



Malaysian Third Party Testing And Certification

Ms. Sharifah Jusoh

SIRIM

*lites.asia - Ninth Regional Meeting
Kuala Lumpur - 22 & 23 April 2014*



Outline

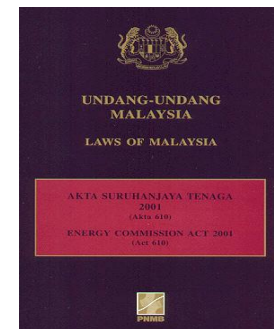
- Introduction
- Testing
- Certification
- Challenge In Testing & Certification For Lighting Product

Outline

- **Introduction**
- Testing
- Certification
- Challenge In Testing & Certification For Lighting Product

Regulation on E&E Products in Malaysia

- Electricity Supply Act 1990 (Act 447) & Electricity Regulation 1994 & Electricity (Amendment) Regulation (2013)
- Statutory body in Malaysia – [Suruhanjaya Tenaga](#) (*Energy Commission*)
- REGULATED ELECTRICAL EQUIPMENT (E&E)
 - 34 Items, including Lighting products / accessories incorporating LED lamps
 - ST COA & SIRIM safety label are mandatory
- Federal Government Gazette 3rd May 2013 – 5 equipment including Lighting Lamps/Bulbs: *Energy Commission* COA mandatory



Regulation on E&E Products in Malaysia

- Main User or Authority in Malaysia
 - Jabatan Kerja Raya (JKR)
(Malaysian Public Works Department)
 - Lembaga Lebuhraya Malaysia (LLM)
(Malaysian Highway Authority)
 - Tenaga Nasional Berhad
(Main Malaysian energy provider)
 - Local State Authority

Regulation on E&E Products in Malaysia

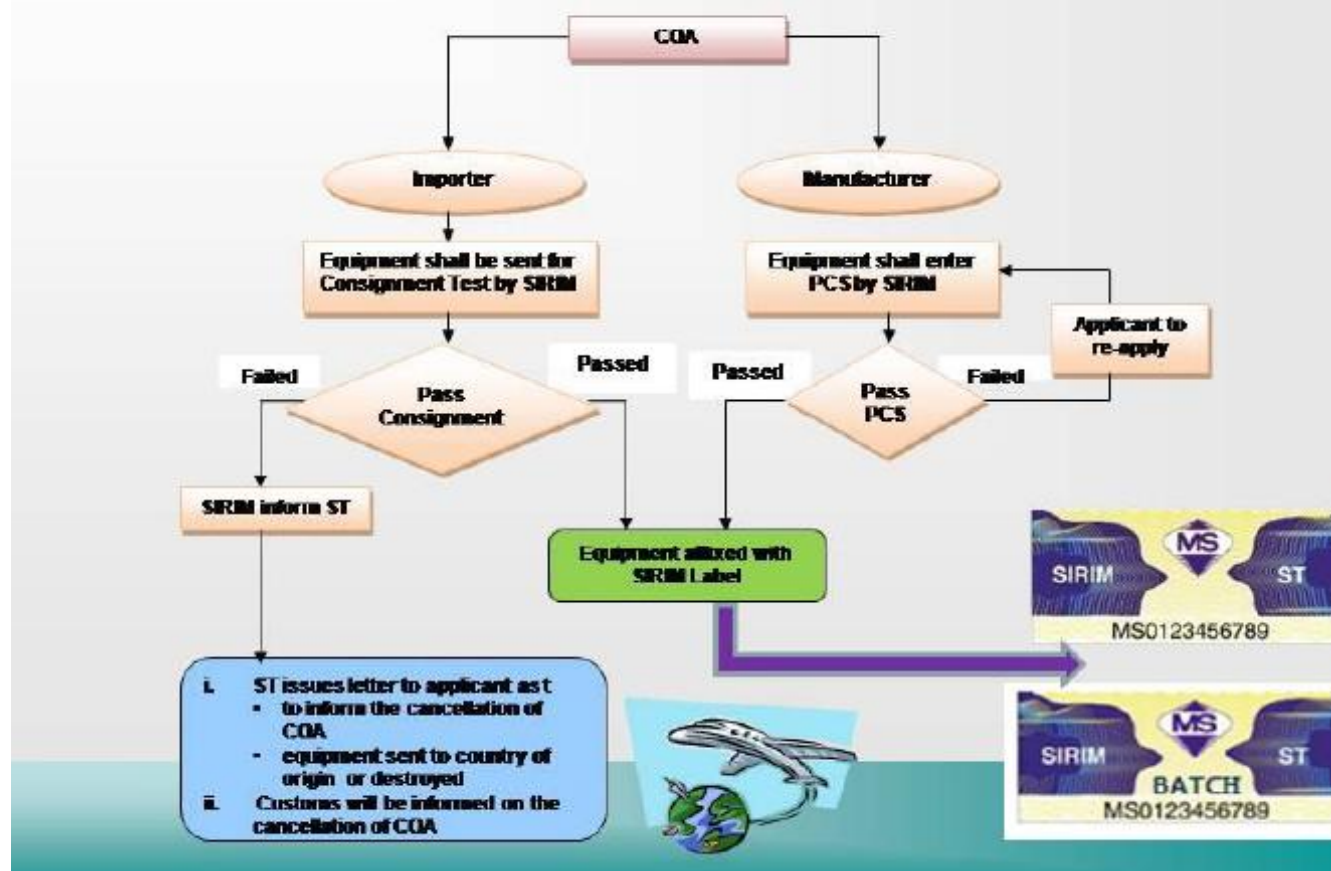
- For COA or approval from relevant body, the product/equipment shall meet:
 - specified safety requirement **AND**
 - specified performance & energy efficiency requirement where relevant
- And that can only be achieved through relevant **TESTING AND CERTIFICATION**

