

# Technical Evaluation Report

## RoHS EN50581

Report No.: RoHS-111-113

Issued Date: 2022-07-13



# Technical Evaluation Report

## Cheng Shiu University Electrical Technology Center Environmental & Reliability Testing Laboratory

No. 840, Chengcing Rd., Niaosong Township,  
Kaohsiung County 833, Taiwan, R.O.C.

Tel: +886-7-733-7383 Fax: +886-7-733-7390  
Email: etc@gcloud.csu.edu.tw

### RoHS EN50581

Report No: RoHS-111-113

**Applicant:** EPILEDS TECHNOLOGIES, INC.  
**Address:** No.7, Kanxi Rd., Tree valley Park,  
Xinshi Dist, Tainan City 744092, Taiwan, R.O.C.  
**Phone:** +886-6-5050101 Fax: +886-6-5056533  
**Product:** Down light  
**Model No(s):** xELS-DLy4zzzwwS04u / xELS-DLy4zzzwwA05u series  
Variant Description:  
x : denote Importer / Customer , each "x" can be 0 to 9 or A to Z  
y : denote LED color temperature, each "y" can be 0 to 9 or A to Z  
zzz : denote Wattage, each "w" can be 0 to 9 or A to Z  
ww : denote size, each "s" can be 0 to 9 or A to Z  
u : denote packaging , each "u" can be 0 to 9 or A to Z

#### Executive Summary

This report is a complete Technical Documentation file to assist the manufacture demonstrating the obligation required by 2011/65/EU directive, and the associated product's compliance with the abovementioned directive.

The report shows that the evaluation product(s) has met the requirement of 2011/65/EU directive. This result is only based on the product sample and/or relevant documents for materials, parts, and/or sub-assemblies submitted by the Applicant and/or the Manufacturer.

This report must not be reproduced, except in full, without the written approval of the issuing testing/evaluating center. The Applicant and Manufacturer have agreed to produce the subject product(s) in accordance with the description of this report. The Manufacturer has also agreed to notify Cheng Shiu University Electrical Technology Center and to request evaluation prior to using alternate parts, components or materials.

**Received Date:** 2022-07-11

**Achieved Date:** 2022-07-13

**Test Site:** No. 840, Chengcing Rd., Niaosong Dist,  
Kaohsiung County 83347, Taiwan, R.O.C.  
Environmental & Reliability Testing Laboratory,  
Electrical Technology Center, Cheng Shiu University



Authorized Representative

*Hsing-Feng Chen*

H. F. Chen

## 1 Overview

The submitted sample/ documents are evaluated in following report with regard to the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU ("the RoHS Directive") in order to identify the compliance with RoHS apply to the sample.

DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Ensuring of Electrical and Electronic Equipment placed on the market, including cables and spare parts for its repair, its reuse, updating of its functionalities or upgrading of its capacity, does not contain the substances and maximum concentration values tolerated by weight in homogeneous materials:

Lead (0,1 %)

Mercury (0,1 %)

Cadmium (0,01 %)

Hexavalent chromium (0,1 %)

Polybrominated biphenyls (PBB) (0,1 %)

Polybrominated diphenyl ethers (PBDE) (0,1 %)

Bis(2-ethylhexyl) phthalate (DEHP) (0,1 %)

Butyl benzyl phthalate (BBP) (0,1 %)

Dibutyl phthalate (DBP) (0,1 %)

Diisobutyl phthalate (DIBP) (0,1 %)

## 2 Relevant Standards and Reference

EN 50581:2012 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

- The standard applied in full or in part here to the evaluation of this entire electrical and electronic product. Especially it provided the key concept and guidance for technical documentation compiling to show the product's compliance with RoHS recast directive (2011/65/EU)

## 3 General Description of the Product

### 3.1 Product Information

**General item description:**

Down light

**Model no.:**

xELS-DLy4zzzwwS04u / xELS-DLy4zzzwwA05u series

**Additional Information:**

Variant Description:

x : denote Importer / Customer , each "x" can be 0 to 9 or A to Z

y : denote LED color temperature, each "y" can be 0 to 9 or A to Z

zzz : denote Wattage, each "w" can be 0 to 9 or A to Z

ww : denote size, each "s" can be 0 to 9 or A to Z

u : denote packaging , each "u" can be 0 to 9 or A to Z

### 3.2 Product Photo

P/N: xELS-DLy4zzzwwS04u series

( Example: DELS-DLD400841S041 / DELS-DLD401661S041 / DELS-DLD402481S041)



