

TEST REPORT

Reference No. : WTD22D04067568N001

Applicant: Blueview Elec-optic Tech Co., Ltd.

Address...... No.1000, Section 2, 2nd Konggang Road, Southwest Aviation

Industrial Development Zone, Shuangliu District, Chengdu City,

Sichuan Province, P.R.China

Manufacturer.: Blueview Elec-optic Tech Co., Ltd.

Address No.1000, Section 2, 2nd Konggang Road, Southwest Aviation

Industrial Development Zone, Shuangliu District, Chengdu City,

Sichuan Province, P.R.China

Product Name.....: LED Strip

Model No. : FN-FC-480-24

Ratings : 24VDC, 5W

Standards..... : Part 1: General Requirements And Tests

AS/NZS 60598.1:2017+A1:2017

In situ temperature measurement test (ISTMT) and TM-21-19*

Date of Receipt sample : 2022-04-29

Date of Test..... : 2022-04-29

Date of Issue : 2022-08-02

Test Result : See the attached sheets

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

Waltek Testing Group Co., Ltd.

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Compiled by:

Approved by:

Joe Huang / Project Engineer

Deval Qin / Designated Reviewer

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Trade Mark:

General remarks:

"(See Attachment #)" refers to additional information appended to the report.

(See remark #)" refers to a remark appended to the report.

"(See appended table)" refers to a table appended to the report.

Throughout this report a comma (point) is used as the decimal separator.

The clause marked * means the clause (s) is(are) out of the scope of the CNAS while being issued this test report.

Remark:

- Measurement was conducted at voltage 24VDC and at a stable ambient temperature 25°C±1°C.
- 2. All models are similar except to model name, colour temperature and enclosure shape are different. Unless otherwise specified, all tests were performed on model FN-FC-480-24 to represent the other similar models.
- 3. All tests at maximum power.
- 4. Detail information for models covered in this report as below:

Item	Model	Ratings	ССТ	LED Type	Driver
1	FN-FC-480- 24	24VDC, 5W	2700K	r. Mur.	

LED specification:

Model / Series	Manufacturer	V _F (V)	I _F (mA)	CCT (K)	Viewing angle (Deg)
SS-SD24- 3P07S4P1S13- 2790-A	Shenzhen Singsun technology Co., Ltd	24	450	2700K	TEX WILLEY

Possible test case verdicts:

test object does meet the requirement P (Pass)

test object does not meet the requirement F (Fail)



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1 - GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

General Description:

Product Type:	: LED Strip	
Manufacturer	Blueview Elec-optic Tech Co., Ltd.	
Product Model No:	FN-FC-480-24	
Product Brand Name:	it mer me me me	
Rated Voltage/Frequency:	24VDC	
Rated Power	5W	
Nominal CCT:	2700K	

1.2 Information of LED Light Source(tested in IES LM-80 Test Report)

Model No	SS-SD24-3P07S4P1S13-2790-A
LED Type	The set of the street out the second
Manufacturer:	Shenzhen Singsun technology Co., Ltd
Nominal CCT:	2700K
Total Number of Test Units:	20
Total Test Duration:	9000 hours
Tested Driver Current:	450mA
First Case Temperature:	85 °C
Second Case Temperature:	105 °C

1.3 Reference Standard

AS/NZS 60598.1:2017+A1:2017+A2:2020* Luminaires - Part 1: General requirements and tests IES TM-21-19* TECHNICAL MEMORANDUM: PROJECTING LONG-TERM LUMEN, PHOTON, AND RADIANT FLUX MAINTENANCE OF LED LIGHT SOURCES

IES LM-80-15* Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules

1.4 Test Facility

The test facility used by Waltek Testing Group Co., Ltd. is located at No. 77, Houjie Section, Guantai Road, Houjie Town, Dongguan City, Guangdong, China

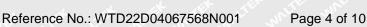
1.5 Test Summary

In-situ temperature measurement test (ISTMT) for one sample using AS/NZS 60598.1:2017+A1:2017 +A2:2020*, including sections 12.4.1.

Statement confirming the measurement method follows IES LM-84-14 Annex A.