Regulation on E&E Products in Malaysia

- Electricity (Amendment) Regulations 2013
- 34 category of regulated items, including lighting products:
 - CFL lamps
 - LED lamps
 - Control Gear/Drivers/ballast for lamps
 - Luminaires
 - Adaptor/charger
 - Lamp holders
 - Capacitors

Regulation on E&E Products in Malaysia

8) Reg. 98 (1):- Marking or labelling of approved equipment



Regulation on E&E Products in Malaysia

■ ST Recognized test report for CoA Application:



Recognised Test Report

Type test reports shall be produced by any of the following laboratories:-

- ✓ Sirim Berhad / accredited lab under SAMM by DSM;
- ✓ Lab under IECEE CB Scheme;
- ✓ Accredited lab by APLAC MRA;
- ✓ Lab listed as Designated Testing Laboratory (DTL) under ASEAN EEE MRA



Regulation on E&E Products in Malaysia



ACCREDITED UNDER
SAMM
SCHEME BY
STANDARDS
MALAYSIA

Testing Laboratory Accreditation



ASEAN SECTORAL MRA ON ELECTRICAL AND ELECTRONIC EQUIPMENT (ASEAN EEMRA) LISTING OF THE DESIGNATED CONFORMITY ASSESSMENT BODIES

In accordance to the ASEAN Sectoral MRA for Electrical and Electronic Equipment, the Joint Sectoral Committee for Electrical and Electronic Equipment (JSC EEE) listed the following Designated Conformity Assessment Bodies to undertake testing/certification for the electrical and electronic equipments under the scope of designation of the respective ASEAN Member Countries. The Scope of designation appears as ANNEX 1.

SIRIM QAS International Sdn Bhd with address at 1, Persiaran Dato' Menteri, Section 2, 40911 Shah Alam, Selangor, Malaysia as listed testing laboratory for Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Indonesia, Philippines, Singapore, Thailand and Viet Nam

This listing was made on 06 January 2012 to 07 December 2014.

JOINT SECTORAL COMMITTEE FOR ELECTRICAL AND ELECTRONIC EQUIPMENT.



ACCREDITED AS AN NCB
& A CBTL UNDER THE
IECEE CB SCHEME

(World most famous and successful
Conformity Assessment Scheme for
mutual recognition of test certificates
and test reports for electrical
equipment)

DESIGNATED/LISTED AS
ONE OF TESTING LAB
UNDER the ASEAN
EEMRA for ASEAN
Countries

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Australian Government



en.lighten



Outline

- Introduction
- **Testing**
- Certification
- Challenge In Testing & Certification For Lighting Product

Purpose of Testing

■ For Government

- Support Regulatory Bodies (ST, BOMBA, SKMM,JPJ) in implementing regulations/legislations.

■ For Industry

- Assist companies' Research and Development activities
- Test for compliance to company, association, national and international standards.
- Assist exporters meeting importing country's regulatory requirements.

Lighting Product Testing

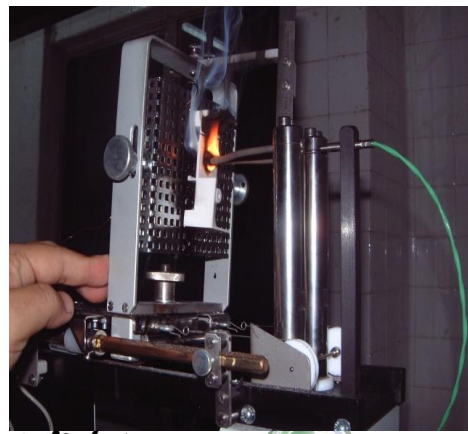
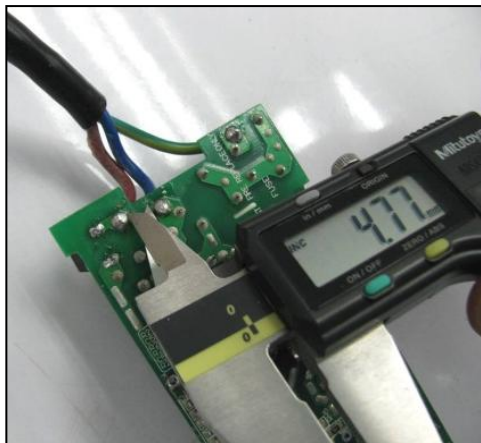
- Testing
 - Safety Test
 - Performance Test
 - MEPS Test

