

In Situ Temperature Measurement Test Report

For

LIGHT EFFICIENT DESIGN

(Brand Name:N/A)

188 S. Northwest Highway Cary, IL 60013

LED Lamp

Model name(s): LED-8087EXXC-A
LED-8087MXXC-A

Remark : The suffix of the model name“E” stand for E26;“M” stand for E39. The letter “XX” on the model name represents the color temperature, “40” stand for 4000K, “57” stand for 5700K.

Representative (Tested) Model: LED-8087E40C-A

Model Different: N/A

Test & Report By:

Jack Luo

Engineer: Jack Luo

Date:May.31,2016

Review By:

Tommy Liang

Manager: Tommy Liang

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4918-A/0

Address : Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

Fax: 8620-32290422

<http://www.standard-tech.com>



Table of Contents

1 General 3

 1.1 Product Information 3

 1.2 Standards or methods 4

 1.3 Equipment list 4

2 Test conducted and method 4

 2.1 Ambient Condition 4

 2.2 Temperature Stabilization 4

 2.3 Thermocouples 5

 2.4 Thermocouples contact 5

3 Test Results 6

 3.1 Test Data: 错误!未定义书签。

 3.2 Test Photo: 6

 3.3 Test Data of LED Driver: 错误!未定义书签。

 3.4 Test Photo: 错误!未定义书签。

1 General

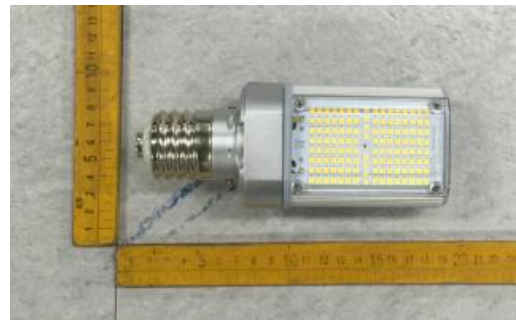
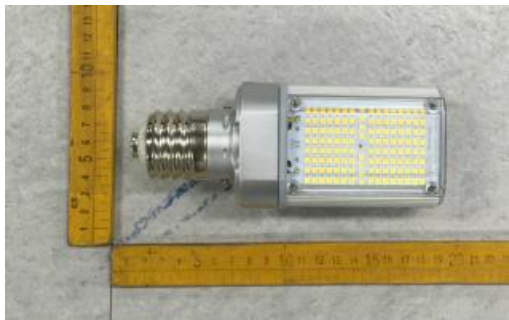
1.1 Product Information

Brand Name	N/A
Model Number	LED-8087EXXC-A, LED-8087MXXC-A
Luminaire Type	LED Lamp
Nominal Power	30W
Rated Initial Lamp Lumen	--
Declared CCT	4000K,5700K
LED Manufacturer	Guangzhou Hongli Opto-Electronic Co., Ltd.
LED Model	HL-A-2835DW-S1-08-HR3
Sample Receipt Date	Apr.01,2016
Sample Number	GZE160347-N1

Photo



LED-8087E40C-A



LED-8087M40C-A

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4918-A/0

Address : Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

1.2 Standards or methods

The following standards are partly or totally used or referenced for test:

No.	Name
ANSI/UL 1598:2008	Luminaires

1.3 Equipment list

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
PF210	Power Meter	2015-07-01	2016-06-30
ST-R-181A	Temperature Tester	2015-07-01	2016-06-30

2 Test conducted and method

2.1 Ambient Condition

Test was conducted in an ambient temperature of $25 \pm 5^\circ\text{C}$. Ambient temperature variations above or below 25°C was subtracted from or added to temperatures recorded at points on the luminaire.

The ambient temperature was measured by a thermocouple which was immersed in 15ml of mineral oil in a glass container.

2.2 Temperature Stabilization

Temperatures were measured after they have stabilized when the test has been running for a minimum of 7.5 hours, or the test has been running for a minimum of 3 hours and three successive reading taken at 15 minutes intervals are with 1°C of another and are not rising.

2.3 Thermocouples

Type J thermocouple was used for temperature measurement. The thermocouple was 0.05mm²(30AWG), and complied with the requirements specified in ASTM MNL 12 and limits of error specified in NIST ITS 90 and ISA MC96.1.

2.4 Thermocouples contact

Thermocouples were in contact with the TMP LED location described in LM-80 test report. In order to gain the maximum temperature, if appropriate, more than one thermocouple were contact in these locations. For details information, please refer to clause 3.3 for the photo of thermocouple contact.

