Guideline for Approval of Electrical Equipment
(ELECTRICITY REGULATIONS 1994)
SIXTH EDITION [2018]

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Published by:
SURUHANJAYA TENAGA (ENERGY COMMISSION)
NO. 12, Jalan Tun Hussein, Precinct 2, 62100 Putrajaya, Malaysia
Tel : (603) 8870 8500
Fax : (603) 8888 8637
Toll Free Number : 1-800-2222-78 (ST)

www.st.gov.my

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IN exercise of the power conferred by Section 50c of the Electricity Supply Act 1990 [Act 447], the Commission issues the following guideline:

Citation and Commencement
1. This Guideline may be cited as the “Guideline for Approval of Electrical Equipment”.
2. This Guideline shall come into operation on the date of registration.

Interpretation
3. In this Guideline, unless the context otherwise requires -

   Act mean the Electricity Supply Act 1990 [Act 447], Electricity Supply (Amendment) Act 2015 [Act A1501] and its subsequent amendment, if any.

Purpose of this Guideline
4. This Guideline describe:-
   • lists of regulated electrical equipments;
   • procedures and conditions that shall be complied by the applicants in the submission of the application for :-
      i. Certificate of Registration (CoR) to Manufacture / Import,
      ii. Certificate of Registration as Conformity Assessment Body (CAB),
iii. Certificate of Approval (CoA) to import, manufacture, display, sell or advertise regulated electrical equipment,

iv. Renewal of Certificate of Approval (CoA) to import, manufacture, display, sell or advertise regulated electrical equipment,

v. Certificate of Approval (CoA) for Exhibition purposes,

vi. Release Letter for CoA Exemption,

vii. Release Letter for Non-Regulated Item,

viii. Import Electrical Equipment for Personal Use;

- national deviation;
- energy efficiency; and
- labelling requirements.

**Application of this Guideline**

5. This Guideline shall be applicable to all manufacturers, importers, exhibitors, sellers and advertisers of any regulated electrical equipment and registered laboratories and certification body in ensuring compliance to the Act and Regulations.

**Notice by the Commission**

6. The Commission may issue written notices from time to time in relation to this Guideline.

**Amendment and Variation**

7. The Commission may at any time amend, modify, vary or revoke this Guideline.

Dated: **21 May 2018**
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PREFACE

This Information Booklet serves as a guide on the procedure of applying for the Certificate of Approval (CoA) to manufacture, import, display, sell or advertise any electrical equipment prescribed under sub regulation 97(1) of the Electricity Regulations 1994 and other related regulatory requirements therein. It can be downloaded from the website www.st.gov.my.

The Energy Commission (the Commission) expressly disclaim all liability to any person in respect of any statement in or omission from this Information Booklet to the extent permitted by the law and nothing contained in this Information Booklet should be taken as constituting any amendment to the Electricity Supply Act 1990 [Act 447] or the Electricity Regulations 1994. In the event of any conflict, Act 447 or the Regulations shall at all times take precedence. This Information Booklet should not, therefore be regarded as or substitute for familiarising yourself with Act 447 or the Regulations, or where necessary, obtaining specific advice for your individual position.

The Commission reserves the right to amend and introduce new requirements to the aforementioned procedures of obtaining a CoA.

Our address is:

Energy Commission Malaysia
No. 12, Jalan Tun Hussein
Precinct 2
62100, Putrajaya.

Toll Free Number : 1-800-2222-78
Telephone : 03-8870 8500
Fax : 03-8888 8637

www.st.gov.my
INTRODUCTION

Why CoA is required?
The objective for the issuance of CoA under the Electricity Regulations 1994 is to ensure that all activities to manufacture, import, display, sale or advertisement of:

(a) any domestic equipment;
(b) any low voltage equipment which is usually sold directly to the general public; or
(c) any low voltage equipment which does not require special skills in its operation,

meets the specified safety and efficient use of electricity requirements.

Consumers’ interests in the use of electrical equipment shall be protected through the determination of the equipment being:

(a) compatible to Malaysian electricity supply system;
(b) complying to standards;
(c) tested by accredited laboratory;
(d) labelled with SIRIM-ST’s label.

Therefore, by complying with the specified minimum requirements risk of accidents such as fire, electric shock, explosion, radiation and other hazards which could result in injuries or deaths to humans and or damages to properties can be minimized or avoided.
WHO SHOULD BE CONCERNED WITH THIS BOOKLET

Consumers
In line with the safety requirements as well as to safeguard consumer’s interests and to ensure the efficient use of electricity, consumers should only purchase:

(a) any domestic equipment;
(b) any low voltage equipment which is usually sold directly to the general public; or
(c) any low voltage equipment which does not require special skills in its operation,

which have been approved by the Commission and affixed with a predetermined label.

Manufacturers, Importers, Exhibitors, Sellers and Advertisers
Manufacturers, importers, exhibitors, sellers and advertisers of any electrical equipment prescribed under sub regulation 97(1), of the Electricity Regulations 1994 must ensure that their obligations under the said Regulations are fulfilled.

This Information Booklet is to assist manufacturers, importers, exhibitors, sellers and advertisers in understanding and fulfilling the requirements and procedures for obtaining the CoA and other related regulatory requirements determined by the Energy Commission.
CHAPTER 3
KEY REGULATIONS TO NOTE

Reference to Electricity Regulations 1994;

Requirement to apply for CoA
Amendment of Regulation 97 Subject to regulations 97C, 97D, 97E and 101A, no person shall manufacture, import, display, sell or advertise -
(a) any domestic equipment;
(b) any low voltage equipment which is usually sold directly to the general public; or
(c) any low voltage equipment which does not require special skills in its operation, unless the equipment is approved by the Commission.

Recognition of foreign conformity assessment body
Regulation 97(A) (1) For the purposes of certifying any equipment under regulation 97, the Commission shall give a recognition to a foreign conformity assessment body, in a manner that may be determined by the Commission. Provided that, the foreign conformity assessment body shall be recognised, registered or licensed by the relevant authority in the country in which the foreign conformity assessment body carries on its business.

(2) The Commission shall cease to recognise the foreign conformity assessment body under sub regulation (1), if the recognition, registration or licence granted to the foreign conformity assessment body is revoked by the relevant authority.

(3) All test reports, certificates, records or technical files produced by a foreign conformity assessment body in accordance with these Regulations shall be recognised as valid and subsisting for the purposes of this Part, without prejudice to any further testing or assessment to be done to them as the Commission deems necessary.
Registration of local conformity assessment body
Regulation 97 (B)  (1) For the purposes of certifying any equipment under regulation 97, a local conformity assessment body shall apply to be registered with the Commission, in a manner that may be determined by the Commission.

Provided that, the local conformity assessment body has been accredited by the accreditation authority.

(2) A local conformity assessment body who is register as conformity assessment body as set out in Form U1 of the First Schedule (as in Appendix I).

(3) A Certificate of Registration issued under sub regulation (2) shall be valid for not less than one year and not exceeding three years from the date of issue or renewal of such certificate.

Registration of manufacturer and importer
Regulation 97 (C)  (1) Any person who manufactures or imports any equipment under regulation 97 shall apply to be registered with the Commission, in a manner that may be determined by the Commission.

(2) A manufacturer or importer who is registered under sub regulation (1) shall be issued with a Certificate of Registration to manufacture or import as set out in Form V1 of the First Schedule (as in Appendix F).

(3) A Certificate of Registration issued under sub regulation (2) shall be valid for not less than one year and not exceeding five years from the date of issue or renewal of such certificate.
Submission of test report or Certificate of Conformity by manufacturer
Regulation 97 (D) (1) Any manufacturer issued with a Certificate of Registration under regulation 97C shall submit to the Commission-
   a. a test report as to the equipment’s conformity with the safety standards as recognised by the Commission; or
   b. a Certificate of Conformity issued by a local conformity assessment body.

(2) A test report under sub regulation (1) shall be issued by a testing laboratory accredited by the accreditation authority and the test report shall be valid for not less than one year and not exceeding five years from the date of the report.

(3) A Certificate of Conformity under sub regulation (1) shall be valid for not less than one year and not exceeding three years from the date of the certificate.

(4) Upon expiry of a test report or Certificate of Conformity, as the case may be, the manufacturer shall submit a new test report or Certificate of Conformity to the Commission in accordance with this regulation.

(5) A manufacturer who submits a test report or Certificate of Conformity under this regulation shall ensure that such test report or Certificate of Conformity has a validity period of not less than one year before the expiry date.

Submission of test report or Certificate of Conformity by importer
Regulation 97 (E) (1) Any importer issued with a Certificate of Registration under regulation 97 shall submit to the Commission:-
   a. a test report as to the equipment’s conformity with the safety standards as recognised by the Commission; or
   b. a Certificate of Conformity issued by a foreign conformity assessment body recognised by the Commission under regulation 97A.
(2) A test report under subregulation (1) shall be issued by a testing laboratory recognised by the Commission and the report shall be valid for not less than one year and not exceeding five years from the date of the report.

(3) A Certificate of Conformity under subregulation (1) shall be valid for not less than one year and not exceeding three years from the date of the certificate.

(4) Upon expiry of a test report or the Certificate of Conformity, as the case may be, the importer shall submit a new test report or Certificate of Conformity to the Commission in accordance with this regulation.

(5) An importer who submits a test report or Certificate of Conformity under this regulation shall ensure that such test report or Certificate of Conformity has a validity period of not less than one year before the expiry date.

**Duties to keep technical files of equipment, etc.**

Regulation 97 (F) (1) A manufacturer or importer issued with a Certificate of Registration under regulation 97C shall keep all files of any equipment is-sued together with a test report or Certificate of Conformity, as the case may be, for not less than ten years after the last equipment has left the production line.

(2) A testing laboratory accredited by the accreditation authority, shall keep all technical files of any equipment issued together with a test report for not less than six years after the expiry of that test report.

(3) A local conformity assessment body shall keep all technical files of any equipment issued with a Certificate of Conformity for not less than six years after the expiry of the validity of the Certificate of Conformity.
Marking or labelling of approved equipment
Regulation 98
Where an equipment has been approved for manufacture, import, display, sale or advertisement by the Commission, the person to whom a Certificate of Approval has been issued under regulation 97 may be required by the Commission to mark or label the equipment and he shall do so in the manner to be determined by the Commission.

Samples of equipment to be delivered to Commission
Regulation 99
(1) Any application for a Certificate of Approval of any equipment referred to in regulation 97 shall be made to the Commission in the manner to be determined by the Commission.

(2) The applicant shall deliver to the Commission samples of the equipment in sub regulation (1) and such other information in connection therewith, including drawings, photographs, pamphlets and technical literature, as the Commission may require.

(3) A sample delivered shall have attached or affixed thereto a label bearing the following particulars:
   a. the full name of the applicant;
   b. the nature of the equipment;
   c. the energy efficiency of the equipment; and
   d. the catalogue or type number of the manufacturer, or any other means of identifying the equipment

(4) The Commission shall not be liable for any loss or damage caused to any equipment delivered under sub regulation (2).

Test and modification before approval
Regulation 100
(1) The Commission may cause one or more samples of the equipment in regulations 99 to be examined and tested.

(2) Where the Commission considers that the equipment examined and tested in sub regulation (1) is likely to cause danger, the person applying for approval thereof shall modify or alter the equipment to suit the Commission’s requirements before submitting any further samples thereof.
Submission for test and seizure of dangerous equipment

Regulation 101  (1) The Commission may at any time by notice in writing require a person who manufactures, imports sells and advertises any equipment to deliver, within such time as may be specified in the notice, samples of the equipment for an examination and a test thereof.

