

# SRI LANKA STANDARDS INSTITUTION



## Labelling of Minimum Energy Performance for LED

### GUIDELINES AND PROCEDURES

Doc. GL/ES/MEPS/01

Issue No.: 03

Date of Issue : 2023-02-01

Effective Date : 2023-02-01

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#### 1. INTRODUCTION:

The Sri Lanka Standards Institution (SLSI) the national standards body of Sri Lanka operates Minimum Energy Performance scheme based on Minimum Energy Performance Standard (MEPS) for Light Emitting Diode (LED) lamps rated power from 2 W to 60 W.

SLSI offers this scheme to the manufacturers and importers of LED Lamps to join this mandatory Minimum Energy Performance Scheme jointly implemented by the SLSI and Sri Lanka Sustainable Energy Authority (SLSEA). Permission to mark Minimum Energy Performance labels will be granted by the SLSI for brand and model basis of LED lamps which conforms to minimum efficacy level seventy-five (75) in accordance with Minimum Energy Performance Standard **SLS 1530**.

#### 2. APPLICABLE STANDARDS:

- a) SLS 1458: Self-ballasted LED lamps for general lighting services by voltage greater than 50 V  
Part 1: Safety requirements
- b) SLS 1530 Minimum Energy Performance Standard (MEPS) for Self Ballasted LED lamps for general lighting services.

#### 3. APPLICATION:

- 3.1 The brand owner of LED lamps shall make an application for each model (brand/wattage/type/shape/colour) of the lamp. If the same model is manufactured in factories at different locations separate applications shall be made in respect of each location and the model.
- 3.2 Duly completed application forms shall be forwarded to the Director (Engineering Standardization), SLSI along with necessary documents.
- 3.3 Photo or a actual drawing / sketch of each model shall be attached along with the application.

#### 4. FEE INVOLVED:

- 4.1 Application & Processing fee: Application and processing fee shall be made by the applicant for each model separately as given in the fee structure (B of GL/ES/FS/01).
- 4.2 Testing fee: Testing charges shall be borne by the applicant as per the laboratory concern.

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#### 5. SAMPLING AND TESTING:

- 5.1 Sampling: Samples shall be drawn from each model randomly comprising 8 specimens for safety (3 pieces) and measurements of minimum energy performance (5 pieces).
- 5.1.1 If lamps manufactured locally, samples shall be drawn by the SLSI officers.
- 5.1.2 If lamps imported, samples shall be drawn randomly from the consignment.
- 5.1.3 If importer obtain test reports from a laboratory accredited in accordance with **SLS 1530** or equivalent. Samples shall be drawn by the laboratory personal or Independent Authority approved by SLSI, randomly from a lot manufactured for export to Sri Lanka and it shall be specified clearly in the test report (The importer shall submit a copy of a certification and scope of accreditation).
- 5.1.4 The accreditation logo endorsed on the test report and the original test report shall be sent directly from the laboratory to the Director of Engineering, Sri Lanka Standards Institute or authenticity verification confirmed (validated digitally signed) pdf formatted test report shall be emailed directly from the laboratory to the de@slsi.lk or the project officer.
- Note:** *The importer shall submit a copy of a certification and scope of accreditation.*
- 5.2 Testing: Sample shall be tested for safety initially and if safety requirements comply, test will be continued for minimum energy performance. Test methods shall be as specified in **SLS 1458: Part 1**.
- 5.2.1 Luminous flux (in lumens), power consumption (in Watts), power factor and colour correlation temperature and colour rendering index shall be measured as per **SLS 1530**, and efficacy shall be determined according to the formula given in the standard.

#### 6. EFFICACY LEVEL & MEPS:

Efficacy is the parameter that reflects the Minimum Energy Performance of the product, which is the tool for making this efficacy value comparative. Depending on the Luminous flux (in lumens) and Power consumption (in Watts) of a LED the efficacy shall be determined as given in **SLS 1530**. If the efficacy level greater than or equal seventy-five (75), LEDs are qualified for MEPS Labelling.

#### 7. TEST REPORT:

Test report issued for a particular model from a Testing Authority identified by the SLSI (SLSI, NERD Centre, RCL, and Arthur C Clarke Centre) or any international accredited laboratory shall be used for calculation of Efficacy. The test report should certify that the sampling and testing are in accordance with **SLS 1530** and should provide the test results for the below mentioned parameters in order to calculate the Efficacy of particular model.

- Luminous flux (in lumens)
- Power consumption (in Watts)

**Note:** *If the test report obtained from an accredited laboratory, lot size and sampling method shall be specified in the report.*

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#### 8. CERTIFICATION:

The Director General, SLSI or his/her nominee shall issue certificate to use Minimum Energy Performance for a model of LED if efficacy is equal or more than 75 by indicating the actual efficacy level subject to the following conditions.

- a) Annual certification fee shall be settled in advance before issuing the certificate.
- b) Maintenance of the efficacy as per the certification.
- c) The label shall be stick or print on the container, lamp or both.
- d) The brand owner shall inform to the SLSI for renewal at least before 6 months.
- e) The details of certificate holders shall be forwarded to SLSEA by SLSI to draw market samples randomly for checking of compliance.
- f) Detailed information, with respect to the number of labels, serial numbers of the LEDs on which the labels are used shall be made available to SLSEA, to prevent misuse of labels by any party.
- g) Warranty period shall be given by the applicant at least a period of 2 years
- h) The applicant shall enter in to an agreement with the SLSI

#### 9. LABELS:

9.2 The label shall have the dimensions, format and all the information as prescribed in the standard. Maximum allowable tolerance limit for label sizing is 5%.

9.3 Printing colours shall be in accordance with the below mentioned scheme, CYMK.

Grass Green	: C: 60%	M: 0%	Y: 40%	K: 40%
Spring Green	: C: 60%	M: 0%	Y: 60%	K: 20%
Mint Green	: C: 34%	M: 0%	Y: 37%	K: 2%
Black	: C: 75%	M: 68%	Y: 67%	K: 90%

**Note:** A sample label is attached herewith.

#### 10. SURVEILLANCE INSPECTION:

10.1 SLSEA shall carry out surveillance inspection at least one per year. Random samples from the market will be drawn for testing and the test results of these samples shall be forwarded to the SLSI.

10.2 In addition to the above, additional sampling and inspection will be carried out, if any complaint received on performance and malfunction. Such inspections will be carried out under close supervision of an operational committee formed by the senior management of SLSEA and SLSI.

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