHILIPS
LED Model.....:	SMD2835
Forward current of the LED chip.....:	53.8mA Driver
Driver Model.....:	XLG-50-H-A
Date of Test Samples.....:	March 14, 2022
Quantity of Test Samples.....:	1 unit

1.2 Standards or methods

Standard	Method
ANSI/UL 1598: 2008	In-Situ Temperature Measurement Test is conducted according to the ANSI/UL 1598-2008, Sections 19.7, 19.10-16. The testing was conducted in a room with ambient temperature of $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$. The apparatus construction followed those described in UL15898-2008 for normal temperature testing. Thermocouples were placed on the LED package and LED driver in the locations indicated by LM-80 report and driver. The temperature was recorded after the lamp was operating for a minimum of 7.5 hours.

1.3 Equipment list

ID	Instrument	Model name	Calibration Date	Calibration Due Date
UN-S-213	Power Meter	PF9800	2021-07-14	2022-07-14
UN-S-211	Temperature Tester	JK-8AU	2021-07-14	2022-07-14
UN-S-211	K thermocouple	JK-8AU-001	2021-07-14	2022-07-14

2. Test Result

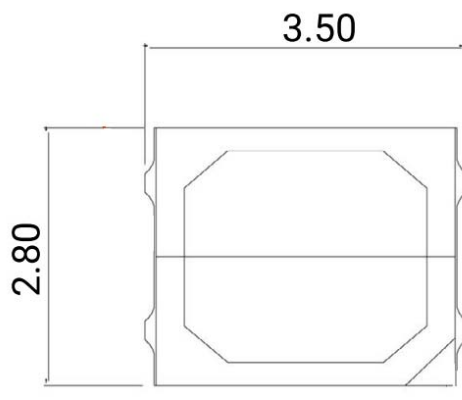
2.1 Electrical data

Criteria Item	Result
Input voltage	220V
Input current	0.23A
Total power	50W
Power factor	0.976
Current on each LED module	53.8mA

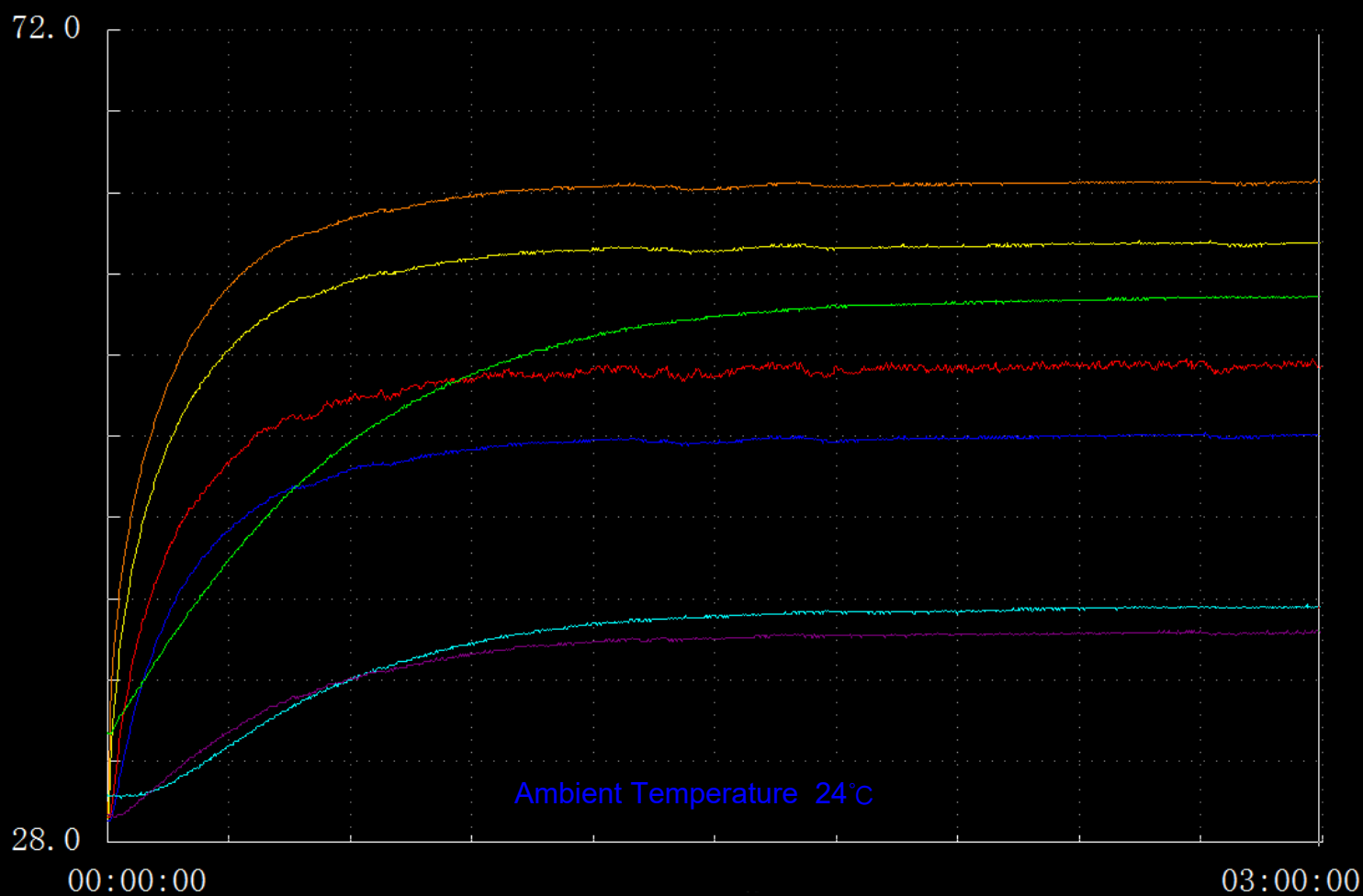
2.2 Temperature data

Criteria Item	Result(°C)	Limit(°C)
Ambient temperature	24	—
Measured maximum Temperature @TEM _{LED}	63.8	105
Measured Temperature @TEM _{LED} (Normalized to 25°C)	64.6	105
LED Driver T _c	57.6	90
LED Driver T _c (Normalized to 25°C)	58.6	90