(2) If any equipment is, in the opinion of the Commission, unsafe or dangerous or likely to become unsafe or dangerous to use, the Commission may prohibit the manufacture, import, display, advertisement or sale of the equipment and may direct the person in sub regulation (1) to withdraw immediately all the equipment from use or sale and where necessary may seize and remove such equipment.

(3) The Commission shall not be liable for any loss or damage caused to any equipment delivered or seized and removed under subregulation (1) or (2), as the case may be.

Efficient use of electricity by equipment

Regulation 101A (1) For the purpose of efficient use of electricity, prior to an application for a Certificate of Approval under regulation 97, any person who manufactures, imports, sells or offers for sale or lease any equipment under that regulation, shall ensure that such equipment meets the energy performance testing standards, the minimum energy performance standards and the efficiency ratings as set out in the Fourth Schedule.

(2) For the purposes of sub regulation (1), a manufacturer or an importer of such equipment shall submit an energy performance testing report in accordance with regulation 101B.

(3) Any equipment that meets all the requirements of efficient use of electricity under sub regulation (1) shall be affixed with an efficiency rating label in such form and manner as may be determined by the Commission.
Energy performance testing report
Regulation 101B (1) An energy performance testing report under sub regulation 101A(2) shall be submitted to the Commission, in a manner that may be determined by the Commission.

(2) An energy performance testing report referred in sub regulation (1) shall be valid for not less than one year and not exceeding five years from the date of the report.

(3) Upon expiry of an energy performance testing report, a manufacturer or an importer shall submit a new energy performance testing report to the Commission in accordance with this regulation.

(4) A manufacturer or an importer who submits an energy performance testing report under this regulation shall ensure that such test report has a validity period of not less than one year before the expiry date.

Submission for test and seizure for the purpose of efficient use of electricity
Regulation 101C (1) The Commission may, at any time, by notice in writing, require any person who manufactures, imports, sells or offers for sale or lease such equipment as referred to in regulation 101A, to deliver, within such period as may be specified in the notice, samples of the equipment for an examination and a test.

(2) If, in the opinion of the Commission, any equipment which does not fulfil the requirements of efficient use of electricity under regulation 101A, the Commission may prohibit the manufacturing, importing, selling or offering for sale or lease of the equipment and may direct the person referred to in sub regulation (1) to withdraw or recall within the stipulated period, all the equipment from manufacturing, importing, selling or offering for sale or lease and where necessary, may seize and remove such equipment.
(3) The Commission shall not be liable for any loss or damage caused in the delivery or seizure and removal of equipment under sub regulation (1) or (2), as the case may be.

Renewal of Certificate of Registration

Regulation 102  The renewal of any Certificate of Registration issued under regulation 97B and 97C shall be made not less than fourteen days before the date of expiry of the Certificate.

Transfer of Certificate of Registration

Regulation 103  (1) No Certificate of Registration issued under regulation 97B and 97C shall be transferred by the holder of the Certificate to any other person except with the written permission of the Commission.

(2) The holder of any Certificate of Registration issued under regulation 97B and 97C shall obtain approval from the Commission in writing for any change of name or address in connection with the business and the Certificate shall be amended or replaced without payment of any fee.

Cancellation of Certificate of Registration

Regulation 104  (1) The Commission may cancel a Certificate of Registration issued under regulation 97B and 97C if –
   a. the holder of the Certificate ceases to carry on the business in respect of which he is registered;
   b. the holder of the Certificate has been adjudicated a bankrupt;
   c. the company goes into liquidation;
   d. the holder of the Certificate or his servant or agent contravenes or fails to comply with any provisions of the Act or these Regulations; or
   e. the holder of the Certificate has obtained the Certificate by making or causing to be made any false or fraudulent declaration, certification or representation, either in writing or otherwise.
(2) Where a Certificate of Registration is cancelled by the Commission pursuant to sub regulation (1), the Certificate shall be returned to the Commission by the person, to whom the Certificate was issued, within fourteen days of the person being notified in writing of the cancellation.

**Removal from and reinstatement to the Register of Certificate of Registration**

**Regulation 105**

(1) There shall be removed from the Register the name and other particulars of any person whose Certificate of Registration was issued under regulation 97B and 97C –

a. where he has failed to renew his Certificate of Registration by the date of expiry thereof; or

b. where his Certificate of Registration has been cancelled under regulation 104.

(2) A person whose name has been removed from the Register under sub regulation (1) may appeal, within thirty days of the removal from the Register, for reinstatement and the Commission, upon receipt of satisfactory evidence or reasons for his reinstatement, may register him again.

(3) The person referred to in sub regulation (2) who feels aggrieved by the decision of the Commission not to reinstate him may apply to the Minister for re-consideration of the matter.

(4) The application under sub regulation (3) shall be made in writing within twenty-one days from the date of the decision of the Commission and shall contain the grounds of grievance.

(5) The decision of the Minister on the matter referred to him under sub regulation (3) shall be final.

**Renewal of CoA**

**Regulation 106**

Renewal of a Certificate of Approval issued under regulation 97 shall be made not less than 14 days before the date of expiry of the Certificate.
Transfer of CoA
Regulation 107  (1) No Certificate of Approval issued under regulation 97, shall be transferred by the holder of the Certificate to any other person except with the written permission of the Commission.

(2) The holder of a Certificate of Approval issued under regulation 97, shall obtain approval from the Commission in writing for any change of name or address in connection with the business and the Certificate shall be amended or replaced without payment of any fee.

Cancellation of CoA
Regulation 108  (1) The Commission may cancel a Certificate of Approval issued in respect of any equipment referred to in regulation 97 if-
   a. the equipment is found to be unsafe for use upon any examination or test thereof;
   b. the person to whom the Certificate was issued, uses it for a purpose different from that for which it was issued or in a manner calculated to mislead or deceive the public;
   c. the person has contravened or failed to comply with any of the provisions of the Act or these Regulations; or
   d. the holder of the Certificate has obtained the Certificate by making or causing to be made any false or fraudulent declaration, certification or representation, either in writing or otherwise

(2) Where a Certificate of Approval is cancelled by the Commission pursuant to sub regulation (1), the Certificate shall be returned to the Commission by the person to whom the Certificate was issued within fourteen days of the person being notified in writing of the cancellation.
Removal from and Reinstatement Approval to the Register of CoA

Regulation 109  (1) There shall be removed from the Register the name and other particulars or any person whose Certificate of Approval was issued under regulation 97-
   a. where he has failed to renew his Certificate of Approval by the date of expiry thereof; or
   b. where his Certificate of Approval has been cancelled under regulation 108.

   (2) A person whose name has been removed from the Register under sub regulation (1) may appeal, within 30 days of the removal from the Register, for reinstatement and the Commission, upon receipt of satisfactory evidence or reasons for his reinstatement, may register him again.

   (3) The person referred to in sub regulation (2) who feels aggrieved by the decision of the Commission not to reinstate him, may apply to the Minister for re-consideration of the matter.

   (4) The application under sub regulation (3) shall be made in writing within twenty-one days from the date of the decision of the Commission and shall contain the grounds of grievance.

   (5) The decision of the Minister on the matter referred to him under sub regulation (3) shall be final.

Market surveillance

Regulation 109A  (1) The Commission may, from time to time, carry out market surveillance to determine if any equipment referred to in regulation 97 is safe and is affixed with a label in accordance with regulation 98 or an efficiency rating label, or both, as the case may be.
(2) Whoever, intentionally or knowingly-
   a. removes, withdraws or assists in the removal or withdrawal of any equipment, which is not labelled in accordance with regulation 98 or which does not bear an efficiency rating label, or both, as the case may be, from any premises in order to obstruct or hinder the Commission, its authorised officers or agents from exercising any of its powers; or
   b. harbours, keeps, conceals, or is in the possession of any equipment which is not labelled in accordance with regulation 98 or which does not bear an efficiency rating label, or both, as the case may be, with the intention to sell or offer for sale, Commits an offence.

Savings and transitional provision

(1) Any existing local conformity assessment body already in operation before the coming into operation of these Regulations, shall apply to be registered with the Commission within a period of six months from the date of coming into operation of these Regulations.

(2) Upon coming into operation of these Regulations, any manufacturer or importer shall apply to be registered with the Commission in accordance with regulation 97C, within a period of one year from the date of coming into operation of these Regulations.

(3) Any existing equipment which had been manufactured, imported, sold or offered for sale or lease before the coming into operation of these Regulations shall be required to comply with regulation 101A, within one year from the date of coming into operation of these Regulations.
**Offences and Penalty**

Section 37(1), Electricity Supply (Amendment) Act 2015

Any person who tampers with or adjusts any installation or part thereof or manufactures or imports or sells any equipment so as to cause or to be likely to cause danger to human life or limb or injury to any equipment or other property shall be guilty of an offence and for each such offence shall, on conviction, be liable to a fine not exceeding RM1,000,000 or to imprisonment for a term not exceeding 10 years or to both.

Regulation 122, Electricity Regulation 1994

Unless otherwise made an offence under the Act, a person who contravenes or fails to comply with any of the provisions of these Regulations shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding RM5,000 or to imprisonment for a term not exceeding 1 year or to both.
CHAPTER 4
PARTIES THAT NEED TO APPLY FOR CERTIFICATE OF APPROVAL (CoA)

Importers
Importers of electrical equipment under sub regulation 97(1) of the Electricity Regulations 1994 are required to apply for the CoA from the Commission. An importer shall be a Malaysian company registered with the Companies Commission of Malaysia.

Manufacturers
Manufacturers who manufacture electrical equipment under regulation 97(1) of the Electricity Regulations 1994 are required to apply for the CoA.

Exhibitors
Exhibitors who display electrical equipment under sub regulation 97(1) of the Electricity Regulations 1994 are also required to apply for the CoA.

Sellers and Advertisers
Sellers and advertisers of electrical equipment are required to apply for the CoA and to ensure that the electrical equipment to be sold or advertised are in accordance with sub regulation 97(1), 97(2) and 98 of the Electricity Regulations 1994.
CHAPTER 5
### LIST OF REGULATED ELECTRICAL EQUIPMENT

**Note:** Regulated Electrical Equipment are to be tested to the specified standards. Equipment that are tested and certified to the same standards of later revisions are also acceptable.

