

**ENERGY EFFICIENCY CERTIFICATION (EEC): Test Report**

**Project Number:** GZE151016-B1

**Customer Name:** L-TECH CORPORTION

**Address:** SHAOGANGTOU DISTRICT.QIAOTOU TOWN.  
DONGGUAN CITY.GUANGDONG PROVINCE,CHINA

**Brand name(s):** L-TECH CORP

**Model name(s):** LTSQ545

**Product category:** LED DOWNLIGHT

**Electrical Ratings:** 120Vac,60Hz 16W

**Representative (Tested) Model:** LTSQ545

**Model differences:** N/A

**LED Manufacturer:** EVERLIGHT ELECTRONICS CO.,LTD.

**LED Model** 62-217D(3000 K)

The Sample(s) tested is(are) compliant with the following applied standards/regulations:

ENERGY STAR<sup>®</sup> : ENERGY STAR<sup>®</sup> Program Requirements Product Specification for Luminaires - Version 2.0

**Test & Report By:**

*Johnson Sun*

Engineer: Johnson Sun

Date: Nov.11,2015

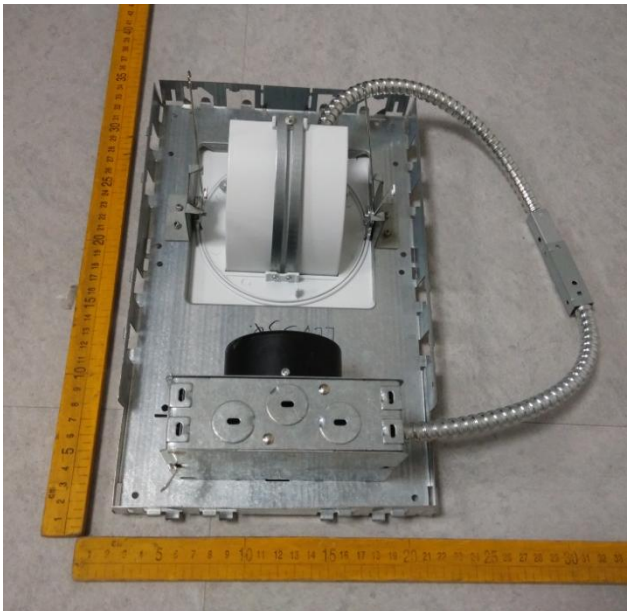
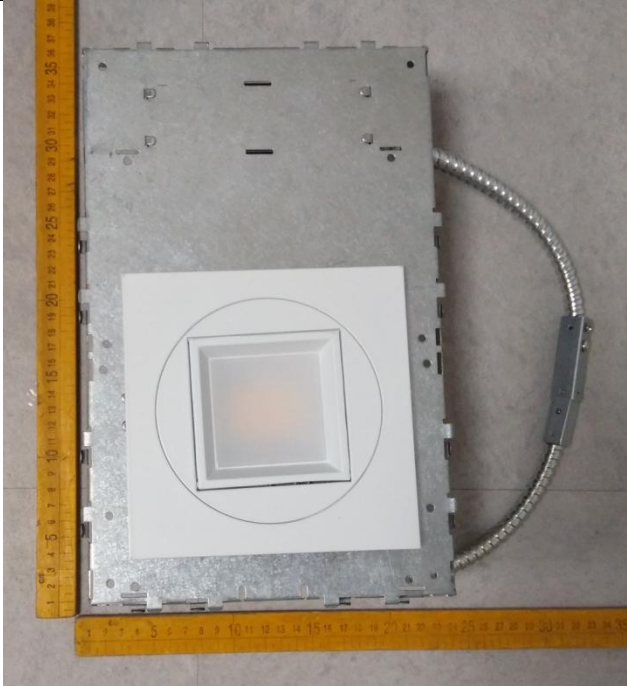
**Review By:**