2.3 TMP in LM-80 Report

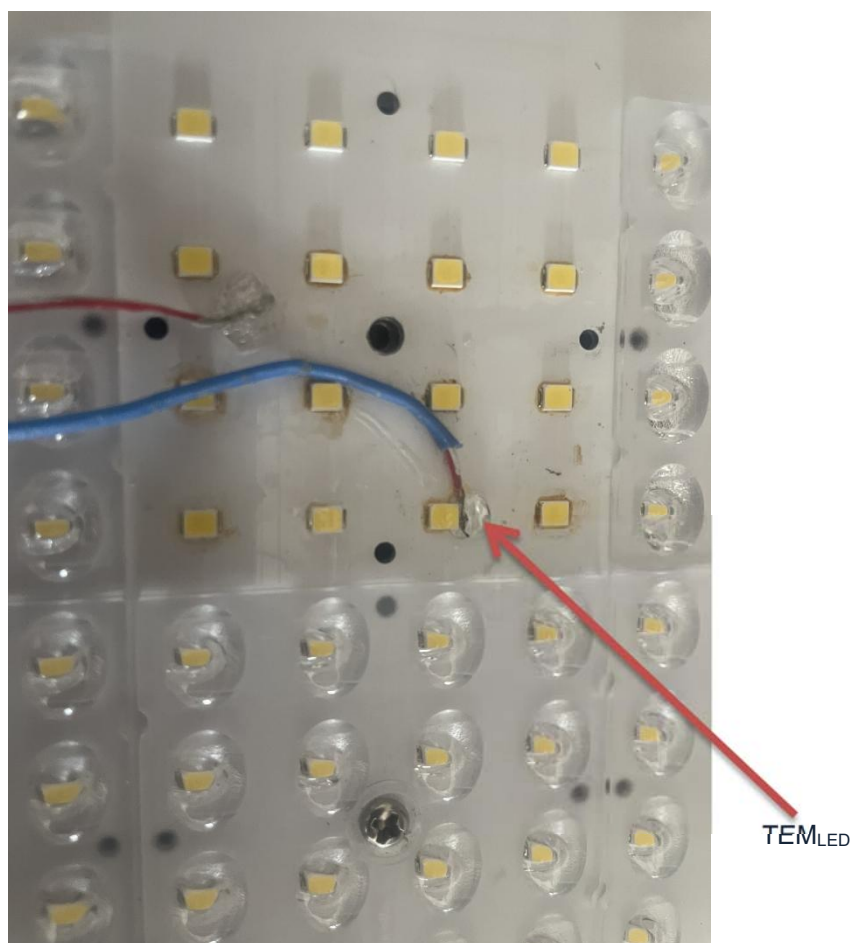


3. Temperature rise graph

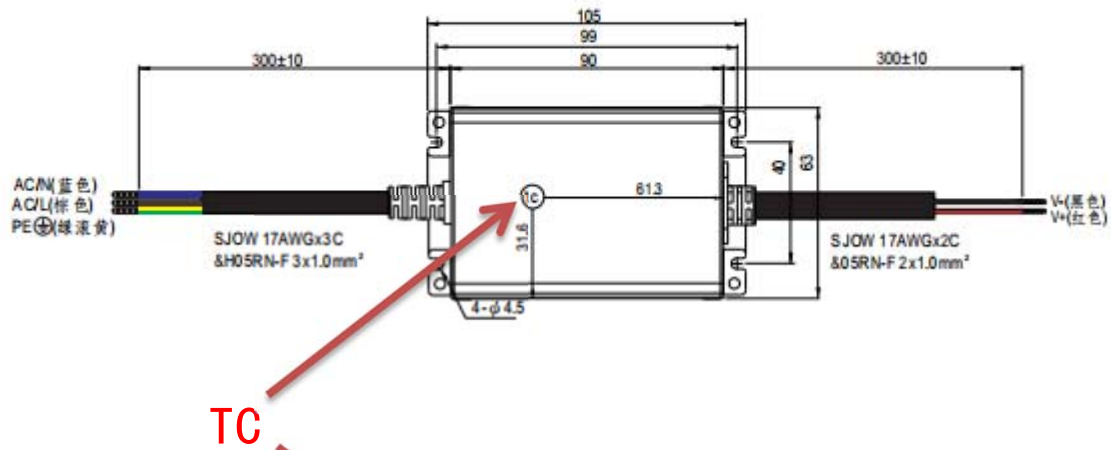


CH 1 LED Ts	63.8°C	CH 5 Driver Tc	57.6°C
CH 2 PCB Ts	60.6°C	CH 6 Driver Ta	40.8°C
CH 3 Heatsink Internal	50.1°C	CH 7 Driver Heatsink	39.5°C
CH 4 Heatsink External	54.1°C	Ambient Temperature	24°C

4. Thermocouple contact photo



5. Thermocouple contact on the Driver photo



6. Photo of sample