Safety Testing & Facilities

- Safety Testing Standards of Lighting Product
 - Components & Accessories of lighting
 - Control gears – IEC 61347 series, MS IEC 61347 series
 - Lampholders
 - Starters
 - Lamps
 - CFL lamps – IEC 60968 / MS IEC 60968
 - LED lamps – IEC 62560 / MS IEC 62560
 - LED modules - IEC 62031
 - Tubular fluorescent lamp – IEC 61195, IEC 61199
 - Luminaires – IEC 60598 series, MS IEC 60598 series
 - Photobiological Hazard for GLS – IEC 62471

Safety Testing & Facilities

■ Electrical Safety Testing of Lighting Product



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Safety Testing & Facilities

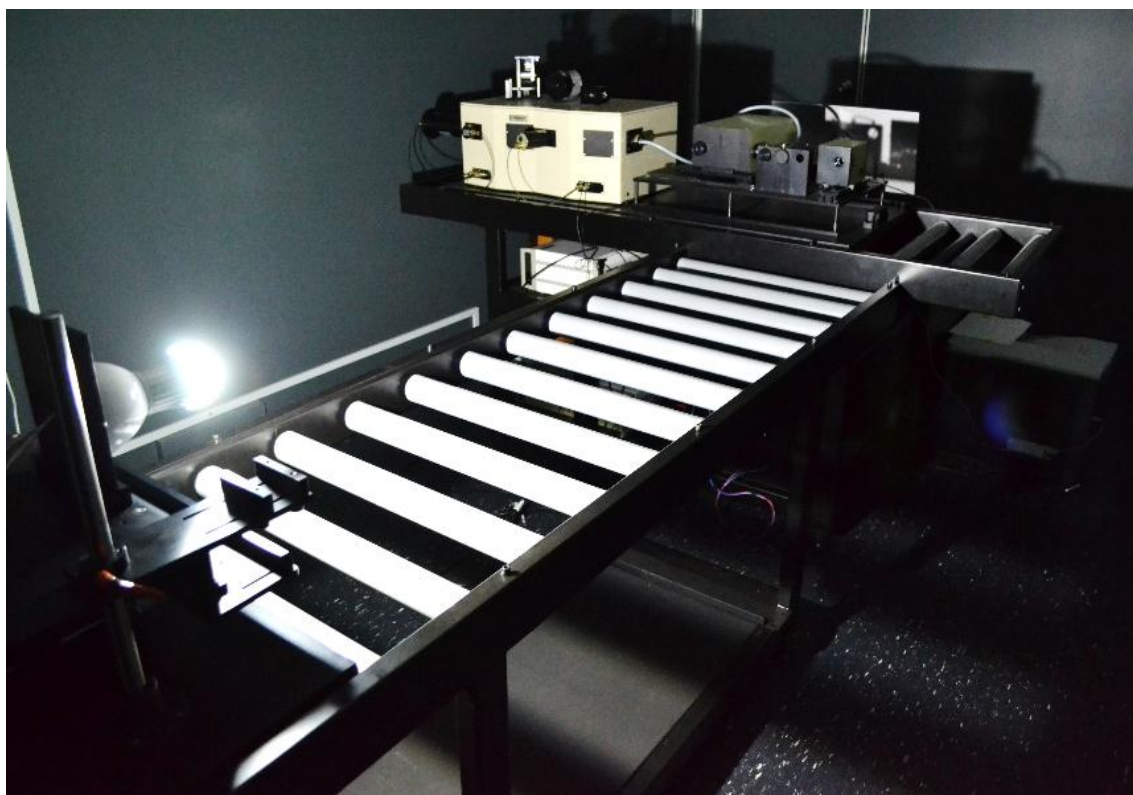
■ Electrical Safety Testing of Lighting Product



