SCHEDULE 13   Regulation 16

Verification procedure for market surveillance purposes

Interpretation

1. In this Schedule "determined values" means the values of the relevant parameters as measured by the market surveillance authority in testing and the values calculated from these measurements.

Verification procedure

2. The market surveillance authority must apply the procedure set out in this Schedule when verifying the conformity of a product model with these Regulations.

3. The product model conforms to these Regulations if all the following conditions are satisfied in respect of the product model—

(a) the declared values and, where applicable, the values used to calculate the declared values, are not more favourable for the supplier than the corresponding measurements carried out pursuant to paragraph 1(2)(b)(vii) or 5(2)(d) of Schedule 1A to the 2010 Regulations;

(b) the values published on the label and in the product information sheet are not more favourable for the supplier than the declared values;

(c) the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and

(d) the determined values comply with the respective verification tolerances as given in Table 14, and for this purpose the determined values are calculated as—

(i) the arithmetic mean over the tested units of the measured values for a given parameter; or

(ii) the arithmetic mean of parameter values calculated from measured values.

4.—(1) For the purposes of paragraph 3(a), (b) and (c), the market surveillance authority must check one single unit of the product model to be verified.

(2) For the purpose of paragraph 3(d), the market surveillance authority must test 10 units of the product model.

5. If any of the conditions set out in paragraph 3 are not satisfied in respect of the product model, the product model and all equivalent product models do not conform to these Regulations.

6. Where a model has been designed to be able to detect it is being tested (for example by recognising test conditions or test cycles), and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in these Regulations or any parameters included in the technical documentation or in any of the documentation provided, the product model and all equivalent models do not conform to these Regulations.

Verification tolerances

7.—(1) The verification tolerances set out in Table 14 must be used only by the market surveillance authority and only for the purposes of this Schedule.

(2) The supplier must not use the verification tolerances—

(a) as allowed tolerances to establish the values in the technical documentation;

(b) in order to interpret those values with a view to achieving compliance; or

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(c) to communicate better performance.

Table 14

Verification tolerances

Parameter	*Verification tolerances*
Full-load on-mode power P_{on} (W):	
$P_{on} \leq 2W$	The determined value must not exceed the declared value by more than 0.20W.
$2W < P_{on} \leq 5W$	The determined value must not exceed the declared value by more than 10%.
$5W < P_{on} \leq 25W$	The determined value must not exceed the declared value by more than 5%.
$25W < P_{on} \leq 100W$	The determined value must not exceed the declared value by more than 5%.
$100W < P_{on}$	The determined value must not exceed the declared value by more than 2.5%.
Displacement factor (*0-1*)	The determined value must not be less than the declared value minus 0.1 units.
Useful luminous flux Φ_{use} (*lm*)	The determined value must not be less than the declared value minus 10%.
Standby power P_{sb} and networked standby power P_{net} (*W*)	The determined value must not exceed the declared value by more than 0.10W.
CRI and R9 (*0-100*)	The determined value must not be less than the declared value by more than 2.0 units.
Flicker *(Pst LM)* and stroboscopic effect *(SVM)*	The determined value must not exceed the declared value by more than 0.1, or by more than 10% if the declared value is more than 1.0.
Colour consistency (*MacAdam ellipse steps*)	The determined number of steps must not exceed the declared number of steps. The centre of the MacAdam ellipse must be the centre declared by the supplier with a tolerance of 0.005 units.
Beam angle (*degrees*)	The determined value must not deviate from the declared value by more than 25%.
Total mains efficacy η_{TM} (lm/W)	The determined value (quotient) must not be less than the declared value minus 5%.
Lumen maintenance factor (for LED and OLED)	The determined X_{LMF}% of the sample must not be less than $X_{LMF,\ MIN}$% in accordance with the test in Schedule 5.
Survival factor (for LED and OLED)	At least 9 light sources of the test sample must be operational after completing the endurance test in Schedule 5.

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Parameter	Verification tolerances
Excitation purity (%)	The determined value must not be less than the declared value minus 5%.
Correlated colour temperature (K)	The determined value must not deviate from the declared value by more than 10%.
Peak luminous intensity (cd)	The determined value must not deviate from the declared value by more than 25%.

(3) For light sources with linear geometry which are scalable but of very long length, such as LED strips or strings, verification testing must consider a length of 50 cm, or, if the light source is not scalable there, the nearest value to 50 cm. The light source manufacturer or importer must indicate which separate control gear is suitable for this length.

(4) When verifying if a product model is a light source, the market surveillance authority must compare the measured values for—

(a) chromaticity coordinates (x and y);

(b) luminous flux;

(c) luminous flux density; and

(d) colour rendering index,

directly with the limit values set out in the definition for light source in regulation 2(1), without applying any tolerances.

(5) If any of the 10 units in the sample satisfies the conditions for being a light source, the product model must be considered to be a light source.

(6) Light sources that allow the end-user to control, manually or automatically, directly or remotely—

(a) the luminous intensity;

(b) colour;

(c) correlated colour temperature;

(d) spectrum; or

(e) beam angle,

of the emitted light, must be tested using the reference control settings.