<table>
<thead>
<tr>
<th>No</th>
<th>Category</th>
<th>Description of Regulated Equipment</th>
<th>Detail of Equipment</th>
<th>Standards</th>
</tr>
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<tbody>
<tr>
<td></td>
<td><strong>PLUG TOP/PLUG</strong></td>
<td></td>
<td></td>
<td>National Standard</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>(a) Plug</td>
<td>Flat Non-Rewirable Two Pole Plug with supply cord (max. 2.5A)</td>
<td>MS 1578:2003</td>
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<td></td>
<td></td>
<td></td>
<td>15 A Plug</td>
<td>MS 1577:2003</td>
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<td></td>
<td>(b) Coupler</td>
<td>Appliance Coupler</td>
<td>MS IEC 60320-1:2010</td>
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<td></td>
<td></td>
<td>No corresponding MS</td>
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<td></td>
<td>No corresponding MS</td>
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<tr>
<td></td>
<td></td>
<td>(c) Adaptor</td>
<td>Adaptor (Multiways)</td>
<td>MS 589-3:2018</td>
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<td></td>
<td></td>
<td></td>
<td>Travel Adaptor</td>
<td>No corresponding MS</td>
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<td></td>
<td></td>
<td>(d) Connector</td>
<td>Electrical Connector (connecting device)</td>
<td>MS IEC 60998-1:2005</td>
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<td></td>
<td></td>
<td></td>
<td>Connecting device with screw type clamping unit</td>
<td>MS IEC 60998-1:2005</td>
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<td>Description of Regulated Equipment</td>
<td>Detail of Equipment</td>
<td>Standards</td>
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<td></td>
<td>National Standard</td>
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<td>2</td>
<td>SWITCH AND DIMMER</td>
<td>• is an air-break switch; • is for connection to the wiring of an electric installation; • is primarily for mounting on a vertical surface • is manually opened and manually closed; and • has a rating up to 63A.</td>
<td>General Purpose Switch</td>
<td>MS IEC 60669-1:2012</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Cooker Control Unit</td>
<td>No corresponding MS</td>
</tr>
<tr>
<td>3</td>
<td>SOCKET OUTLET</td>
<td>(a) Socket Outlet • is for fixing at a point at which fixed wiring terminates; • provides a detachable connection with the pins of a plug; • has two, or more contacts; and has a maximum rating of 15 A; • with switch and without switch socket outlet.</td>
<td>Electric Shaver Socket Outlet</td>
<td>MS IEC 61558-1:2005, MS IEC 61558-2-5:2005</td>
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<td>15A socket outlet &amp; Plug</td>
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<td>Portable 2 pin socket outlet class II</td>
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<td>4</td>
<td><strong>FLUORESCENT LAMPHOLDER / STARTER HOLDER</strong></td>
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</tbody>
</table>
|   | (a) Lamp Holder  
Holds tubular fluorescent lamp *but does not include:*  
A lamp holder which by design is restricted to specific appliances. | Lamp holder for tubular fluorescent lamp  
MS IEC 60400: 2006  
IEC 60400: 2004 |
|   | (b) Starter Holder  
to hold a glow starter  
*but does not include:*  
A starter holder which by design is restricted to specific appliances. | Starter holder for tubular fluorescent lamp  
MS IEC 60400: 2006  
IEC 60400: 2004 |
| 5 | **CEILING ROSE** |   |
|   | • a terminal for connection to a lamp holder via a cable. | Ceiling Rose  
MS 770:1982 (confirmed 2006)  
BS 67:1969 |
|   | • Edison Screw Lamp holder with Edison screw thread E14, E27 and E40, designed for holding and connecting to the supply of lamps. | Edison Screw Lamp holder  
MS IEC 60238:2008  
IEC 60238:2004 |
| 6 | **BAYONET CAP and MULTIWAYS ADAPTOR** |   |
|   | • holds a bayonet cap lamp, bayonet cap adaptor  
*but does not include:*  
• a lamp holder, which by design, is restricted to specific appliances  
• a lamp holder which is for incorporation in an industrial equipment | Bayonet cap Lamp holder  
No corresponding MS  
IEC 61184:2008+A1 |
|   | • Bayonet Lamp Adaptor  
MS 769:1982 (confirmed 2013) with IEC 61184:2008  
IEC 61184:2008 with modification |

**Portable**  
A device comprising a flexible cable or cord attached to a reel so constructed that the flexible cable may be completely wound onto the reel, and provided with a plug and one or more socket outlets.  
Portable cable reel  
MS 1141: 2006  
IEC 61242: 2008 with modification
<table>
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<th>No</th>
<th>Category</th>
<th>Description of Regulated Equipment</th>
<th>Detail of Equipment</th>
<th>Standards</th>
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<tr>
<td></td>
<td></td>
<td>(c) Self-ballasted Compact Fluorescent Lamp (CFL)</td>
<td>with Edison screw or bayonet caps</td>
<td>MS IEC 60968:2006 (confirmed 2011)&lt;br&gt;MS IEC 60969:2006</td>
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<td>Self-ballasted double capped LED Lamps for general lighting services by voltage &gt; 50V (to retrofit linear fluorescent lamp)</td>
<td>MS IEC 62776:2017</td>
<td>IEC 62776:2014</td>
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<td>Self-ballasted single capped LED-lamps for general lighting services by voltage &gt; 50V</td>
<td>MS IEC 62560:2012</td>
<td>IEC 62560:2011</td>
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<td>• is for controlling the magnitude of current flowing through the discharge path of a fluorescent lamp,  • is of the independent or built-in type intended for use with luminaires (portable or fixed); or  • is of the integral type such that it forms a non-replaceable part of a fluorescent lamp/ballast combination; or  • is of the adaptor type such that it allows the insertion of a fluorescent lamp into the ballast by the user;</td>
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<td><em>but does not include:</em></td>
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<td>• a ballast which is incorporated in luminaires certified for compliance with the requirements for electrical equipment with increased safety type protection (Explosive) for use in hazardous locations.</td>
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<td>(b) Control Gear</td>
<td>Control Gear</td>
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<td>• General safety for lamp control gear for use on dc supply up to 250V and or ac supply up to 1000 V</td>
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<td>10</td>
<td>CIRCUIT BREAKER including AC CURRENT OPERATED EARTH LEAKAGE CIRCUIT BREAKER and MINIATURE CIRCUIT BREAKER</td>
<td>(a) Residual Current Device (RCD)</td>
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<td>• isolates or initiates a tripping signal to isolate a low-voltage supply to protected circuits, socket-outlets or equipment in the event of a current flow to earth which exceeds a pre-determined level;</td>
<td>Residual Current Circuit Breaker (RCCB)</td>
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<td>• has a rated residual current less than 300mA for devices intended for connection to fixed wiring or 10mA for other devices; and</td>
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<td>• has a rated load current not exceeding 125 A for devices intended for connection to fixed wiring or 20 A for other devices.</td>
<td>Residual Current Breaker with Overcurrent Protection (RCBO)</td>
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<td>MS IEC 61008-1:2012</td>
<td>IEC 61008-1:2010</td>
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<td>MS IEC 61008-2-1:2003 or MS IEC 61008-1:2012</td>
<td>IEC 61008-2-1:1990 or IEC 61008-1:2010</td>
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<td>MS IEC 61008-2-2:2003</td>
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<td>IEC 61008-2-2:1990</td>
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but does not include :-
- a device intended to be used with a particular circuit-breaker other than a miniature over-current circuit-breaker; or
- a device intended to protect an electricity supply authority distribution system.

(b) Fuse
- is an enclosed air-break switch;
- opens a low voltage circuit automatically under pre-determined conditions of over-current;
- has a nominal rating not exceeding 125 A and has a current breaking capacity of up to 10kA.
- is by the fusion of one or more of its specially designed and proportioned components, opens the circuit in which it is inserted and breaks the current when this exceeds a given value for a sufficient time. The fuse comprises all the parts that form the complete device.

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<tr>
<th>Description</th>
<th>Standard</th>
<th>Committee</th>
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<tr>
<td>Miniature Circuit Breaker (MCB) for ac supply</td>
<td>MS IEC 60898-1: 2007</td>
<td>IEC 60898-1: 2003</td>
</tr>
</tbody>
</table>

11 PORTABLE LUMINAIRE LAMP
- is a household type;
- provides illumination or for decorative purposes, produces light;
- is fitted with a supply flexible cord, an appliance inlet socket or a power supply unit with integral pins for insertion into a socket outlet;
- is for standing on a table or floor, or is fitted with a clamp or similar for attachment to vertical or horizontal surfaces;