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Safety Testing & Facilities

■ Photobiological Safety Testing of Lighting Product



Performance Testing & Facilities

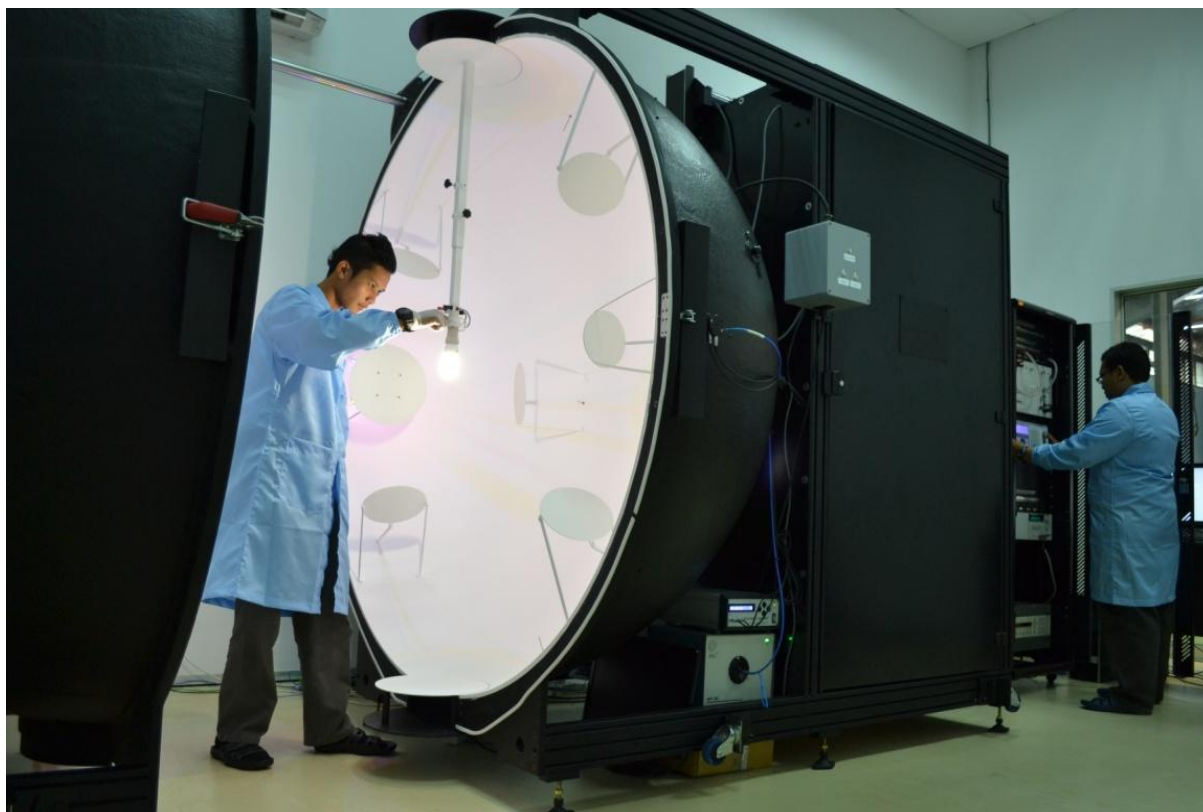
- Performance Testing Standards of Lighting Product
 - Components & Accessories of lighting
- Control gears – IEC/ MS IEC 60921, IEC/MS IEC 60923, IEC/MS IEC 60929, IEC/MS IEC 62384
 - CFL lamps – IEC 60969 / MS IEC 60969
 - LED lamps – MS 62612
 - LED modules - MS 62617
 - Tubular fluorescent lamp – IEC 60081, IEC 60901
- Luminaires – MS 62722-1 & MS 62722-2-1

Performance Testing & Facilities

- Photometry testing
 - Integrating sphere System
 - 2π and 4π
 - For measurement on Electrical, Colorimetric and Photometric characteristics
 - Goniophotometry test System
 - For measurement on Electrical, Colorimetric and Photometric characteristics including light distribution