*Tommy Liang*

Manager: Tommy Liang

**Attachment**

**Photo**





## Annex

Regulatory Body	Tests to Determine Compliance	The Type Luminaires	Test Limit per Regulation or Program Requirement	Measured Efficiency or Limit Level	Pass / Or Fail
ENERGY STAR	Luminaire Minimum Light Output	SSL downlight retrofits	$\leq 4.5"$ aperture: 345 lumens $> 4.5"$ aperture: 575 lumens	1139.9lm	Pass
ENERGY STAR	Input Wattage	All	$\leq$ Rated Wattage	15.91W	Pass
ENERGY STAR	Luminous Efficacy	SSL downlight retrofits	$\geq 65$ lm/W	71.64lm/W	Pass
ENERGY STAR	Zonal Lumen Density	SSL downlight retrofits	$\geq 75\%$ of total initial lumens within the 0-60° zone	86.6%	Pass
ENERGY STAR	Correlated Color Temperature (CCT)	Shall be capable of providing at least one of the following nominal correlated color temperatures (CCTs): 2700 Kelvin 3000 Kelvin 3500 Kelvin 4000 Kelvin 5000 Kelvin	$2725 \pm 145$ K Duv -0.0001 $\pm$ 0.006	2700K:2694K Duv=-0.0007	Pass
ENERGY STAR	Color Rendering Index (CRI)	All	$R_a \geq 80$ $R_9 > 0$	$R_a = 86.4$ $R_9 = 35$	Pass
ENERGY STAR	Color Maintenance	Solid State	$\Delta u'v' \leq 0.007$	See LM80	Pass

ENERGY STAR	Color Angular Uniform	SSL downlight retrofits	The variation of chromaticity shall be within 0.006 from the weighted average point on the CIE 1976 (u',v') diagram	0.0044	Pass
ENERGY STAR	Start Time	Solid State	< 750 ms	124ms	Pass
ENERGY STAR	Power Factor	Solid State	Total luminaire input power ≤ 5 watts: PF ≥ 0.5 Total luminaire input power > 5 watts: PF ≥ 0.7	0.9955	Pass

## Annex

ENERGY STAR	Transient Protection	All Luminaires	The line transient shall consist of seven strikes of a 100 kHz ring wave, 2.5 kV level, for both common mode and differential mode.	Comply	Pass
ENERGY STAR	Dimming	Solid State	The luminaire and its components shall provide continuous dimming from 100% to 20% of total light output.	Comply	Pass
ENERGY STAR	Operating Frequency Requirements - Directional and Non-Directional Luminaires	Solid State	<b>Frequency <math>\geq</math> 120 Hz</b>	<b>120.09Hz</b>	<b>Pass</b>
ENERGY STAR	Driver Replaceability	Solid State	Drivers shall be accessible and removable by an electrician without the cutting of wires and without damage to the luminaire housing, trim, decorative elements or the carpentry (e.g., ceiling drywall) to which the luminaire is attached.	N/A	Pass
ENERGY STAR	Maximum Measured Ballast or Driver Case Temperature	Solid State	$\leq 105^{\circ}\text{C}$	$67.3^{\circ}\text{C}$	Pass
ENERGY STAR	Maximum In-Situ Source Temperature	Solid State	$\leq 95^{\circ}\text{C}$	$61.6^{\circ}\text{C}$	Pass
ENERGY STAR	Warranty	Solid State	$\geq 3$ years	3 years	Pass

	<b>Standard-Tech Co. Ltd Testing Center</b>  STD/QR4910-A/1	 NVLAP LAB CODE 201011-0
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ENERGY STAR	Safety	Solid State	N/A	N/A	Pass
ENERGY STAR	Lighting Toxics Reduction Requirements	Solid State	N/A	RoHS report has been verified	Pass
ENERGY STAR	Packaging Requirement				
ENERGY STAR	CCT	Solid State	Packaging shall clearly describe the nominal color designation in units of Kelvin (e.g. 2700K, 3000K).	2700K,3000K, 3500K,4000K, 4500K, 5000K	Pass

--- End of Report ---