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<tr>
<th>Description</th>
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<tr>
<td>Standing Lamp with detachable or non-detachable mains supply flexible cord, Standing Lamp &amp; adaptor, Table lamp with detachable or non-detachable mains supply flexible cord, Table Lamp &amp; adaptor,</td>
<td>MS IEC 60598-1: 2012 MS IEC 60598-2-4: 2003 (confirmed 2015)</td>
<td>IEC 60598-1:2008 IEC 60598-2-4: 1997</td>
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<td>• is for use with tungsten filament, tubular fluorescent or other discharge lamps; and • is constructed to represent a model, person or animal and is likely to be treated by a child as a toy; or • has metal parts which are required to be earthed or double insulated from live parts (excluding live parts of an all insulated lamp holder) • is for inspection purposes using illumination; • holds a light source or bulb; and • is hand held; <strong>but does not include</strong> • hand lamp with a magnification facility.</td>
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<td>12</td>
<td>KETTLE including HEATING ELEMENTS IF SUPPLIED SEPARATELY</td>
<td>• is a household type; • is portable; • has a capacity not exceeding 15L; and • heats liquid for: * humidifying room air; or * hot beverage; or * cooking purpose</td>
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<td>Kitchen Machine</td>
<td>Multi-purpose cooker</td>
<td>Water Dispenser - Filter/Ionizer/Hydrogen</td>
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Blender, Chopper, Food Processor, Juice Extractor, Grinder, Mixer.
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<th>Standards</th>
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</table>
|    | TOASTER / OVEN (Cooking Appliance) | • is a household type; and  
• is for toasting bread or similar food;  
• is for cooking or warming food by electrical energy;  
• applies heat to food, liquid or other substances in a chamber by means of high-frequency electromagnetic radiation. | Stationary type:- Electric Oven, Induction Hob, Induction Cooker, Cooking Range, Grill.  
Portable type:- Bread Maker, Bread Toaster, Portable Oven, Induction Cooker, Grill, Sandwich Maker, Waffle Maker, Roaster, Barbeque, Pop-corn maker. | MS IEC 60335-1:2015  
MS IEC 60335-2-6:2014  
MS IEC 60335-1:2015  
MS IEC 60335-2-9:2014  
MS IEC 60335-1:2015  
MS IEC 60335-2-9:2014  
MS IEC 60335-1:2015  
MS IEC 60335-2-25:2014  
MS IEC 60335-1:2015  
MS IEC 60335-2-25:2014  
MS IEC 60335-1:2015  
MS IEC 60335-2-25:2014  
MS IEC 60335-1:2015  
MS IEC 60335-2-25:2014  
MS IEC 60335-1:2015  
MS IEC 60335-2-25:2014  
MS IEC 60335-1:2015  
MS IEC 60335-2-25:2014  |
|    | RICE COOKER | • is a household type; and  
But does not include –  
• a type, promoted exclusively to industry/commercial sector. | Rice Cooker | MS IEC 60335-1:2015  
MS IEC 60335-2-15:2004 |
|    | REFRIGERATOR | • is a household type; and  
But does not include –  
• a type, promoted exclusively to industry/commercial sector. | Refrigerator, Freezer, Minibar, Chest Freezer. | MS IEC 60335-1:2015  
MS IEC 60335-1:2015  
|    | | | | |
| 17 | IMMERSION WATER HEATER | • is a household type;  
• is for heating liquid in which it may be immersed; and  
• is self contained; and includes –  
• aquarium type immersion heaters | Fixed Immersion Heater | MS IEC 60335-1:2015  
IEC 60335-2-73:2009 |
| 18 | WATER HEATER including HEATING ELEMENTS IF SUPPLIED SEPARATELY | (a) Storage  
• is for heating and storage of water for bathing, washing or similar purposes;  
• incorporates a heating element; and  
• has a storage capacity not less than 4.5 L or not more than 680 L. | Storage Water Heater | MS IEC 60335-1:2015  
MS 1597-2-21:2015 | IEC 60335-1:2010  
IEC 60335-2-21:2012 with modification |
|  |  | (b) Instantaneous  
• is for heating water;  
• is of the instantaneous type; and  
• incorporates live parts in contact with water. | Instantaneous Water Heater | MS IEC 60335-1:2015  
MS 1597-2-35:2010 | IEC 60335-1:2010  
IEC 60335-2-35:2006 with modification |
| 19 | WASHING MACHINE | • is a household type; and  
• is used for washing/drying clothes.  
\textit{but does not include -}  
• a type, promoted exclusively to industry/commercial sector. | Washing Machine with dryer | MS IEC 60335-1:2015  
MS IEC 60335-2-7:2007 | IEC 60335-1:2010  
IEC 60335-2-7:2006 |
|  |  | Washing Machine with separate spin container | MS IEC 60335-1:2015  
MS IEC 60335-2-4:2007  
MS 1597:Part 2-7:2017 | IEC 60335-1:2010  
IEC 60335-2-4:2004  
IEC 60335-2-7:2012 with modification |
|  |  | Tumbler Dryers | MS IEC 60335-1:2015  
IEC 60335-2-11:2012 |
|  |  | Cloth Dryers (\textit{on rack located}) | MS IEC 60335-1:2015  
IEC 60335-2-43:2008 |
|  |  | • household type;  
• for washing and rising dishes. | Dish Washer and other utensils. | MS IEC 60335-1:2015  
MS 1597-2-5:2005 | IEC 60335-1:2010  
IEC 60335-2-5:2005 with modification |
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<th>Standards</th>
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</table>
| 20 | FAN                               | • is a household type;  
• has a primary function of moving air in its vicinity; and  
• is self contained;                                                                 | Moving-louver fan, Ceiling fan, Auto fan, Pedestal fan, Table fan, Wall fan & applies to their separate regulators and with blade. | MS IEC 60335-1:2015  
MS 1597-2-80:2010  
MS 1220:2010  
IEC 60335-1:2010  
IEC 60335-2-80:2008 with modification for ceiling fan only  
IEC 60879:1986 with modification |
|    |                                   | Ventilating fan, Decorative fan & applies to their separate regulators and fan without blade.       |                                                                                      | MS IEC 60335-1:2015  
MS 1597-2-80:2010  
IEC 60335-1:2010  
IEC 60335-2-80:2008 with modification for ceiling fan only |
|    |                                   | Range Hood                                                                                         |                                                                                      | MS IEC 60335-1:2015  
MS IEC 60335-2-31:2014  
IEC 60335-1:2010  
IEC 60335-2-31:2008 |
|    |                                   | Cleaning Appliances (eg. Air Purifier, Fruit & vegetable washer/ozone)                              |                                                                                      | MS IEC 60335-1:2015  
MS IEC 60335-2-65:2014  
IEC 60335-1:2010  
IEC 60335-2-65:2008 |
|    |                                   | Humidifiers (eg. Air Cooler, water diffuser)                                                      |                                                                                      | MS IEC 60335-1:2015  
MS IEC 60335-2-98:2014  
IEC 60335-1:2010  
IEC 60335-2-98:2008 |
| 21 | HAND OPERATED HAIR DRYER/HAIR-CARE/SKIN CARE | • is a household type or a commercial hand-held type; and  
• is for drying, styling or the caring of human hair.                                     | Hair Dryer, Hair Styling Set, Hand Dryer, Ionic Facial Steamer or similar to it.     | MS IEC 60335-1:2015  
MS IEC 60335-2-23:2007  
IEC 60335-1:2010  
IEC 60335-2-23:2003 |
| 22 | IRON                              | • is a household type;  
• is for smoothening or pressing fabric by the application of heat or steam;           | Iron                                                                                 | MS IEC 60335-1:2015  
MS IEC 60335-2-3:2006  
IEC 60335-1:2010  
IEC 60335-2-3:2004 |
|    |                                   | • is hand held except for any separate steam generator; and includes:  
• any associated equipment                                                           | Fabric Steamer, Garment Steamer                                                     | MS IEC 60335-1:2015  
MS IEC 60335-2-85:2014  
IEC 60335-1:2010  
IEC 60335-2-85:2008 |
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<th><strong>SHAPER</strong></th>
<th><strong>VAPORISER</strong></th>
<th><strong>VACUUM CLEANER</strong></th>
<th><strong>HI-FIDELITY SET</strong></th>
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<tr>
<td></td>
<td>is a household type; and</td>
<td>is a household type; and</td>
<td>is a household type;</td>
<td>is a household type;</td>
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<td>shaves, cuts or trims human hair.</td>
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<td>is portable; and</td>
<td>is for reproduction of sound, with little distortion, connected to the supply mains as the only energy source, intended for domestic and similar general indoor use with a rated supply voltage not exceeding 250 volts rms.</td>
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<td>27</td>
<td>VIDEO and VISUAL DISPLAY UNIT</td>
<td>• is for household use;</td>
<td>Electronic appliances such as: LCD, LED, Plasma, CRT, Internal Antenna/Booster,</td>
<td>MS IEC 60065:2007 or IEC 62368-1:2014</td>
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<td></td>
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<td>• is for receiving and displaying information from a transmitting station or local source</td>
<td>and similar to it.</td>
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<td>• is for the display of public or subscription television broadcasts.</td>
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<td>28</td>
<td>AUDIO and VIDEO PLAYER UNIT</td>
<td>• is a household type;</td>
<td>VCD, Laser Disc, Video Cassette Recorder, DVD, Video Rewinder, Children Video Game,</td>
<td>MS IEC 60065: 2007 or IEC 62368-1:2014</td>
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<td></td>
<td>• is for video recording and playback or for playback only, connected to the supply mains either</td>
<td>Play station and similar to it.</td>
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<td>directly or indirectly and intended for domestic and similar general indoor use.</td>
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<td>29</td>
<td>MASSAGER</td>
<td>• Is a household type.</td>
<td>Foot Massagers, Massage Bed, Massage Chair, Massage Pads, Handheld Massagers,</td>
<td>MS IEC 60335-1:2015 or IEC 60335-2-32:2014</td>
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<td>Massage Belts, Water filled foot massager.</td>
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<td>30</td>
<td>AIR CONDITIONER (Cooling Capacity of 32,000 Btu/hr &amp; below)</td>
<td>• A electrical assembly to provide delivery of conditioned air to an enclosed space, room or zone, including an electrically operated refrigeration system for cooling and possibly dehumidifying the air.</td>
<td>Split Air-conditioner, Portable Air-conditioner, Ceiling Air-conditioner</td>
<td>MS IEC 60335-1:2015 or IEC 60335-2-40:2013 with modification</td>
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<td>Page</td>
<td>CHRISTMAS LIGHT</td>
<td>• is for decorative, • display or illumination purposes; and • consists of — - lamps or lamp holders interconnected by flexible cord of less than 2.5mm² cross-sectional area; or - lamps within a flexible enclosure; and includes — any integral power supply or control device.</td>
<td>Lighting Chain, Rope Light, Decorative/ Festive Light.</td>
<td>MS IEC 60598-1: 2012 MS IEC 60598-2-20:2013</td>
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<td>32</td>
<td>DOMESTIC POWER TOOLS (Portable Type)</td>
<td>• is for machining, drilling, sawing, or surface preparation; • may be entirely supported by hand during operation; • a tool, portable type. but does not include - • promoted exclusively to the industry/commercial sector.</td>
<td>Drill/Impact Drill (Drill bit size up to 15 mm)</td>
<td>MS IEC 60745-1:2010 MS IEC 60745-2-1:2011</td>
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<td>Grinder (up to 100 mm)</td>
<td>MS IEC 60745-1:2010 MS IEC 60745-2-3:2010</td>
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<td>Spray gun for non-flammable liquid (up to 100 bars)</td>
<td>MS IEC 60745-1:2010 MS IEC 60745-2-7:2005</td>
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<td>Jig and Sabre Saw / reciprocating saw (up to 60 mm)</td>
<td>MS IEC 60745-1:2010 MS IEC 60745-2-11:2011</td>
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<td>National Standard</td>
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<td>Router and trimmer (up to 500 W)</td>
<td>MS IEC 60745-1:2010 MS IEC 60745-2-17:2012</td>
<td>IEC 60745-1:2006 IEC 60745-2-17:2010</td>
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<td>• is a household type; and • is for stitching fabric or other material</td>
<td>Sewing Machine</td>
<td>MS IEC 60335-1:2015 MS IEC 60335-2-28:2003</td>
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<td>• is for the application or removal of solder; and • is hand held; but does not include: a soldering iron promoted exclusively to industry</td>
<td>Portable Heating Tool such as: Soldering Gun, Soldering Iron, Heat Gun, Hot Air Firelighters, Glue gun.</td>
<td>MS IEC 60335-1:2015 MS IEC 60335-2-45:2003</td>
</tr>
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<td>33</td>
<td>ADAPTER / CHARGER</td>
<td>• is a household type; • is for charging batteries other than those of the automotive type; • is self contained; • is for charging one or more batteries for use in other equipment; • is for charging battery for use in mobile phone/PDA. • Is imported or manufactured separately (detachable).</td>
<td>Portable Battery Charger (up to 12 V)</td>
<td>MS IEC 60335-1:2015 MS IEC 60335-2-29:2014</td>
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<td>Adapter for IT Equipment (up to 20V)</td>
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<td>MS IEC 60950-1:2007 (confirmed 2013)</td>
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<tr>
<td>Baby Cradle, Breast Pump, Electric Heated Pillow</td>
<td>MS IEC 60335-1:2015</td>
<td>IEC 60335-1:2010</td>
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<tr>
<td><strong>34</strong> WIRE / CABLE / CORD (non-armoured) 0.5mm$^2$ to 35mm$^2$</td>
<td>Polyvinyl chloride (PVC) insulated flexible cord and cable</td>
<td>MS 2112-5:2009, A1:2017 BS EN 50525-2-11:2011 or IEC 60227-5:2011</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# List of Regulated Electrical Equipment That Are to Be Tested to the Specified Minimum Energy Performance Standards (MEPS)

<table>
<thead>
<tr>
<th>No</th>
<th>Equipment</th>
<th>Type of Equipment</th>
<th>National Standard</th>
<th>International Equivalent Standard</th>
<th>Efficiency Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Star Rating</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Star Index Value</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 + 25 % ≤ Star index</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 + 10 % ≤ Star index &lt; + 25 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 - 10 % ≤ Star index &lt; + 10%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 - 25 % ≤ Star index &lt; - 10%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 - 35 % ≤ Star index &lt; - 25 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Star Rating</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tested CSPF (Wh/Wh)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 ≥ 5.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.60 ≤ CSPF &lt; 5.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.30 ≤ CSPF &lt; 4.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.0 ≤ CSPF &lt; 3.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt; 3.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Minimum Star Rating Value is 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>following list: (a) Plasma (b) Liquid Crystal Display (LCD) (c) Light Emitting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diode (LED) (d) Cathode Ray Tube (CRT)</td>
<td></td>
<td>Star Rating</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Star Index Value</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 Star index ≥ +20 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 +10 % ≤ Star index &lt; +20 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 -10 % ≤ Star index &lt; +10 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 -20 % ≤ Star index &lt; -10 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 -30 % ≤ Star index &lt; -20 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Minimum Star Rating Value is 2</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Equipment</td>
<td>Type of Equipment</td>
<td>National Standard</td>
<td>International Equivalent Standard</td>
<td>Efficiency Ratings</td>
</tr>
<tr>
<td>----</td>
<td>---------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-----------------------------------</td>
<td>---------------------</td>
</tr>
</tbody>
</table>
| 4  | Domestic Fan | (a) Wall Fan ≤16 inch  
(b) Desk Fan ≤16 inch  
(c) Pedestal Fan ≤16 inch  
(d) Ceiling Fan ≤60 inch | MS 1220:2010  
MS 2574:2014 | N/A | a) Wall fan, Desk fan and Pedestal fan  
b) Ceiling fan |
|    |               |                   |                   |                                   | Star Rating | Tested CSPF (Wh/Wh) |
|    |               |                   |                   |                                   | 5 | ≥1.20  
4 | 1.12 to 1.19  
3 | 1.08 to 1.11  
2 | 1.01 to 1.07  
1 | 0.93 to 1.00  |
| 5  | Lighting     | (a) T5 and T8 Double Capped Fluorescent Lamp | MS IEC 60081:2003 | IEC 60081:2003 | Type | Lamp Rating (W) | Minimum Efficacy (lm/W) |
|    |               |                   |                   |                                   | T8 | 18 to 30  
≥31 | 70  
T5 | 14 | 75  
≥15 | 80  |
|    |               |                   |                   |                                   | (b) Self ballasted single-capped lamps (Compact Fluorescent Lamps CFL) | Lamp Rating (W) | Minimum Efficacy (lm/W) |
|    |               |                   |                   |                                   | < 9 | 46  
9 to 14 | 52  
15 to 24 | 55  
≥25 | 62  |
|    |               |                   |                   |                                   | (c) Single-capped fluorescent Lamps (Non-Integrated CFL) & circular fluorescent lamp | Lamp Rating (W) | Minimum Efficacy (lm/W) |
|    |               |                   |                   |                                   | < 10 | 46  
10 to 18 | 55  
19 to 26 | 59  
≥27 | 70  |
(d) Self-ballasted Light Emitting Diode (LED) Lamps

