

KES

Definition of Terminology for Vehicle Lighting Equipment

KES M – D001A

(EST.) 1988 – 08 – 20

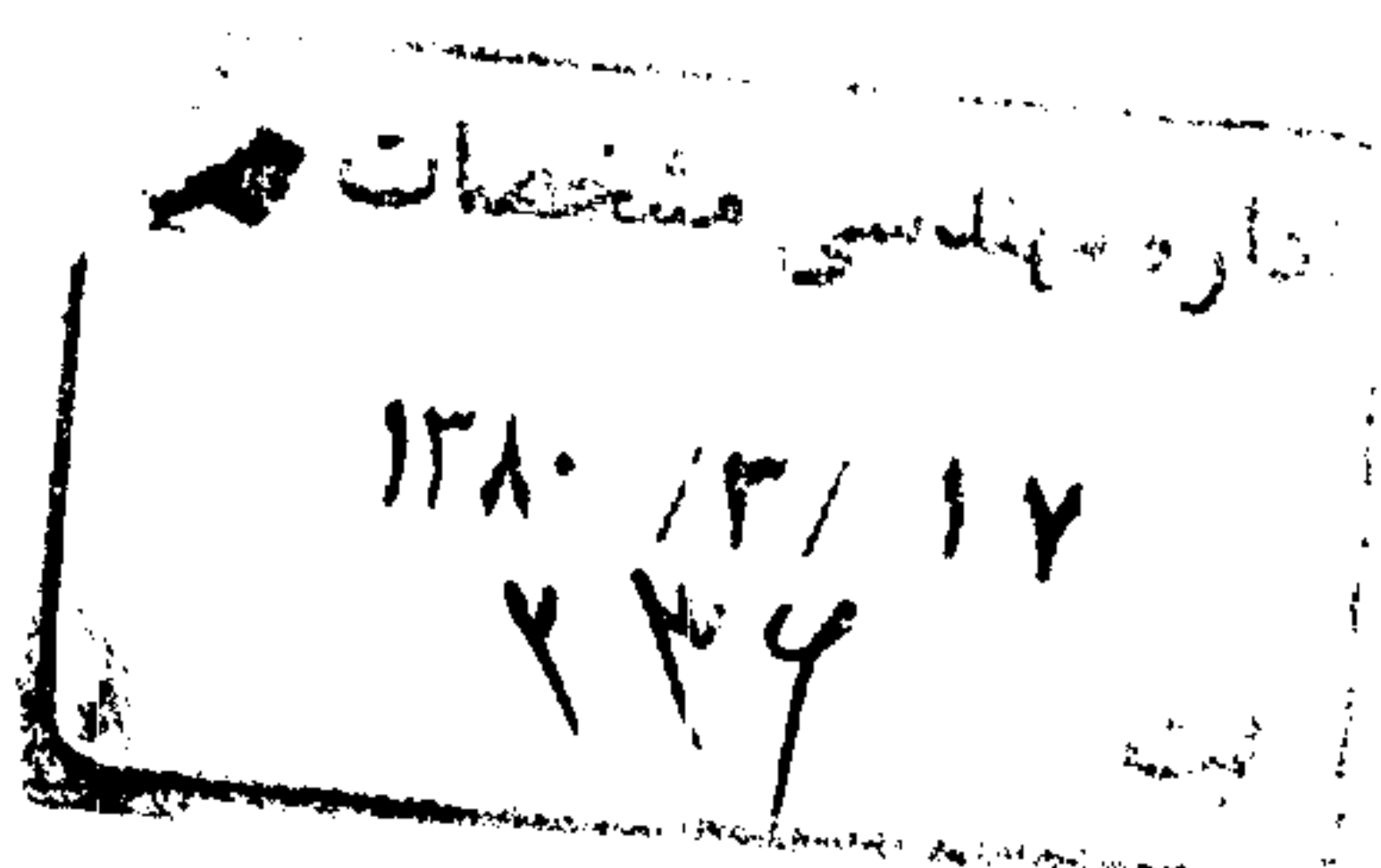
(REV.) 1990 – 04 – 12

Contents

1. Scope of Application
2. Meaning of Employed Terminology on
FMVSS and CMVSS
3. Meaning of Employed Terminology on
ECE and EEC

Additional Rule

Explanation



KIA KIA MOTORS

1. Scope of Application

This standard shall apply to the vehicle lighting equipment and is a definition of employed common terminology on SAE standard specification, SAE recommended specification and EEC regulation, which are required on CMVSS & FMVSS 108 specification.