1.6 Test Equipment

Equipment	Model/Type	Cal. Due. Date
AC Power Source	ALL POWER APW-150	white many many
Power meter	YOKOGAWA WT310E	2023-01-11
Multimeter	FLUKE 15B	2023-01-11
Temperature Recorder	Agilent 34970A	2023-01-11





The samples were operated until constant temperatures were obtained. A temperature was considered constant if the sample was operating for at least three hours and upon three successive readings - taken at 15 minute intervals - were within one degree and were not rising.

Thermocouples were attached at locations described in the results by means of a cement made of water glass and Fuller's earth, solder, or epoxy.

3 - Life Measurement Data

Test Method:

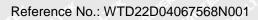
Lumen maintenance life of LED light source and LED lamp or luminaire (if any) is the elapsed operating time over which an LED light source maintains a given percentage of its initial light output. L70 in this report is the time (in hours) when the light output from the LED has dropped to 70% of its initial output. A lumen maintenance test report of LED light sources was provided by client to calculate the lumen maintenance life according to IES TM-21-19. The calculator was developed by Light Naturally, version date 2021-10-26, and temperature interpolation type.

The LED light source is LED package, array, or module which is tested in IES LM-80 test report. Final product means LED lamp or luminaire which the LED light source will be included. Ts is the temperature of the thermocouple attachment point on the LED light source package as defined by the manufacturer of the LED light source. The in situ temperature of LED light source used in final product was used to calculate the lumen maintenance life of final product, if any.

Reported L70: For a sample size of 20 units or more, luminous flux values must not be projected beyond 6 times the total test duration (in hours) of measured data. For a sample size of 10 units to 19 units, luminous flux values must not be projected beyond 5.5 times the total test duration of measured data.

The LM-80 test data used in this report is from report No.: R2DG191101066-10-9000-M1 which is issued by Bay Area Compliance Laboratories Corp. (Dongguan) (Laboratory), issue date: 2022-03-01.







4 - Appended-Test Data Sheet

4.1.1 Thermal Test Result of Product

1.12 (12.4)	TABLE: Thermal to			P		
	Type reference		:	FN-FC-480-24		—
The su	Lamp used		411	LED	FER CLIEB OF	
	Lamp control gear u	ısed	v:	in my	70.	
ier inti	Mounting position of	f luminaire	:	As normal used	ALTER MIT	_
	Supply wattage (W)	(d		4.790	20, 20	
WITE.	Supply current (A) .			0.1996	JEE NIE	
TEX.	Temperatures in test ta (°C)			25	TEX TEX	_
1/2 1	- abnormal operatin			THE WALL OF	in the to	
LEF S	- test 1: rated voltage	je	<u> </u>	24V	y 16th 1	_
7 1/2	- test 2: 1,06 times wattage or 1,1 times			Will Mult Mult Mult Mult		_
Mery	- test 3: Load on will voltage or 1,05 time			WALTER WALTER	MULTER MULE	_
MALTER	Through wiring or lo	ooping-in wiring I the test	oaded by a	INLIEK WITEK	INLIEK WALTER	_
1.12 (12.5)	u Tay Anti	Mr.	4		TEX INCTEX	_
		Temperat	ure measuremen	its (°C)		
Part		Ambient	Cl. 12.4 –	normal	Cl. 12.5 – a	bnormal

Temperature measurements (°C)								
Dort	Ambient	Cl. 12.4 – normal Cl. 1				Cl. 12.5 –	abnormal	
Part	Ambient	test 1	test 2	test 3	limit	test 4	limit	
LED driver to point	25	7.5	44.0	* -UE	Ref.	Viles White	AUDE:	
Supplementary information:	Car Clare	West of	Vr. 200	70.	10.	1 1	J.	



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4.1.2 ISTMT Test Result of Product

Ambient Temperature	, °C : 25 <u>+</u> 1°C	25±1°C Relative Humidity, 9		%:	65%	
Supply voltage:	24V DC	24V DC Type of thermocoup		ıples:	J	
Test Product Model.	FN-FC-480-24	m. n	A THE THE	LIEK SLIE	MITER MITER	
Test LED Model.	SS-SD24-3P07	24-3P07S4P1S13-2790-A				
Test LED Driver Model.		the tex riex writes writes write write write write				
Number of Driver / Product	3 - any an	NE WALL WATER TEX TEX STEEL WHITE WALTER WA				
Test Duration	≥3.5Hours	≥3.5Hours				
Sample number	Test Location	Location E	Description	Test R	esult at 25°C (°C)	
nitt ur#1 wall	101	Temperati	ure for LED #1	44.0	White White	
LED drive current (F	orward current o	of LEDs)*	200mA	* *	at at	