MS IEC 62612:2015
MS IEC 60061-1:2005
IEC 62612:2013
IEC 60061-1:2005

<table>
<thead>
<tr>
<th>Lamp Cap Type (As in MS IEC 60061-1)</th>
<th>Minimum Efficacy (lm/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G13</td>
<td>75</td>
</tr>
<tr>
<td>GU10</td>
<td>50</td>
</tr>
<tr>
<td>E27 or B22d</td>
<td>60</td>
</tr>
<tr>
<td>E14</td>
<td>60</td>
</tr>
</tbody>
</table>

(e) **Incandescent Lamps

MS IEC 60064:2006
IEC 60064:2006

Minimum Efficacy = 20 lm/W

6 *Washing Machine

a) Top loading washing Machine

b) Front loading Washing Machine

MS IEC 60456: 2012
IEC 60456: 2010

a) Top Loading Washing Machine ≤ 16kg

<table>
<thead>
<tr>
<th>Star Rating</th>
<th>Energy Efficiency Ratio (Wh/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>&lt;6.0</td>
</tr>
<tr>
<td>4</td>
<td>6.0 ≤ EER &lt; 10.0</td>
</tr>
<tr>
<td>3</td>
<td>10.0 ≤ EER &lt; 17.0</td>
</tr>
<tr>
<td>2</td>
<td>17.0 ≤ EER &lt; 22.5</td>
</tr>
<tr>
<td>1</td>
<td>≥ 22.5</td>
</tr>
</tbody>
</table>

b) Front Loading Washing Machine ≤ 16kg

<table>
<thead>
<tr>
<th>Star Rating</th>
<th>Energy Efficiency Ratio (Wh/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>&lt;7.0</td>
</tr>
<tr>
<td>4</td>
<td>70.0 ≤ EER &lt; 90.0</td>
</tr>
<tr>
<td>3</td>
<td>90.0 ≤ EER &lt; 140.0</td>
</tr>
<tr>
<td>2</td>
<td>140.0 ≤ EER &lt; 220.0</td>
</tr>
<tr>
<td>1</td>
<td>≥ 220.0</td>
</tr>
</tbody>
</table>

Minimum Star Rating Value is 2

**MEPS for washing Machine will be effective on 1st September 2018.**

**The Minimum Energy Performance Standards (MEPS) value for incandescent lamp shall not apply for the following use:**

(a) components in electrical appliances;
(b) medical and lab equipment;
(c) internal decoration, shows and exhibition;
(d) safety and signaling;
(e) conservation of animals and as repellant for insects;
(f) heating and testing;
(g) cleanliness and health;
(h) beauty treatment;
(i) lamps that cannot be directly replaced with other type of lamp; and
(j) incandescent lamp for other purposes deemed suitable by the Commission to be excluded.
CHAPTER 6
APPLICATION FOR CERTIFICATE OF APPROVAL (CoA) FOR ELECTRICAL EQUIPMENT

ELECTRICAL EQUIPMENT
In improving its delivery services, the Energy Commission (ST) has developed an online system for application of Certificate of Approval (CoA) for the importation and manufacture of household electrical equipment. Effective 1st October 2010, all applications are done online via e-Permit system operated by DagangNet Technologies Sdn. Bhd. (DagangNet).

To import household electrical equipment, applicants or their local agents need to register with DagangNet. Once registered, applicants can proceed to apply electronically. Applicants are required to apply for the Certificate of Registration to Manufacture/Import before he can proceed with the Certificate of Approval (CoA) application. ST will issue the CoA if applications are in order (test report and all required documents submitted and fees paid to ST).

e-Permit is available at http://epermit.dagangnet.com as follows:-

E-Permit screen
The process of CoAs application is as shown in the following flow-chart:-
6.1 **NEW Application for CoA (Import/Manufacturer)**

Applicant registers with Dagangnet

- **Registered with ST**
  - **Yes**
    - Apply CoR
  - **No**
    - **CoR issued**

Online application through ePermit. Applicant fills-up information such as:-
- Name of electrical equipment
- Brand
- Model

*Applicant can refer to Trader Module User Guide*

Attached Type test report

- **MEPS Products**
  - **Yes**
    - **Attach Type Test Report for MEPS (Performance Test Report)**
  - **No**
    - **Correct Information given**
      - **Yes**
        - **Process Fee RM30.00**
      - **No**
        - Application Rejected

- **Paid**

- **Process Fee RM30.00**
  - **Yes**
  - **No**

CoR = Certificate of Registration to Manufacture/Import (see Appendix A)
Energy Commission (ST) evaluates based on:
- Validity of Type test report
  > SIRIM QAS; or
  > labs under SAMM by DSM; or
  > labs under IECEE CB Scheme; or
  > labs accredited by APLAC MRA; or
  > labs accredited by ILAC MRA; or
  > labs listed under ASEAN EE MRA.
- National Deviation

Application re-submitted

Complete

Yes

CoA Fees :-
- Single phase RM 220.00
- Three phase RM 330.00

No

Paid

Yes

CoA issued
i. ST issues letter to applicant as to:
   • inform the cancellation of CoA
   • equipment to be sent to country of origin or destroyed
   • Product Recall shall be implemented by importer if equipment is already in the market.
ii. Customs will be informed of the cancellation of CoA

**
- The artwork for EE label can be obtained by EC;
- Please refer to Chapter 8 and Chapter 9 for details.

i. ST issues letter to applicant as to:
   • inform the cancellation of CoA
   • cease the production in the factory
   • Product Recall shall be implemented by manufacturer if equipment is already in the market.
iii. Customs will be informed of the cancellation of CoA

*Please refer details explanation in Appendix B*
6.2 RENEWAL Application for CoA (Import/Manufacturer)

CoR = Certificate of Registration to Manufacture/Import (see Appendix A)
**GUIDELINE FOR APPROVAL OF ELECTRICAL EQUIPMENT**

**MEPS Products**

- Consignment or PCS Equipment affixed with SIRIM-ST Label & **EE Label

- Applicant to re-apply
  - SIRIM inform ST

- Equipment shall be sent for Consignment Test or PCS by SIRIM
- Failed: SIRIM inform ST
- Passed: MEPS Products

- Equipment shall enter PCS by SIRIM
- Failed: **Administrative**
  - Equipment shall be sent for Consignment Test or PCS by SIRIM
  - Failed: Equipment affixed with SIRIM-ST Label
  - Yes: Equipment affixed with SIRIM-ST Label & **EE Label
  - No: MEPS Products

- Passed: RCS

---

**Importers**

- Equipment shall be sent for Consignment Test or PCS by SIRIM
- Failed: SIRIM inform ST
- Passed: MEPS Products

---

**Manufacturer**

- Equipment shall enter PCS by SIRIM
- Failed: **Technical**
  - Equipment shall be sent for Consignment Test or PCS by SIRIM
  - Failed: Equipment affixed with SIRIM-ST Label
  - Yes: Equipment affixed with SIRIM-ST Label & **EE Label
  - No: MEPS Products

- Passed: RCS

---

**Equipment affixed with SIRIM-ST Label**

- The artwork for EE label can be obtained by EC;
  - Please refer to Chapter 8 and Chapter 9 for details.

---

*Please refer details explanation in Appendix C*
6.3 Application for CoA for EXHIBITION purposes

Online application through e-Permit. Applicant fill-up information on items related to exhibition such as:
- Name of electrical equipment
- Name
- Place and Address
- Date
- Duration
Applicant can refer to Trader Module User Guide

CoR = Certificate of Registration to Manufacture/Importer (see Appendix A)
Application to be re-submitted

Energy Commission (ST) evaluates based on:
• Invoice; and
• Air Way Bill (AWB); or
• Bill of Lading (BL).

No

Complete

Yes

CoA for EXHIBITION Fee RM 220.00

Paid

No

Equipment approved is intended to be displayed only. It should be:-
• NOT to be sold, installed or used;
• Re-exported (returned to country of origin).

CoA EXHIBITION issued

*Please refer details explanation in Appendix D
CHAPTER 7
APPLICATION FOR RELEASE LETTER (RL)

Applicants to register with DagangNet

Registered

No

Yes

Online application through e-Permit.
Applicant to choose type of RL:-
• **Regulated Equipment**
  > Factory Research
  > Quality Research
  > Specific Purpose
  > Transit
  > Import Component for Local Market
  > Import Component for 100% Export
  > Re-work and Re-export
  > Concert

• **Non-Regulated Equipment**
Applicant can refer to *Trader Module User Guide*

Application Rejected

No

Correct Information

Yes

Energy Commission (ST) evaluates based on each type of RL on each requirement as in **Appendix E**

Application Rejected

No

Complete

Yes

Comply

Yes

RL issued

*Please refer details explanation in **Appendix E**
### REGULATORY REQUIREMENTS RELATED TO NATIONAL DIFFERENCES

<table>
<thead>
<tr>
<th>No</th>
<th>Items</th>
<th>Requirements</th>
</tr>
</thead>
</table>
| 1  | Nominal Voltages and Frequency | a) Nominal Voltage  
Effective 1st Jan 2008, nominal voltage for low voltage supply in Malaysia is 230/400V (+10%, -6%) in accordance with MS IEC 60038. The details of voltages and variations are as below: |

<table>
<thead>
<tr>
<th>Nominal Voltage (V)</th>
<th>Percentage of Variations (%)</th>
<th>Voltage Variations (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
<td>Max.</td>
</tr>
<tr>
<td>Until 31/12/2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single phase, 1 Ø</td>
<td>240</td>
<td>5</td>
</tr>
<tr>
<td>Three phase, 3 Ø</td>
<td>415</td>
<td>5</td>
</tr>
<tr>
<td>Commencing on 1/1/2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single phase, 1 Ø</td>
<td>230</td>
<td>10</td>
</tr>
<tr>
<td>Three phase, 3 Ø</td>
<td>400</td>
<td>10</td>
</tr>
</tbody>
</table>

b) Nominal Frequency  
Nominal frequency for low voltage supply voltage in Malaysia is allowed to fluctuate at ±1% from 50Hz.

| 2  | Voltages and Frequency Marking for Regulated Equipment | In line with (a) above, the electrical equipment to be used in Malaysia shall be designed to operate at the country’s nominal voltage and frequency as follows: |

a) Voltage  
Single-phase equipment shall be rated/ marked at 230V or 240V. If the equipment is rated with multiple or a range of voltages, voltage range of 230V (+10%, -6%) shall be included.