2. Meaning of Employed Terminology on FMVSS and CMVSS

2.1 It is operated as a design average spherical intensity of light and the filament is within $\pm 0.25^\circ$ range of official design position. A bulb is aged within $\pm 0.25^\circ$ range of pin's official design position and a nominal bulb is aged within 1 % time of design life (Limit of 10 hours) by nominal voltage.

2.2 Bulb

It includes the light source and is an undivided assembly, which is normally employed with putting in the lamp.

2.3 Centroid of lens area

It is a geometrical centroid of plane, which is transmitting mechanical lighting vertically to the standard axis of vehicle.

For example, The standard axis of attached lamp on the front & rear of vehicle is a final axis of vehicle.

2.4 Device

It is a designed device, which is employed for special usage or special functionality.

2.5 Lamp

Bulb includes lighting system by lens or reflection mirror with respect to other light source and cases. It supplies the lighting function as dividable assembly.

2.6 Light

Mechanical radiant energy

2.7 Multiple compartment lamp

It is a signal indication equipment on more than 2 of separate lighting surface by more than 1 of common region for housing and lens.

2.8 Multiple lamp arrangement

It is an arrangement by more than 2 of separate lamps, which are attached on both sides of vehicle to indicate one signal operating together.

2.9 Unit

It is an undivided assembly, which supplies mechanical, electrical or lighting functions such as sealed-beam unit or flasher.

2.10 Headlamp beam switching

It is a driver's operating switch to be employed for straight and crossing beam circuit switching of headlamp.

2.11 Semi-automatic headlamp beam switching device

It is a device, which supplies both automatic and semi-automatic beam switching by driver's intention.

(1) When the beam is switched automatically

The headlamp is an irradiated by headlamp of approaching vehicles. The straight beam is switched to crossing beam and it is switched again back to straight beam when front beam reaches a certain intensity.

(2) When the beam is switched manually

The straight and crossing beam is manually switched regardless of lighting conditions in front of driver's vehicle.

2.12 Lamp bulb retention system

The electric contact is performed by bulb retention to condition for use.

2.13 Plastic materials for vehicle lamp

(1) Material

Type, grade, composition, manufacturer's indication number and color of plastic material are included.

(2) Coated material

The coating is performed on the exterior surface of completed sample to have a certain protection characteristics.

"Coating" includes manufacturer's name, material number and recommended coating method.

(3) Exposed material

It is an employed material for lens & lighting equipment exposing to the direct sunlight on vehicle attachment conditions.

(4) Shaded material

The direct sunlight is less than 45 ° above of horizon on vehicle attachment conditions.

It is not exposed but is a employed material for the exposed lens & lighting equipment by certain cause on other surrounding conditions.

(5) Protected material

It is an employed material for inner lens of lighting equipment and its inner lens is protected from exposure to sunlight by outer lens, which is made of exposed material.

(6) Color bleeding

It is a phenomenon, where the colors are changed from inside to outer surface on plastic materials.

(7) Crazing

It is a minute crack, which is occurred on or under the plastic materials.

(8) Cracking

It is a cracking phenomenon in-between the tangent region of materials as squeezing into specimen.

(9) Haze

It is a phenomenon, where originally clear normal specimen is dimmed by diffusion of lighting on specimen inside or surface

(10) Delamination

It is a phenomenon, where the layers composing materials with coating are separated.

2.14 Definition of terminology about required condition for practicality of turn signal flasher

(1) Lot

Lot or batch is a inspected lot. It means group of flasher, which is employed for the test to see appropriateness for the standard with gathering specimen from its center.

Each lot should be composed of same type of flasher on the same time. The code showing manufactured date & year should be indicated on exterior surface of each flasher.

(2) Sample and sample size

Sample is composed of each flasher gathering roughly from lot, whose quality is not considered.

The quantity of flasher composing sample is a sample size.

(3) Flasher characteristic

Characteristics of operating flasher is λ , which is occurrence of flickering, "on" time,

present starting time, voltage drop, etc.

(4) Engineering design standard

It is flasher's characteristics, which is appropriate to SAE J 590.

(5) Zone

It is safe range or measurement group of flasher's characteristics, which is out of engineering design standard.

(6) Zone designation

Each zone is designated as A, B and C by the sequence of difference on SAE J 590.

(7) Zone A

It is a characteristics range of flasher, which does not change much of flasher's characteristics.