3 Test Results

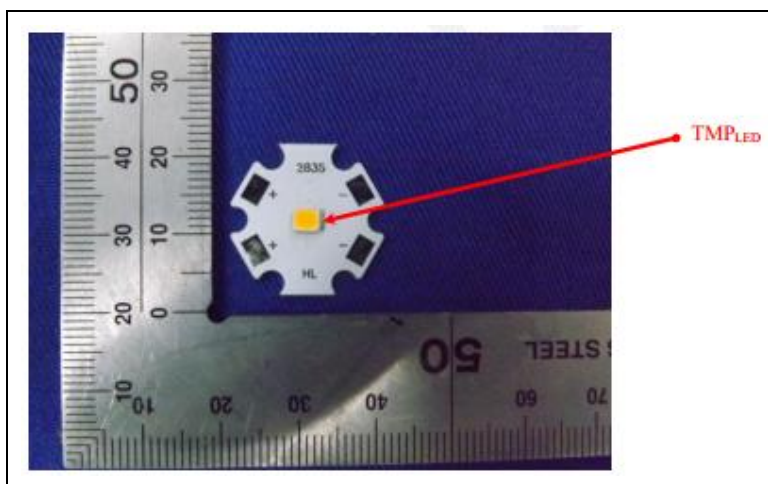
Test date	2016-04-24	Test Ambient	25.1 °C
Sample No.		LED Package Model	
GZE160347-N1		HL-A-2835DW-S1-08-HR3	
LED driver of Each Lamp	Output voltage V	Measured LED working current (Max.) mA	
1	45.9	67.5	

3.1 Test Data:

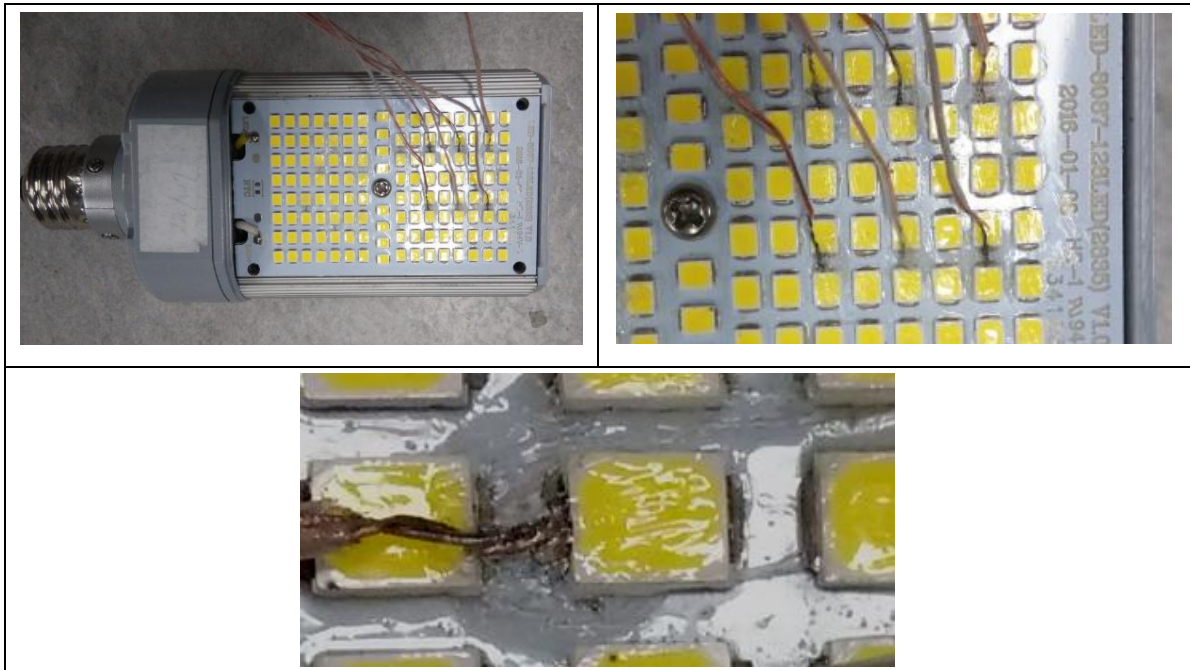
Input Vol.	220.0V	Input Current	0.1466A	Input Wattage	31.23W	Temperature stabilization time:	500 min	
No.	Temperature (°C)		No.	Temperature (°C)		No.	Temperature (°C)	
	Measured	Corrected at 25°C		Measured	Corrected at 25°C		Measured	Corrected at 25°C
1	74.1	74.0	3	74.9	74.8	5	73.2	73.1
2	74.5	74.4	4	73.5	73.4	6	73.8	73.7
The highest in-situ measured temperature LED is 74.8°C								

3.2 Test Photo:

Ts Position:



Thermocouple Location on Temperature Measurement Point (TMP):



Results

Time (t) at which to estimate lumen maintenance (hours):	36,000
Lumen maintenance at time (t) (%):	81.58%
Reported L70 (hours):	>54000

***** END OF THE TEST REPORT*****