Three-phase equipment shall be rated/ marked at 400V or 415V. If the equipment is rated with multiple or a range of voltages, voltage range of 400V (+10%, -6%) shall be included.

b) Frequency  
Product shall be rated/ marked at 50Hz and testing shall be conducted at 50Hz (±1%). If the product is marked with 50/60Hz or 50-60Hz then testing shall be conducted either at 50Hz or 60Hz, whichever is more unfavourable. |
3 Testing Voltage and Frequency on Electrical Equipment

Type Test Report for Equipment
The test shall be conducted by the Conformity Assessment Body (CAB) at voltage variations as in the table below:

<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single phase, 1Ø</td>
<td>240V ± 6% : (225.6 – 254.4) V</td>
</tr>
<tr>
<td>Three phase, 3Ø</td>
<td>415V ± 6% : (390.1 – 439.9) V</td>
</tr>
<tr>
<td>Single phase, 1Ø</td>
<td>230V ± 10% : (207 – 253) V</td>
</tr>
<tr>
<td>Three phase, 3Ø</td>
<td>400V ± 10% : (360 – 440) V</td>
</tr>
</tbody>
</table>

a) Voltage
Single-phase equipment
Testing shall be conducted based on 230V(+10%,-10%) or 240V(+6%,-6%) and other relevant voltages, whenever the equipment is marked with multiple or a range of voltages.

Three-phase equipment
Testing shall be conducted based on 400V(+10%,-10%) or 415V(+6%,-6%), and other relevant voltages, whenever the equipment is marked with multiple or a range of voltages.

b) Frequency
Testing shall be conducted either at 50Hz or 60Hz, whichever is more unfavourable.

4 Power supply cord and main plug requirements

Appliances shall be fitted with a suitable and appropriately approved power supply cord and mains plug. Both are regulated equipment and must be approved by the regulatory body before it can be used with the appliances.

a) The Power Supply Cord shall be certified to:-
   • MS2112-5 or BS EN 50525-2-11 or IEC 60227-5 (PVC insulated - flexible cables/cords); or
   • or MS 2127-4 or IEC 60245-1 & IEC 60245-4 (Rubber insulated - flexible cables/cords)

b) The mains Plug to be used in Malaysia shall be as follows:
   • 13A fused plug complying with MS 589-1 or BS 1363:PT.1;
   • 15A plugs complying with MS 1577;
   • 2.5A, 250V, flat non-rewireable two-pole plug with cord for the connection of class II equipment comply with MS 1578 or BS EN 50075.

5 Class I and Class II Equipment

Only Class I with symbol as in Figure 1 and Class II with symbol as in Figure 2 are allowed to be used in Malaysia.

Figure 1 : Class 1
Figure 2 : Class II

Class 0 and Class 01 appliances as defined in MS IEC 60335 series or IEC 60335 series are NOT ALLOWED to be used in Malaysia.
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GUIDELINE FOR APPROVAL OF ELECTRICAL EQUIPMENT

Regulated Energy Efficiency (EE) Fans for performance

a) Regulated minimum energy efficiency standards for electrical fans namely fans, wall fans, table fans, pedestal fans and box fans which use blades are as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Type of fans</th>
<th>Minimum Co-efficient of performance (COP) (m3/min/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ceiling Fan (1200 mm /48 inch – 1500 mm / 60 inch)</td>
<td>2.58</td>
</tr>
<tr>
<td>2.</td>
<td>Pedestal Fan (250 mm /10 inch – 400 mm / 16 inch)</td>
<td>1.01</td>
</tr>
<tr>
<td>3.</td>
<td>Table / Desk Fan (250 mm / 10 inch – 400 mm /16 inch)</td>
<td>1.01</td>
</tr>
<tr>
<td>4.</td>
<td>Wall Fan (250 mm / 10 inch– 400 mm / 16 inch)</td>
<td>1.01</td>
</tr>
<tr>
<td>5.</td>
<td>Box Fan (250 mm / 10 inch– 350 mm / 14 inch )</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Where, \( \text{COP} = \frac{\text{Air Delivery (m3/min)}}{\text{Input Wattage (W)}} \)

The test method used to determine COP is in accordance with MS 1220:2010 or IEC 60879:1986 with modification.

The acceptable value of COP must be at least or above the stated value shown.

Note: Value of COP for No.1, 2, 3 & 4 are included in the MEPS requirements

b) Suspension System for Electric Ceiling Fans.

Electric ceiling fans must be provided with a special wire as a secondary suspension system. The test method used to check that the secondary suspension system of the electric ceiling fan has adequate mechanical strength is in accordance with MS 1597: Part 2-80 or IEC 60335-2-80 with modification for ceiling fan only.
Standards for Fluorescent Lamp Fitting are MS IEC 60598-2-1 or IEC 60598-2-1 (for fixed luminaries) and MS IEC 60598-2-2 or IEC 60598-2-2 (for recessed luminaries). Components such as glow starter, starter holder, lamp holder, capacitor, connecting device, ballast and internal wiring are used as part of the fitting. Thus, the components used for both standards mentioned shall comply to the following standards:

<table>
<thead>
<tr>
<th>Components</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glow-Starters</td>
<td>MS IEC 60155 or IEC 60155</td>
</tr>
<tr>
<td>Starterholder</td>
<td>MS IEC 60400 or IEC 60400</td>
</tr>
<tr>
<td>Lampholders</td>
<td>MS IEC 60400 or IEC 60400</td>
</tr>
<tr>
<td>Capacitors</td>
<td>MS IEC 61048 or IEC 61048 &amp; MS IEC 61049 or IEC 61049</td>
</tr>
<tr>
<td>Connecting devices</td>
<td>MS IEC 60998 (Series) or IEC 60998 (Series)</td>
</tr>
<tr>
<td>Magnetic/conventional Ballast</td>
<td>Safety test: MS IEC 61347-1 or IEC 61347-1 + MS IEC 61347-2-8 or IEC 61347-2-8 and Performance test: MS IEC 141 PT.2 or IEC 60921 with modification Note: Ballast Watt Loss shall not be more than 6W for all fluorescent lamps ballast.</td>
</tr>
<tr>
<td>Electronic Ballast</td>
<td>Safety test: MS IEC 61347-1 or IEC 61347-1 + MS IEC 61347-2-3 or IEC 61347-2-3 and Performance test: MS IEC 60929 with MS IEC 61000-3-2 or IEC 60929 with IEC 61000-3-2</td>
</tr>
<tr>
<td>Internal Wiring</td>
<td>MS 2112-3 or IEC 60227-3, MS 2112-4 or IEC 60227-4 The insulating material of internal wiring must be capable of withstanding the maximum temperature to which it is subjected (heat resistance).</td>
</tr>
</tbody>
</table>
b) Component used for LED Lamp Fitting

Standards for LED Lamp Fitting are MS IEC 60598-2-1 or IEC 60598-2-1 (for fixed luminaries), MS IEC 60598-2-2 or IEC 60598-2-2 (for recessed luminaries), MS IEC 60598-2-4 or IEC 60598-2-4 (Portable LED Lamp), MS IEC 60598-2-12 or IEC 60598-2-12 (LED Night Lamp) and MS IEC 60598-2-8 or IEC 60598-2-8 (LED hand lamp). Components such as driver, module, lampholder, connecting device and internal wiring are used as part of the fitting. Thus, the components used for above standards mentioned shall comply to the following standards:

<table>
<thead>
<tr>
<th>Components</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver</td>
<td>MS IEC 61347-1 and MS IEC 61347-2-13</td>
</tr>
<tr>
<td>Module / Lamp</td>
<td>MS IEC 62031 or MS IEC 62776 or MS IEC 62560 * to meet the requirement of LED photobio safety class of exempt group according to MS IEC 62741 or IEC 62741</td>
</tr>
<tr>
<td>Lampholders</td>
<td>MS IEC 60400 and MS IEC 602380</td>
</tr>
<tr>
<td>Connecting Devices</td>
<td>MS IEC 60838-1 and MS IEC 60838-2-2 or IEC 61984</td>
</tr>
<tr>
<td>Internal Wiring</td>
<td>MS 2112-3 or IEC 60227-3, MS 2112-4 or IEC 60227-4</td>
</tr>
</tbody>
</table>

8. Manufacturing requirements

a) Manufactured regulated equipment shall participate in Product Certification Scheme (PCS) by SIRIM and electrical equipment shall be affixed with label issued by SIRIM or bear SIRIM Certification Mark (under Label Licensing Programme). The sample of SIRIM label and SIRIM Certification Mark can be referred in Chapter 9.

b) Manufacturers of products such as television, refrigerator, domestic fan and air conditioner, must also affix the Energy Efficiency Label onto the products before it can be sold to the customer. The sample of Energy Efficiency (EE) label is shown in Figure 6 in Chapter 9.

9. Importing requirements

a) Imported regulated electrical equipment shall undergo Consignment Test conducted by SIRIM or participate in Product Certification Scheme (PCS) by SIRIM.

Electrical equipment which passes the Consignment Test shall be affixed with the labels issued by SIRIM. The sample of SIRIM label can be referred in Chapter 9.

Electrical equipment which fails the Consignment Test need to be sent to the country of origin or shall be destroyed.
Electrical equipment shall be constructed to be used with power supply cord and power plug which comply with Malaysia’s requirements and standards.

The requirements and standards of Power supply cord and power plug are stated as in item No.4 above.

b) Importers of products such as television, refrigerator, domestic fan and air conditioner, must also affix the Energy Efficiency Label onto the products before it can be sold to the customer. The samples of Energy Efficiency (EE) label are shown in Figure 6 in Chapter 9.

<table>
<thead>
<tr>
<th>10. Climate Conditions</th>
<th>Apparatus to be used in Malaysia shall be subjected to tests under tropical conditions as specified in the related standards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Requirements for MEPS</td>
<td>To meet the requirements of the MEPS, the performance criteria when tested using the relevant testing standards has to be met. The testing standards and performance criteria have been set as prescribed in Chapter 5A.</td>
</tr>
<tr>
<td>12. Requirement for LED Luminaires</td>
<td>To meet the requirements of the LED Photobiological Safety Class of Exempt Group according to standard MS IEC 62471 or IEC 62471.</td>
</tr>
</tbody>
</table>
CHAPTER 9
LABELLING OR CERTIFICATION MARK

A. Objective and rationale
Labeling or marking of regulated electrical equipment will enable consumers to differentiate between the approved and non-approved regulated electrical equipment. It also serves as a deterrent and a means to check for non-approved regulated electrical equipment in the market.

B. Labeling or Marking
All regulated electrical equipment approved by the Commission must be labeled or marked in accordance with regulation 98 of the Electricity Regulations 1994 and shall be done in the manner which has been determined by the Commission as below:

i) Sticker Type
There are two types of SIRIM-ST label which shall be affixed on the equipment.

a) SIRIM-ST label (BATCH)
Importer who has passed Consignment Test shall purchase SIRIM-ST label and affix on each of equipment. The Word BATCH printed on the label shows that the imported equipment gone through BATCH Consignment Test. Sample of the label is as shown below:

![New SIRIM-ST Label](effective 01-01-2015)

![Old SIRIM-ST Label](

Figure 3: SIRIM-ST label for Imported

b) SIRIM-ST label
Local manufacturer and importer who have entered PCS shall purchase SIRIM-ST label and affix on each equipment. Sample of the label is as shown below:

![New SIRIM-ST Label](effective 01-01-2015)

![Old SIRIM-ST Label](

Figure 4: SIRIM-ST label for Locally Manufactured and Imported Equipment
ii) Embossed Type

a) For manufacturer or importer which participated in SIRIM-ST Label Licensing Programmed, they may use the SIRIM Certification Mark as shown in Figure 5 below.

![SIRIM Certification Mark](image)

**Figure 5: SIRIM Certification Mark**

b) For small regulated electrical equipment such as lampholder, starter-holder, glow starter and cable, SIRIM Certification Mark shall be emboss in their products.