P/N: xELS-DLy4zzzwwA05u series

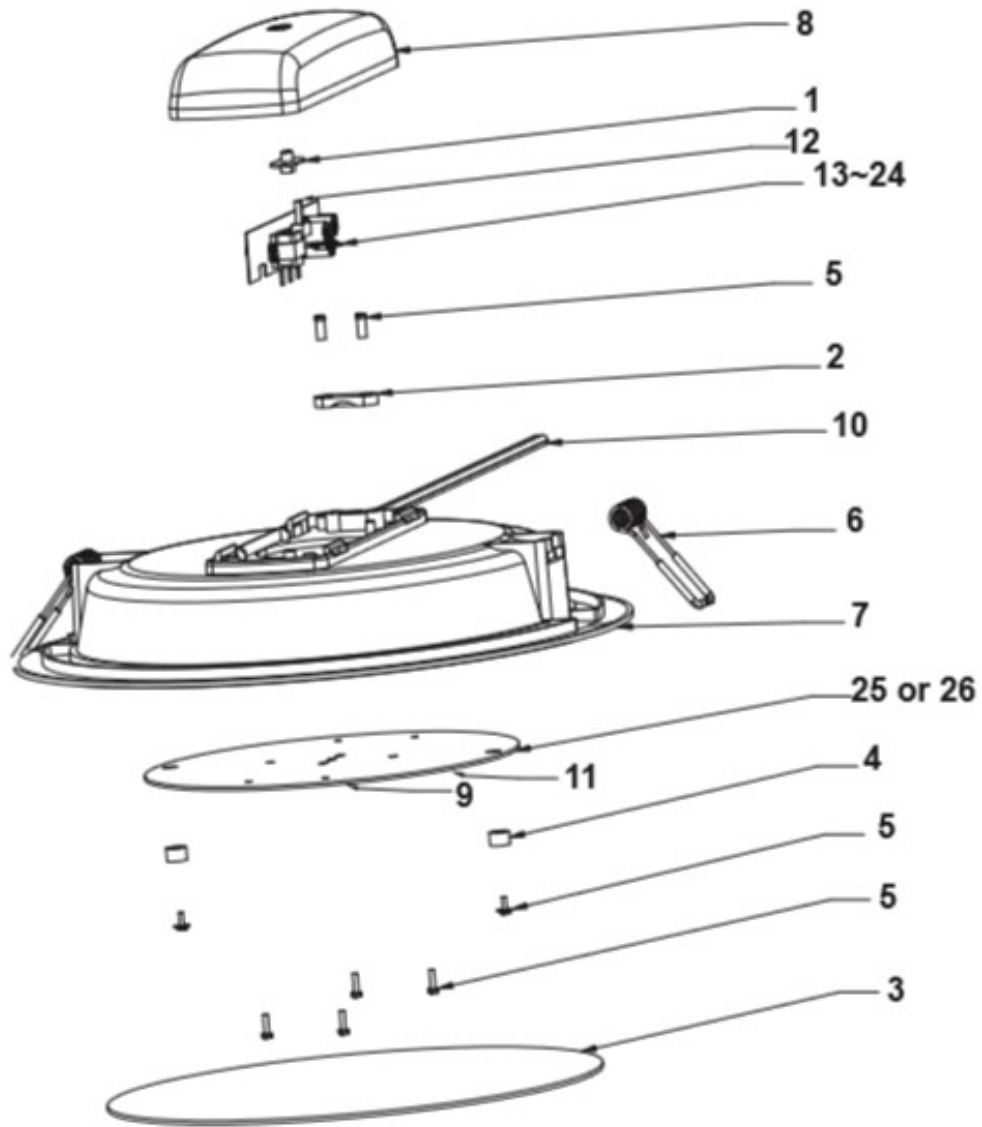
( Example: DELS-DL3400841A051 / DELS-DL4401661A051 / DELS-DLC402481A051)