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4.2 Test Data of LM-80Test

: Sample Set 1 SS-SD24-3P07S4P1S13- 2790-A
85
450
20
9000
Avg. Luminous Flux (%)
100.00%
99.44%
99.03%
98.60%
98.14%
97.72%
97.33%
96.98%
96.63%
96.26%

LM-80 Test Data: Sample Set 2					
Test product identifier	SS-SD24-3P07S4P1S13- 2790-A				
Input power (W)					
Test case temperature (°C)	105				
Test drive current (mA)	450				
Sample Size	20				
Test duration (hours)	9000				
Time (hours)	Avg. Luminous Flux (%)				
0	100.00%				
1000	99.08%				
2000	98.24%				
3000	97.53%				
4000	96.71%				
5000	96.20%				
6000	95.75%				
7000	95.31%				
8000	94.82%				
9000	94.28%				

4.3 Test Result of LM-80 Test

LM-80 Test Set	Test Set 1	Test Set 2
Description of LED Light source tested	SS-SD24-3P07S4P1S13-2790-A	SS-SD24-3P07S4P1S13-2790-A
Sample Size	20	A 20 A 30
DUT drive current used in the test (mA)	450	450
Test duration (hours)	9000	9000
Test duration used for projection (hours)	4000 to 9000	4000 to 9000
Tested case temperature (°C)	85	105
Flux maintenance	write wir were were	The state of
we we are a	3.828E-06	5.005E-06
of the the little wife B	0.996	0.987
Reported L(94) (9k)	15000	10000



4.4 TM-21 report

Reference No.: WTD22D04067568N001

Model: FN-FC-480-24	
In-Situ Inputs	74 74 79 2)
Input Power for LED package/array/module (W):	
Drive current for each LED package/array/module (mA):	200
In-situ case temperature (Tc, ⁰ C):	44.0
Percentage of initial lumens to project to (%):	94
Temperature only Interpolation	10.
T _{s,1} (°C)	85
T _{A.1} (K)	358.15
α_1	3.828E-06
THE B1 WE WILL B	0.996
T _{s,2} (°C)	While My
T _{A,2} (K)	at a
α_2	Write Will.
B_2	* - d
T _{s,i} (°C)	44.0
T _{s,i} (K)	317.15
A	Surt. M
m _B	-
b_{B}	Mr Mr.
Q _i	3.828E-06
B ₀	1.000
Reported L(94) (9k)	15000



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Attachment 1: Photo document

Model: FN-FC-480-24



Photo 1

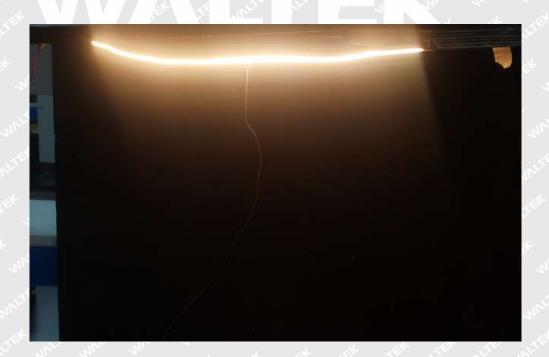


Photo 2

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Photo 3

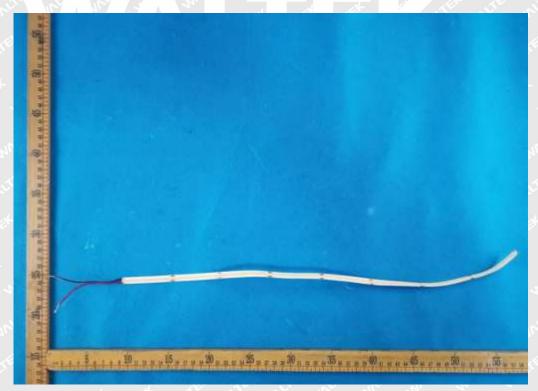


Photo 4

===== End of Report =====