(8) Zone B

It is a characteristics range of flasher, whose characteristics is not performed much.

(9) Zone C

It is a characteristics range of flasher, where it is hard to perform characteristics much.

2.15 Average laboratory life

It is an average of test time for flasher specimen within SAE J 590 engineering design standard or zone A & B.

This average is a tested sample size.

2.16 Aiming plane

It is a plane, which passing 3 of aiming pads on lens surface.

2.17 Headlamp aiming device

It is an employed equipment for aiming adjust and inspection of mechanically aim able head lamp. 3 of aiming pads on mechanically aim able head lamp, which is attached to

the vehicle are composed of more than 1 of components. It makes accurate aim easier along the vertical and horizontal directions of unit.

2.18 Mechanically aiming sealed beam unit

When it is attached to the vehicle, it is a unit, which has 3 pads on the lens surface to compose mechanical aiming surface for aiming and inspection.

2.19 Mechanical axis

It is a crossing line perpendicular to center of circle, which is composed of aiming pads on lens surface.

2.20 H-V axis

It is composed line on a crossing point of horizontal and vertical lines for screen of lens center.

2.21 Symmetrical beam

It is a symmetrical beam to left/right for vertical plane of beam center.

2.22 Asymmetrical beam

It is an asymmetrical beam to left/right for vertical plane of beam center.

Remark : All of lower beams are asymmetrical beams.

2.23 Sealed-beam unit

It is an optical assembly, which is undivided and molded by letter of sealed-beam on lens.

2.24 Upper beam

Its original purpose is distant lighting. It is an employed beam on the wide highway not driving with other vehicles.

2.25 Lower beam

It is a beam for lighting front vision with not giving too much glaring to other drivers.

2.26 7 in sealed beam system

It is a system, where two of 7 in (178 mm) type 2 sealed beam unit

It is an unit (Number "2" is molded on lens surface) with 7 in (178 mm) of diameter, which supplies both upper and lower beams of 7 in (178 mm) type 2 sealed beam unit.

2.27 5 – 3 / 4 in sealed beam system

It is a system, which employs 4 (Two of type 1 & tow of type 2) of 5 – 3 / 4 in sealed beam.

(1) 5 – 3 / 4 in type 1 sealed beam system

It has 1 filament and 4 lighting system. It is an unit with 5 – 3 / 4 in (146 mm) of diameter, which supplies main part of upper beam.

(2) 5 – 3 / 4 in type 2 sealed beam system

It has 2 filaments and 4 lighting system. It is an unit with 5 – 3 / 4 in (146 mm) of diameter, which supplies partial part of both upper & lower beams.

2.28 4 x 6 – 1 / 2 in sealed beam system

It is a system, which employs 4 of 4x6-1/2 in sealed beam units

(1) 4 x 6 – 1 / 2 in type 1A sealed beam unit

It has 1 filament and 4 lighting system. It is a rectangular unit with 4 x 6 – 1 / 2 in (100 × 165 mm) of dimensions, which supplies main part of upper beam.

(2) 4 x 6 – 1 / 2 in type 2A sealed beam unit

It has 2 filaments and 4 lighting system. It is a rectangular unit with 4 x 6 – 1 / 2 in (100 × 165 mm) of dimensions, which supplies partial part of both upper & lower beams.

2.29 Sealed beam headlamp assembly

It has more than 1 of sealed beam unit and it is a light assembly, which is employed to

light up the front of vehicle.

2.30 Mounting ring

It is an adjustable ring to mount sealed beam unit

2.31 Retaining ring

It is a holding ring to retain sealed beam unit.

2.32 Aiming screw

It is a adjusting screw along horizontal & vertical directions, which is employed for automatic fixation to aim & retain the correct position of headlamp unit.

2.33 Auxiliary driving lamp

It is installed in order to light up the front of vehicle and is a supporting lamp of upper beam on standard headlamp system.

It is employed individually or does not mean that it is employed together with lower beam of standard headlamp system.

2.34 Auxiliary lower-beam lamp

It is a supporting lamp of lower beam of standard headlamp system.

2.35 Front fog lamp

It is installed in order to light up the front of vehicle under the conditions of rain, snow, dirt and fog.

This equipment is employed together with lower beam or with both upper and lower beam headlamp with using coupled switch with headlamp by driver's intention.

2.36 Front cornering lamp

It is employed with connecting to the turn signal equipment. It is a lamp, which is not turned off in order to support headlamp with adding light to vehicle's turning direction.