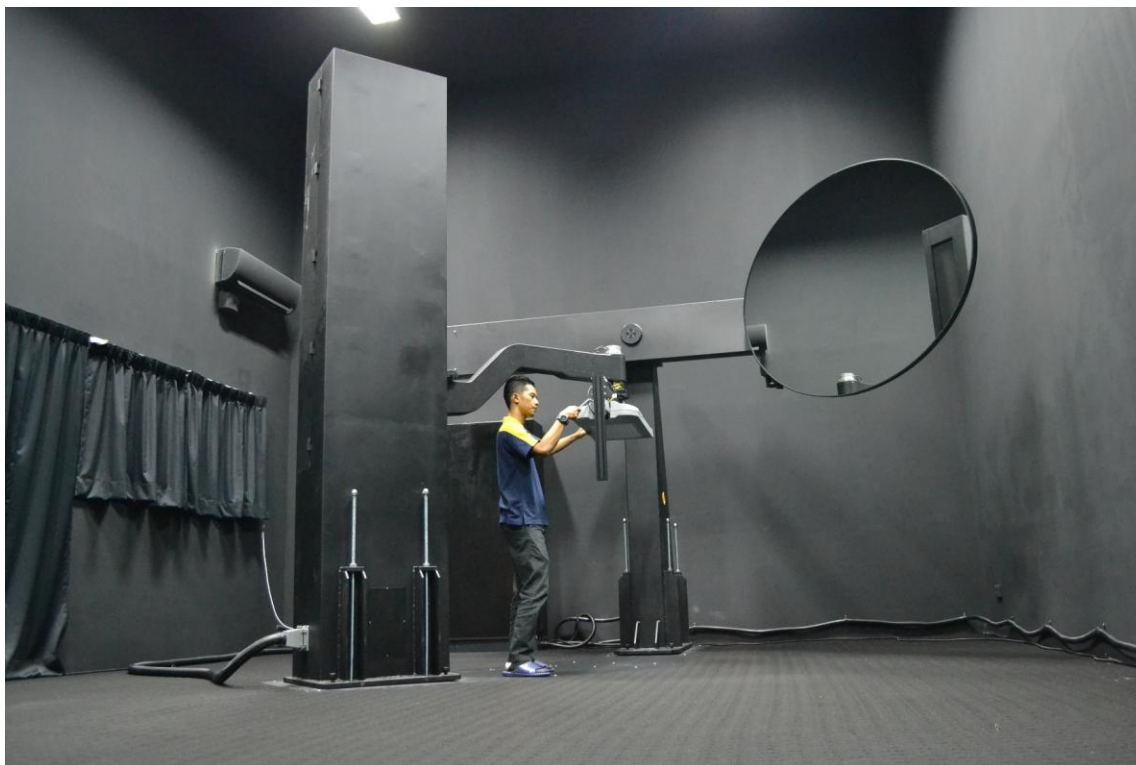
Performance Testing & Facilities

■ Integrating Sphere System



Performance Testing & Facilities

■ Goniophotometry Test System



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Performance Testing & Facilities

- Lumen Maintenance & Endurance Testing for Lamp



MEPS Testing

- Part of Performance Testing
 - Electrical parameter – W, A, V
 - Luminous flux (initial)
 - Lumen Maintenance (after endurance)
 - Correlated Color Temperature (CCT)
- Lamp Efficacy (Lm/W)

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Product Certification – E&E Products

Mandatory certification

Voluntary certification



Product Certification Scheme

SIRIM



- Established in Malaysia year 1972
- Provides independent assurance for products manufactured to conform consistently with pertinent standards and specifications.
- Gives manufacturers right to affix the SIRIM “*Top Mark*” on their products.
- Assures customers of products’ quality and safety.
- Accredited by the Department of Standards Malaysia to ISO/IEC Guide 65.
- Mandatory & Voluntary.

Major Regulatory Agencies in Malaysia

AGENCY	LAWS & REGULATIONS	SCOPE
Suruhanjaya Tenaga (<i>Energy Commission</i>)	Electricity Supply Act (ACT 447) and Subsidiary Regulations	Safety of electricity supply, use and installations of electrical equipment.
Jabatan Pengangkutan Jalan (<i>Road Transport Department</i>)	Road Transport Act 1987 (ACT 33) and Subsidiary Rules	Motor vehicle and road safety
Kementerian Kesihatan (<i>Ministry of Health</i>)	Food Act, 1983 (ACT 281) and Food Regulations, 1983	Food safety
Kerajaan Tempatan (<i>Local state</i>)	- Street, drainage and Building Act (ACT 133) and Uniform Building By Laws. 1984	Structure, Construction and safety of buildings
Bomba dan Penyelamat (<i>Malaysian Fire and Rescue Department</i>)	- Fire Services Act 1988	
Jabatan Kerja Raya (JKR) (<i>Malaysian Public Works Department</i>)	Uniform Building By Law 1984	Construction & Building Materials
Suruhanjaya Perkhidmatan Air Negara (SPAN) (<i>National Water Services Commission</i>)	SPAN Act 2006 Water Service Industry Act 2006 (WSIA)	Sewage/Sewerage systems Potable water supply

ISO/IEC GUIDE 67: Conformity Assessment – Fundamentals of Product Certification

- Provides guidance on the different systems of product certification.