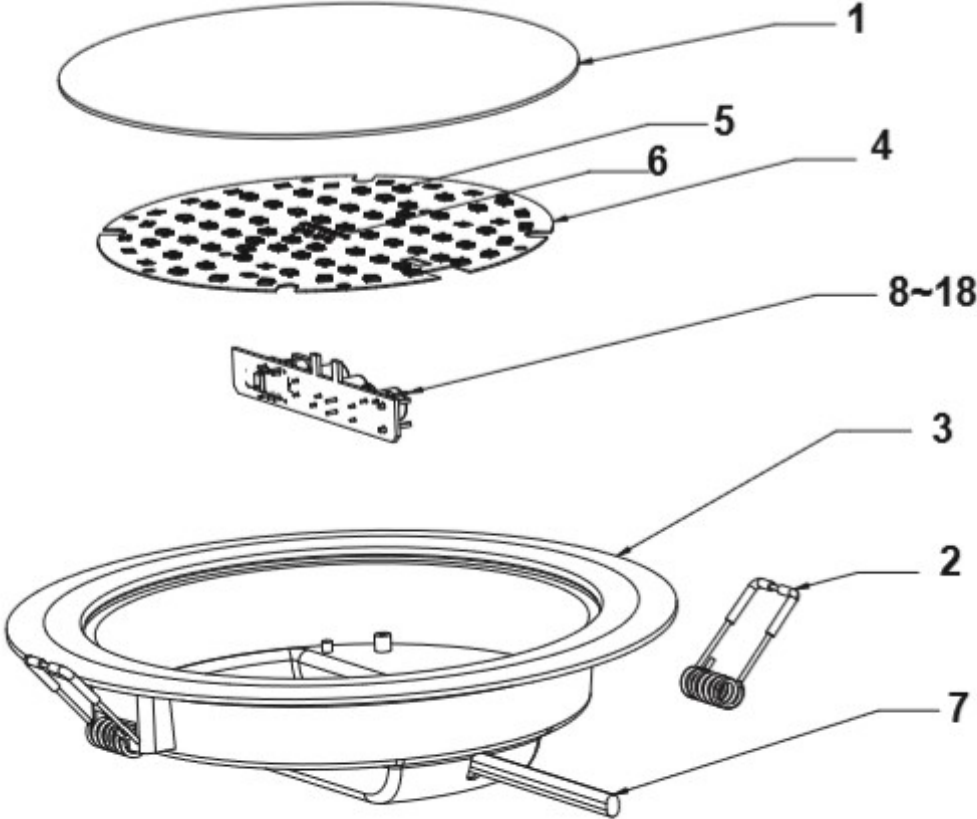
3.3 Exploded Diagram of Product

P/N: xELS-DLy4zzzwwS04u series

( Example: DELS-DLD400841S041 / DELS-DLD401661S041 / DELS-DLD402481S041)



P/N: xELS-DLy4zzzwwA05u series  
( Example: DELS-DL3400841A051 / DELS-DL4401661A051 / DELS-DLC402481A051)



**3.4 Bill of Material (BOM)**

P/N: xELS-DLy4zzzwwS04u / xELS-DLy4zzzwwA05u series

P/N	版次	日期
DELS-DLD400841S041	V1.0	20220704
DELS-DLD401661S041	V1.0	20220704
DELS-DLD402481S041	V1.0	20220704
DELS-DL3400841A051	V1.0	20220704
DELS-DL4400841A051	V1.0	20220704
DELS-DLC400841A051	V1.0	20220704
DELS-DL3401661A051	V1.0	20220704
DELS-DL4401661A051	V1.0	20220704
DELS-DLC401661A051	V1.0	20220704
DELS-DL3402481A051	V1.0	20220704
DELS-DL4402481A051	V1.0	20220704
DELS-DLC402481A051	V1.0	20220704



## 4 Product Evaluation Description

### 4.1 Product Classification

The submitted product is evaluated with regard to RoHS Directive 2011/65/EU in the scope of the respective directive:

- 1. Large household appliances
- 2. Small household appliances
- 3. IT and telecommunications equipment
- 4. Consumer equipment
- 5. Lighting equipment
- 6. Electrical and electronic tools
- 7. Toys, leisure and sports equipment
- 8. Medical devices
- 9. Monitoring and control instruments including industrial monitoring and control instruments
- 10. Automatic dispensers
- 11. Other EEE not covered by any of the categories above

### 4.2 Evaluation Procedure

#### 1. Component / Material selection

- BOM
- Exploded diagram

#### 2. Evaluation base

Evaluation is according to following documents/results/experience to process.

- 1 Test report provided by vendor
- 2 Compliance declaration or supplementary document

Once test result excess following limit in homogeneous material basis or 40% of following limit in composite material basis, the exemptions of 2011/65/EU should be checked and the compliance declaration from vendor is required.

Lead (0,1 %)  
 Mercury (0,1 %)  
 Cadmium (0,01 %)  
 Hexavalent chromium (0,1 %)  
 Polybrominated biphenyls (PBB) (0,1 %)  
 Polybrominated diphenyl ethers (PBDE) (0,1 %)  
 Bis(2-ethylhexyl) phthalate (DEHP) (0,1 %)  
 Butyl benzyl phthalate (BBP) (0,1 %)  
 Dibutyl phthalate (DBP) (0,1 %)  
 Diisobutyl phthalate (DIBP) (0,1 %)



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