The manufacturer, importer, exhibitor, seller or advertiser is responsible to ensure that the regulated electrical equipment is affixed with appropriate label or SIRIM Certification Mark whichever is applicable. The Commission will conduct surveillance/enforcement from time to time on manufacturers’ or importers’ premises and distributors’ outlets.

C. Where to affix SIRIM-ST label or SIRIM Certification Mark

The SIRIM-ST label or SIRIM Certification Mark shall be affixed on the regulated electrical equipment itself in a legible manner. The SIRIM-ST label shall not be affixed on the packaging.

D. Requirement for Energy Efficiency (MEPS) Labelling

Products such as television, refrigerator, domestic fan and air conditioner are required to affix with Energy Efficiency label before it can be sold to the consumer. The label as in the energy efficiency labeling guideline shall be followed in accordance to the following specification as shown in Figure 6 below:-

(i) Font Specification
(ii) Colour Specification
(iii) 2-Star rating until 5-Star rating

1 Details emboss on cable are SIRIM Cert. Mark/labs, standards, size of cable, manufacturer’s company.
D1. Size of EE label and requirement to display on the product

Manufacturer and Importer that have obtain COA required to print out the EE label by referring to Energy Commission guidelines. EE Labelling guidelines for MEPS products are as below:

- **Air Conditioner**
  - Size for air conditioners energy efficiency label is 9 cm (width) X 13.5 cm (height).
  - Calculation guideline shown as below:

### Annual Energy Consumption Calculation Guideline:

\[
A = \text{Annual Energy Consumption (kWh)}
\]

\[
A \ (kWh) = \frac{\text{CSEC (kWh)}}{1817 \text{ hours}} \times 4380 \text{ hours} *
\]

Where

\[\text{CSEC} = \text{Cooling Seasonal Energy Consumption (From Test Report)}\]

*Operating hours per year = 12 hours per day \times 365 \text{ day} = 4380 \text{ hours}*

### Percentage Energy Saving Compared to Lowest 2-Star Rating Compared Calculation Guideline:

\[
B = \text{Annual energy consumption (kWh) for lowest 2 - Star rating model}
\]

\[
B \ (kWh) = 100\% - (100 \times \frac{\text{CSPF}_\text{Lowest 2-Star}}{\text{CSPF}_\text{Measured}})
\]

Where

\[
\text{CSPF}_{\text{Lowest 2-Star}} = 3.1 \text{ for rated cooling capacity } < 4.5kW
\]

\[
\text{CSPF}_{\text{Lowest 2-Star}} = 2.9 \text{ for rated cooling capacity } 4.5W \text{ to } 7.1kW
\]

\[
\text{CSPF}_{\text{Measured}} = \text{Obtained from test report}
\]
b) Domestic Fan
- Size for fan’s energy efficiency label is 4 cm (width) X 6 cm (height).
- Calculation guideline shown as below:

**Annual Energy Consumption Calculation Guideline:**

\[ A = \text{Annual energy consumption (kwh)} \]
\[ \text{A} = 365 \times 8 \times \text{Power input measured from test report (kW)} \]

**Percentage Energy Saving Compared to Lowest 2-Star Rating Compared Calculation Guideline:**

\[ B = \text{Annual energy consumption (kwh) for lowest 2-Star rating model} \]

For Ceiling Fan:
\[ B = \frac{365 \times 8 \times \text{Tested air delivery capacity (m}^3/\text{min}) \text{ from test report}}{1000} \]
\[ \text{For Pedestal, Wall & Desk Fan:} \]
\[ B = \frac{365 \times 8 \times \text{Tested air delivery capacity (m}^3/\text{min}) \text{ from test report}}{1000} \]

Percentage of energy saving compared to the lowest 2- Stars rating model
\[ = 100\% - (100 \times \frac{A}{B}) \]

c) Refrigerator
- Size for refrigerator’s energy efficiency label is 8 cm (width) X 12 cm (height).
- Calculation guidelines shown as below:-
e) Lighting

- Declared efficacy value (lumen/watt) of the lamp and testing hours that has been conducted must be stated at packaging of the individual product.

- For Light Emitting Diode (LED) Lamps:
  1) The Lumens maintenance test will be carried out every 1,000 hours until the completion of 6,000 hours. An interim report will be issued after completing the first 1,000 hours. The interim report can be used for CoA application. The test will be continued to complete the 6,000 hours. A final full test report will then be issued to supersede the interim report. This procedure will only apply to the products tested according to MS 62612 (P) standard in local labs accredited by Standards
Malaysia i.e SIRIM QAS International Sdn Bhd and QAV Technologies Sdn Bhd. For LED lamps tested according to IEC 62612 in overseas accredited labs, only full test reports will be accepted for COA application.

2) Once the CoA has been issued, the applicant is required to state the Efficacy value onto the packaging of the product together with the number of hours the LED has been tested as per example below:

- i) After completing first 1,000 hours test
- ii) After completing first 6,000 hours test

3) If the product fails after the first 1,000 hours before completing the 6,000 hours, the testing body is required to inform Energy Commission of such failure. The Energy Commission will then not approve the application for the renewal of the CoA.

* For more details please refer to Guideline for Obtaining The Certificate Of Approval (COA) for LED Lamps Under Minimum Energy Performance Standards (MEPS) in Energy Commission website.

f) Washing Machine

**MEPS for washing Machine will be implemented on 1st September 2018.**

- Size for washing machine energy efficiency label is 8 cm (width) X 12 cm (height).
- Calculation guideline shown as below:

  **Annual Energy Consumption Calculation Guideline:**

  \[ A = \text{Annual energy consumption (kwh)} \]
  \[ = 365 \times \text{Energy Consumption from test report (kwh)} \]

  **Percentage Energy Saving Compared to Lowest 2-Star Rating Compared Calculation Guideline:**

  \[ B = \frac{365 \times \text{EER of lowest 2 Star x Rated capacity}}{1000} \]

  Where
  
  EER lowest 2 - Star = 22.5 Wh/kg for top loading washing machine
  EER lowest 2 - Star = 220.0 Wh/kg for front loading washing machine
  % energy saving compared to the lowest 2 stars rating model
  \[ = 100\% - (100 \times \frac{A}{B}) \]
Appendixes
Appendix A
APPLICATION FOR CERTIFICATE OF REGISTRATION (CoR) TO MANUFACTURE / IMPORT

A. Application Procedure
1) Applicants who require applying for Certificate of Approval (CoA) shall register as registered manufacturer/importer with the Energy Commission.
2) Applicant has to ensure their registration as registered manufacturer/importer is valid prior to apply for CoA.
3) Registration can be made through e-DIK system http://edik.st.gov.my. The Energy Commission will issue the successful applicant with a Certificate of Registration (CoR) to Manufacture/Import.
4) A CoR shall be valid for not less than 1 year and not exceeding 5 years from the date of issue or renewal.
5) Renewal of CoR shall be made within one (1) month before the expiry date and not less than 14 days before the expiry date.
6) Application for Renewal of CoR received less than 14 days before the expiry date will automatically be rejected. In this case applicant needs to apply for a new CoR.
7) Registered manufacturer/importer will be issued with Form V1 Certificate of Registration to Manufacture/Import as in Appendix F.

B. Documents Required
Documents required for Certificate of Registration to manufacture and import are as follows:

(i) Business Registration with Companies Commission of Malaysia (under Business Registration Act)
   • Certificate of Business Registration (Form D)
   • Others Business Information

or

Company Incorporation with Companies Commission of Malaysia (under Companies Act)
   • Form 9 / Form Section 17
   • Form 44 / Form Section 46(3)
   • Form 49 or latest Form of Annual Return of a Company / Form Section 14 / Form Section 68 / Form Section 58
   • Form 24 / Form Section 51 / Form Section 78

(ii) Warehouse Tenancy Agreement

(iii) Business License from Local Authority (i.e. Dewan Bandaraya Kuala Lumpur)

(iv) Photo of the premise showing the business signboard

(v) any other information/document as the Commission deems necessary

C. Annual Fee
No Fee Imposed.
Appendix B
APPLICATION FOR CERTIFICATE OF APPROVAL (CoA) TO MANUFACTURE, IMPORT, DISPLAY OR ADVERTISE ELECTRICAL EQUIPMENT.

A. Application Procedure

1) Applicant is required to apply for Certificate of Approval (CoA) through e-Permit http://epermit.dagangnet.com.
2) Applicant shall refer to Dagang Net Technologies Sdn Bhd for details on online registrations at toll free 1-300-133-133.
3) Applicant is required to apply for Certificate of Registration prior to him/her applying for CoA.
4) Details for application to be a registered Manufacturer/Importer are as in Appendix A.
5) Applicant shall complete the application by providing all information correctly and attach all required documents.
6) Information such as Name of Electrical Equipment, Brand and Model shall not be correct or else application will be rejected.
7) Detailed steps on application procedures are available at e-Permit website on Trader Module User Guide.
8) Technical documents required for CoA to manufacture and import are as follows:
   • Type Test Report validity period not exceed five (5) years from the date of testing and shall not less than 12 month from the date of CoA application;
   • List of components;
   • Instruction manual;
   • Technical specification and catalogue; and
   • Sample of the product, if requested.
9) Applicant shall pay RM30.00 as processing fee.

B. Type Test Report

(i) Type Test Reports that are recognised by the Commission shall be produced by any of the following laboratories:-

1) SIRIM QAS International Sdn. Bhd. (SIRIM), Malaysia; or
2) Laboratories under Laboratory Accreditation Scheme of Malaysia (SAMM) by Department of Standards Malaysia (DSM) recognised by Energy Commission; or
3) Laboratories under the IECEE CB Scheme. The list of the laboratories is available from the website http://www.cbscheme.org. The CB test report needs to be accompanied by a CB test certificate; or
4) Laboratories (in the scope of its accreditation) which are accredited by the accreditation body* that have signed the Asia Pacific Laboratory Accreditation Cooperation (APLAC) MRA – http://www.aplac.org; or
5) Laboratories (in the scope of its accreditation) which are accredited by the accreditation body* that have signed the International Laboratory Accreditation Cooperation (ILAC) MRA – http://www.ilac.org; or
6) Laboratories (in the scope of its accreditation) listed as Designated Testing Laboratory (DTL) under ASEAN Sectoral Mutual Recognition Agreement for Electrical and Electronic Equipment (ASEAN EEE MRA); or

(ii) For items (3), (4), (5) and (6), testing should include the national deviation in Malaysia. The requirements of national deviation are as in Chapter 8.

(iii) Test report must be either English or Malaysian language.

*Note: Department of Standard Malaysia (DSM) is one of the (APLAC/ILAC) MRA signatory.

C. Annual Fee for New Application
An annual fee of RM220.00 for single phase and RM330.00 for three phase shall be paid upon approval of the COA as per Second Schedule, Part XIII, Regulation 97(4), Electricity (Amendment) Regulations 2014.

D. Requirement for Manufacture
Electrical equipment that has been approved for manufacturing shall participate in SIRIM’s PCS. The electrical equipment shall be affixed with a label issued by SIRIM or bear the SIRIM Certification Mark.

E. Requirement for Importer
Electrical equipment that has been approved for import into Malaysia shall comply with the consignment test by SIRIM for each batch or participate in SIRIM’s PCS within the validity period of the COA. The electrical equipment shall be affixed with labels issued by SIRIM or bear the SIRIM Certification Mark.

Electrical equipment which failed the Consignment Test need to be sent back to the country of origin or shall be destroyed.
Electrical equipment shall be constructed with power supply cord and power plug which comply with Malaysian requirements and standards.