	ELEMENTS OF PRODUCT CERTIFICATION SYSTEM	PRODUCT CERTIFICATION SYSTEMS							
		1a	1b	2	3	4	5	6	N
1	Selection (Sampling)	x	x	x	x	x	x		
2	Determination of characteristics - Testing (17025) - Inspection (17020) - Design Appraisal - Assessment of Services	x	x	x	x	x	x	x	
3	Review	x	x	x	x	x	x	x	
4	Decision on Certification	x	x	x	x	x	x	x	
5	Licensing (Right to use the Mark)		x	x	x	x	x	x	
6	Surveillance								
	- Testing or inspection of samples from open market			x		x	x		
	- Testing or inspection of samples from the factory				x	x	x		
	- Quality System Audits						x	x	
	- Assessment of the production process				x	x	x	x	

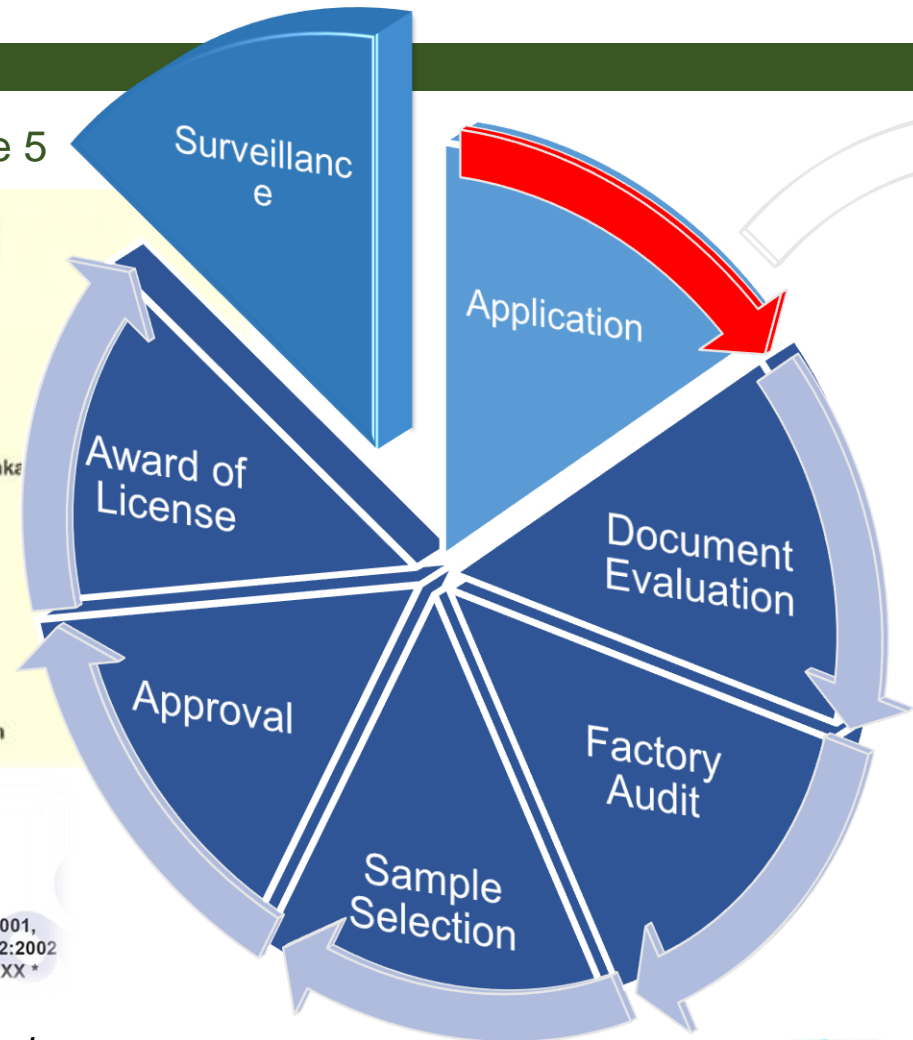
*A product certification system should include at least elements 2, 3 and 4.

Certification Process

Adopt ISO Product Certification System Type 5



*SIRIM-ST mandatory
certification label*



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Application Documents

- **Questionnaire**
- **Application form**
- **Declaration of Trade mark**
- **Declaration of Approval from relevant authority ***
- **Declaration from Manufacturer ***

