

# **EL201. Fluorescent Lamps**

## **[EL201-1993/6/2010-13]**



### **1. Scope**

The criteria shall apply to tubular fluorescent lamps having a rated lamp power of 40W or less and compact fluorescent lamps having a rated lamp power of 55W or less for general lighting.

### **2. Definitions**

#### 2.1

“Compact fluorescent lamps” refer to the fluorescent lamps with one-side base whose glass tube is bent to be compact-size.

#### 2.2

“Lumen maintenance” refers to the total luminous flux of certain times within the life-time of the lamp divided by the initial characteristic and represented at its percentage.

#### 2.3

“Initial characteristic” refers to the optical and electrical characteristics of the lamp (electric power, current, and total luminous flux) after aging for 100 hours.

### **3. Certification Criteria**

#### **3.1 Environmental Criteria**

##### 3.1.1

With respect to use of chemicals during the manufacturing process and hazardous waste discharge in disposal stage, the amount of mercury into the lamp shall be 5 mg or less.

##### 3.1.2

The product should satisfy the requirements for the first class Energy Efficiency Rating,

according to the efficiency management equipment operation regulations in the Energy Use Rationalization Act.

Note) If a light source product having high color temperature, which is for the same rated lamp power, meets the relevant standards, the same type of product (e.g., start-up circuit system, the rated lamp power and the nominal diameter) having a lower color temperature than the light of test sample shall be deemed to satisfy the criteria.

### 3.1.3

With respect to waste discharge in disposal stage, the following requirements shall be satisfied.

#### 3.1.3.1

The diameter of glass tube shall be 26mm or less.

#### 3.1.3.2

Lumen maintenance after 2,000 hrs [%] shall be 80 % or more.

## 3.2 Quality Criteria

### 3.2.1

The quality of the product shall satisfy the safety standards in accordance with the Korean Safety and Control Act for Electric Appliances.

### 3.2.2

The starting characteristic, initial characteristic, and color rendering shall satisfy the quality standards specified in the KS C 7601 (Fluorescent lamps).

## 3.3 Information for Consumers

### 3.3.1

Standards for the exclusive ballasts

### 3.3.2

Specifications of the product such as rated lamp power, light source color, etc.

### 3.3.3

Display the reduction of environmental impact to which the product contributes at the stage of use, e.g., indicating the reasons for certification of the product, including mercury reduction, energy conservation and waste reduction, in a catalog.

## 4. Test Methods

Certification Criteria		Test and Verification Methods	
Environmental Criteria	3.1.1	Test report by an accredited testing laboratory in accordance with the KS M 1811 (Test method for mercury content in fluorescent lamps)	
	3.1.2	Test report by an accredited testing laboratory in accordance with the test method of "Efficient Management Regulations on the Operation of Equipment" of the "Energy Use Rationalization Act"	
	3.1.3	3.1.3.1	Verification of submitted documents
		3.1.3.2	Test report by an accredited testing laboratory in accordance with the KS C 7601 (Fluorescent lamps)
Quality Criteria	3.2.1	Test report by an accredited testing laboratory in accordance with the safety standards for electric appliances or certificate of equivalent	
	3.2.2	Test report by an accredited testing laboratory in accordance with the KS C 7601 (Fluorescent lamps) or certificate of equivalent	
Consumer Information		Verification of submitted documents	

### 4.1 General Matters

#### 4.1.1

The number of samples shall basically comply with the requirements of the KS C 7601 (Fluorescent lamps), but 5 samples shall be required for the luminous efficiency testing.

#### 4.1.2

Test samples shall be collected at random by a certification institute from products in market or those in storage at the production site.

#### 4.1.3

The final evaluation of the test results for all samples shall comply with the certification criteria.

#### 4.1.4

Test result shall be numerically set according to KS Q 5002 (Statistical interpretation

method of the data – Part 1: Statistical description of the data).

## **5. Reasons for Certification**

“Less mercury use, energy-saving, less wastes”

## **Common Criteria, Notice No. 2012-36, the Ministry of Environment**

1. Eco-label products must follow the following provisions with regard to the proper treatment of environmental pollution substances, such as air and water wastes and noxious chemical substances emitted in the process of manufacturing or service operation.

A. When first applying for certification, the product manufacturer should observe the environment related laws and agreements pertaining to the region where the production factory or the place of service operation is located for a period of one year prior to the date of application. Any case of violation of the penalty clause will be verified by confirming documents involved during a period of one year to the date of application. Regarding any violation not related to the penalty clause, confirmation will be made on the completion of appropriate measures.

B. A person who has received a certification of eco-labeling shall observe the environment related laws and agreements pertaining to the region where the production factory or the place of service operation is located during the period of certification. However, regarding any violation besides a penalty, confirmation will be made on the completion of appropriate measures.

2. As a general rule, information for consumers shall be indicated on the surface of the product in such a way not to be easily erased. However, in case that indication on the surface of the product is impossible or undesirable, it can be indicated on the appropriate part such as product packaging, product guidebook and user's manual that consumers can recognize. However, the service information should be indicated inside and outside of the place of service operation. In case that indication inside and outside of the place of service operation is impossible or undesirable, it can be indicated on the appropriate part such as an agreement, letter of delivery, letter of guarantee, and PR materials that consumers can recognize.

3. In order to establish fair trade and to protect consumer, the applicant for eco-label and the holder of eco-label license shall observe the Act on the Fairness of

Indication and Advertisement with respect to the environmental aspects of the product.

4. For Various standards referred in the certification criteria by target product, the latest revised edition applies at the date of application, if not specified otherwise.

5. In applying the quality related criteria for each target product, if no standard is available that can be applied as the quality criteria, the president of Korea Environmental Industry & Technology Institute (KEITI) (hereafter referred to as "president of KEITI") may establish and operate the quality criteria for the product involved after review by a competent committee.