The requirements and standards of Power Supply Cords and Power Plugs are as stated in Chapter 8, No.4.
Appendix C
RENEWAL OF CERTIFICATE OF APPROVAL (CoA) TO MANUFACTURE, IMPORT, DISPLAY OR ADVERTISE ELECTRICAL EQUIPMENT

Renewal of CoA shall be made not less than 14 days before its expiry date as required under regulation 106 of Electrical Regulations 1994.

A. Application Procedure
1) Applicant (registered Manufacturer / Importer) is required to apply for Renewal of CoA through e-Permit.
2) Applicant whose previous Certificate of Registration has expired is required to re-apply with procedures as in Appendix A.
3) All approved CoA will be displayed at e-Permit and applicants may renew CoA by selecting the previous Job Number or Application ID.
4) Applicant shall complete his/her application by providing all information correctly and attaching all required documents.
5) Unwanted models shall be deleted/removed from e-Permit before submitting the renewal application for CoA to Energy Commission (ST).
6) Application will be rejected if unwanted models are NOT removed from e-Permit. In this case applicant needs to apply for a new CoA.
7) Renewal of CoA shall be made within two (2) months before the expiry date and not less than 14 days before the expiry date.
8) Application for Renewal of CoA received less than 14 days before the expiry date will automatically be rejected. In this case applicant needs to apply for a new CoA.

B. Technical documents required are:
1) Latest test report from testing laboratories recognised by the Commission.
2) The test report validity period shall not exceed five (5) years from the date of testing and the validity of test report shall not be less than 12 month from the expiry date of CoA.
3) In the case of renewal application for CoA to import, the proof of purchase of SIRIM’s label for the period of importing and consignment invoice or copy of consignment test report issued by SIRIM are required.
4) In the case of renewal application for CoA to manufacture, the proof of purchase of SIRIM’s label or copy of valid Product Certification license issued by SIRIM are required.
C. **Annual Fee for Renewal of CoA**
   An annual fee of RM110.00 for single phase and RM220.00 for three phase products shall be paid upon approval of the CoA.

D. **Requirement for Manufacture**
   The manufacturer of Electrical equipment that has been approved for manufacture shall also renew his SIRIM’s PCS. The electrical equipment shall be affixed with labels issued by SIRIM or bear the SIRIM Certification Mark.

E. **Requirement for Importing**
   Electrical equipment that has been approved for import into Malaysia shall comply with the consignment test by SIRIM’s for every batch or participate in SIRIM’s PCS within the validity period of the COA. The electrical equipment shall be affixed with labels issued by SIRIM or bear SIRIM Certification Mark.
   Electrical equipment which fails the Consignment Test need to be sent back to the country of origin or shall be destroyed.
   Electrical equipment shall be constructed with power supply cord and power plug which comply with Malaysia’s requirements and standards. The requirements and standards of Power Supply Cord and Power Plug are as stated in Chapter 8, No.4.
APPLICATION FOR CERTIFICATE OF APPROVAL (CoA) FOR EXHIBITION PURPOSES

A. Application Procedure
   1) Applicant is required to apply for a CoA for Exhibition through e-Permit [http://epermit.dagangnet.com].
   2) Applicant is required to apply for Certificate of Registration prior to him/her applying for CoA.
   3) Details for applications to be registered Manufacturer/Importer can be referred in Appendix A.
   4) Applicant shall complete application by providing all information correctly and attach all required documents.
   5) Information such as Name of Electrical Equipment, Brand and Model shall be correct or else application will be rejected.
   6) Detailed steps on application procedures are available at e-Permit website on Trader Module User Guide.
   7) Technical documents required for CoA for Exhibition purposes are:
      i) A Cover letter to specify:
         Name, place, address, exhibition date and length of exhibition or offer letter to participate in the related exhibition.
      ii) The Invoice and Air Way Bill (AWB) for importation by air or Bill of Lading (BL) for importation by sea should be made available.
   8) Applicant shall pay RM30.00 as processing fee.

B. Exhibition Fee
   Exhibition Fee of RM 220.00 shall be paid upon approval of the CoA.

C. Requirement for CoA for Exhibition Purposes
   Equipment approved is intended to be displayed only. It shall be:-
   • NOT to be sold, installed or used;
   • re-exported or returned to country of origin after exhibition.
APPLICATION FOR RELEASE LETTER (RL)

A. Application Procedure

1) The Energy Commission (ST) will issue a Release Letter to Customs as blanket approval for exemption from Certificate of Approval (CoA) for importation of ST’s regulated electrical equipment.
2) Release Letter is applicable for Special Purpose, Concert, Factory Research, Quality Research, Re-Work and Re-Export, Imported Components used for Equipment Manufactured for 100% Export or Local Market and Transit.
3) For non-regulated equipment, applicant may request Release Letter for Customs clearance purposes.
5) Applicant shall complete application by providing all information correctly and attach required documents.
6) Information such as Name of Electrical Equipment, Brand and Model shall be correct or else application will be rejected.

B. Fee for Release Letter

There is no fee imposed for Release Letter.

C. Technical Documents Required

1. Regulated Equipment for COA Exemption
   i) Specific Purpose - Oil Rig, Tanker, SIRIM Test, Electric Fence Etc.
      • Cover letter to specify the purpose of import, name and address of user as well as place of use,
      • Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
      • All applications are subjected to Energy Commission’s approval.
   ii) Concert
       • The imported equipment shall not be sold, advertised and exhibited and must be re-exported after the concert.
       • Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
       • Equipment catalogue should also be made available.
   iii) Factory Research
       • The imported sample shall not be sold, advertised or exhibited and the sample must be disposed after the end of the research.
       • Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
       • A maximum of 10 units per model is allowed for factory research. A copy of manufacturing license should also be made available.
iv) Quality Research
- The imported sample shall not be sold, advertised or exhibited and the sample must be disposed after end of research.
- Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
- A maximum of 4 units per model is allowed for quality or market research.

v) Repair And Re-Export
- The imported sample shall not be sold, advertised, exhibited and the sample must be re-exported after repair.
- Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.
- Export invoice as proof that the manufactured equipment has been re-exported;
- Manufacturing license should be made available.

vi) Imported Components Used For Equipment Manufactured For 100% Export
- Letter of confirmation that the completed equipment will be full exported.
- A copy of License of Manufacturing Warehouse (LMW) manufacturing license with related appendices or tax exemption letter from the Ministry of Finance/MIDA or tax exemption letter from the Royal Malaysian Customs Department.

vii) Imported Components Used For Equipment Manufactured For Local Market
- A copy of COA to Manufacture for equipment which uses imported components; and
- Test reports as proof that the components to be imported are required for the equipment to be manufactured.

viii) Transit Purposes
- Cover letter should specify:
  a. name and address of Bonded Customs Warehouse where imported equipment will be placed, including the name and telephone number of the officer to be contacted; and
  b. equipment will 100% re-exported to the related country. The country should be named.
- Invoice and Air Way Bill (AWB) for importation via air or Bill of Lading (BL) for importation via sea should be made available.

2. Non-Regulated equipment
- Equipment catalogue;
- Test report; and/or
- Sample if required
Appendix F
CERTIFICATE OF REGISTRATION TO MANUFACTURE/ TO IMPORT*

The Energy Commission hereby certifies in pursuance of section 4(k) of the Electricity Supply Act 1990 that

................................................................................................................................................

at ................................................................................................................................................ has
satisfied the requirements of the Act and the Regulations made thereunder.

The Energy Commission certifies that the above-mentioned
........................................................................................................................................... has been registered and
this Certificate of Registration shall be valid for a period of .......... years(s) from the
date of issue stated below.

Date of issue: .........................
Place: .................................

........................................................................................................................................

Energy Commission

* Delete wherever appropriate
** Not less than one year and not more than five years.”.
Appendix G
FORM V  
(regulation 97)  
ELECTRICITY SUPPLY ACT 1990  
CERTIFICATE OF APPROVAL

In accordance with regulation 97 of the Electricity Regulations 1994, this Certificate is issued to …………………………………………………………………………………………………………..

(name of importer)

at………………………………………………………………………………………………………………

(address)

and approval is given to

import  display  sell  advertise

the equipment, the description of which are set out below direct from

………………………………………………………………………………………………………………

(name and country of manufacturer)

and the equipment is in compliance with:

(a) Standard : ...........................................................

(b) Type Test Report No : ...........................................

for a period of one year from the date of issue/renewal* shown hereunder subject to the following conditions:

(state)

Date of issue/renewal*: ………………… Expiry Date : …………………

Approval No : ………………………………… Fee RM : …………………………………

Description of Equipment

Equipment : …………………………………………………

Trade Name : …………………………………………………

Type/Model : …………………………………………………

Specification Of Equipment

Voltage ................................................. Volts  Power ......................... watts

Frequency ................................................. Hz  Current ......................... Amp

………………………………………………………………………………

Energy Commission

1. Equipment approved is intended to be displayed only and not to be sold, installed or used.
   * Delete whichever is not applicable.
Appendix H
FORM W
(regulation 97)
ELECTRICITY SUPPLY ACT 1990
CERTIFICATE OF APPROVAL

In accordance with regulation 97 of the Electricity Regulations 1994, this Certificate is issued to ........................................................................................................................................(name of holder’s company)
at...................................................................................................................................................................................(address)
and approval is given to-

<table>
<thead>
<tr>
<th>manufacture</th>
<th>display</th>
<th>sell</th>
<th>advertise</th>
</tr>
</thead>
</table>

the equipment, the description of which are set out below direct from ........................................................................................................................................(name of manufacturer)

...................................................................................................................................................................................(address of manufacturer)

and the equipment is in compliance with:

(a) Standard : ........................................................................
(b) Type Test Report No : .................................................

for a period of one year from the date of issue/renewal* shown hereunder subject to the following conditions:

(state)

Date of issue/renewal*: ........................................... Expiry Date : ..............................
Approval No: ................................................................. Fee RM : ..............................

Description of Equipment

Equipment : ........................................................................
Trade Name : ........................................................................
Type/Model : .........................................................................

Specification Of Equipment

Voltage.................................... Volts  Power ......................... watts
Frequency.............................. Hz  Current ......................... Amp

Energy Commission

1. Equipment approved is intended to be displayed only and not to be sold, installed or used.
* Delete whichever is not applicable.
Appendix I
CERTIFICATE OF REGISTRATION AS CONFORMITY BODY

The Energy Commission hereby certifies in pursuance of section 4(l) of the Electricity Supply Act 1990 that

................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
has satisfied the requirements of the Act and the Regulations made thereunder.

The Energy Commission certifies that the above-mentioned
................................................................................................................................................
has been registered and this Certificate of Registration shall be valid for a period of ........... year(s) from the date of issue stated below.

Date of issue : .........................
Place : .................................
........................................................................................................................................

Energy Commission

* Not less than one year and not more than three years.";
Appendix J
ACCEPTABLE AND NON-ACCEPTABLE 2-PIN MAINS PLUG

SOURCE: CEE 7: 1963 Standard Sheet XVI
IEC 83: 1975 Standard C5

NOTES: This plug is available in two profiles (see page 9)
Version I: round plug
Version II: Flat plug, with insulating collar
Intended to be fitted to class II (double insulated) appliances 2.5 A, 250 V
Two pole - no earth contact

OTHER
RATINGS : None
OUTLINE :
Version II:

TYPICAL PLUG

ACCEPTABLE
SOURCE: CEE 7: 1963 Standard Sheet XVII
IEC 83: 1975 Standard C5

NOTES: Intended to be fitted to class II (double insulated) appliances 2.5 A, 250 V
Two pole - no earth contact

OTHER
RATINGS: None
OUTLINE:

TYPICAL PLUG

UNACCEPTABLE