*Note: * - whenever applicable*

Application Document

Full Type Test

Report

SIRIM QAS International



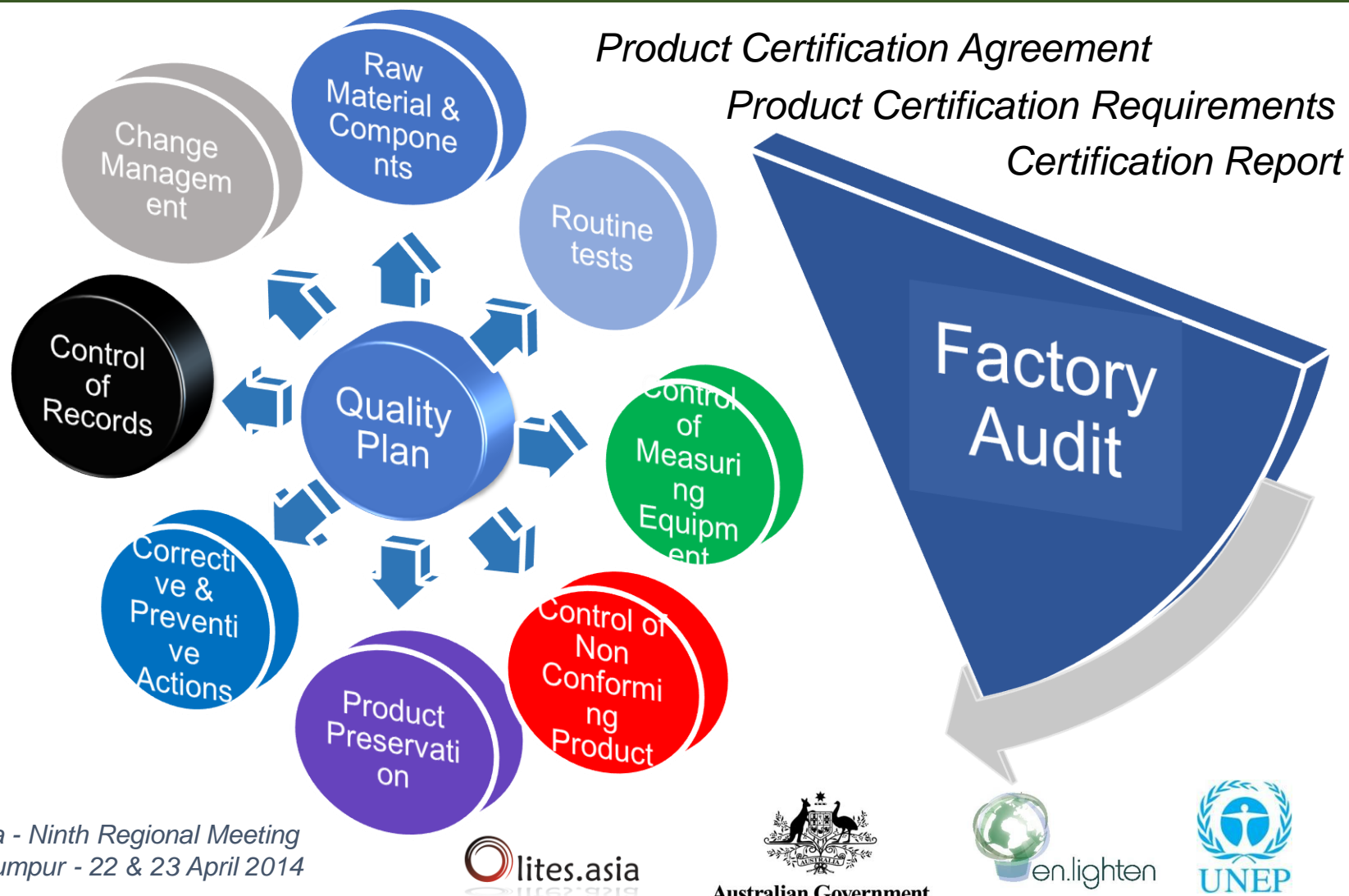
**Test Laboratory
- CB Scheme**



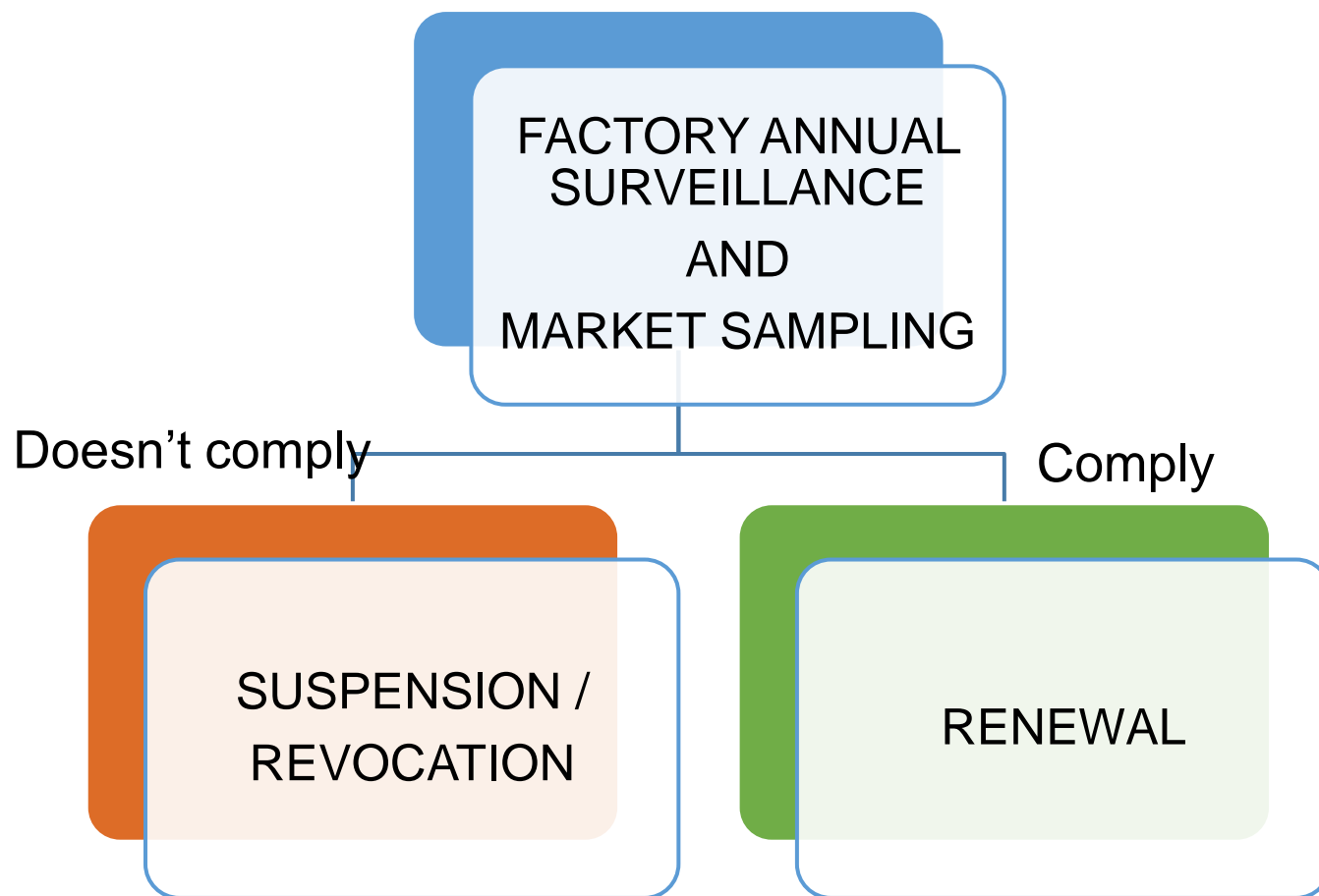
**3rd Party Laboratories accredited
by national accreditation bodies
recognise by STANDARD
MALAYSIA e.g. ILAC, HOKLAS,
NATA, UKAS, EEMRA etc.**



Product and Quality System Evaluation



Product Certification Scheme

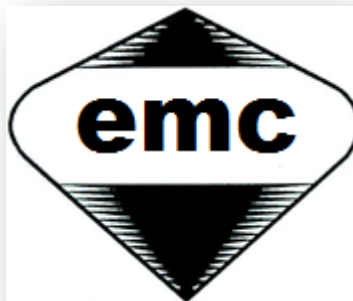


SIRIM Certification Mark for E&E Product



Product Certification Mark

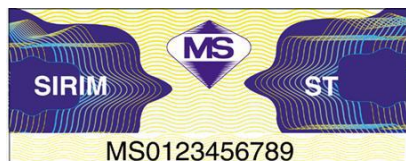
Used on products complying with a Malaysian Standard, foreign standard or international standard



Electromagnetic Compatibility (emc) Mark

Used on Electrical and Electronic products complying to national and international EMC standards

Certification sticker



**Affixed on regulated
E&E products**



Affixed on emergency lighting, exit sign and fire door



**Affixed voluntarily on
non-regulated products.**



BATCH CERTIFICATION (CONSIGNMENT) FOR ST REGULATED IMPORTED PRODUCTS

- Alternative to Product Certification Scheme
- Quick and convenient solution for electrical product importers.
- Inspection and sampling of products in Malaysia, and testing in SIRIM's Laboratory.
- Products will receive [SIRIM Labels](#) indicating particular batch complies with standard and regulatory requirement



Batch Certification (Consignment) For Regulated Imported Products

Adopt ISO Product Certification System Type 1a with modification

- **Receipt of Application**
- **Documentation Audit**
- **Inspection & Sampling**
- **Testing on Samples**
- **Approval**
- **Issuance of Labels**
- **Affix Labels**
- **Market Surveillance**



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- **Challenge In Testing & Certification For Lighting Product**

Challenge in Testing and Certification for Lighting

- Long duration of lumen maintenance test for performance
 - Up to 6000 hrs (84 days) on LED lamp
 - 2000 hrs (250 days) on CFL & others lamp
- Limitation of test compliance
- Change of design & R&D in short period
- Availability of test standard
- Method of tests – CIE & IESNA
- Equipment & calibration expensive

THANK YOU



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