

71 Driving vision assistant system

71.1 Effective Date and Scope:

- 71.1.1 Effective from 2017/1/1, the new vehicle variants of category M2, M3, and from 2019/1/1, the all vehicle variants of category M2, M3, shall comply with this regulation.

71.2 Definitions

Driving vision assistant system: an assistant system using cameras mounted outside of vehicle to provide driver with the vision adjacent to the vehicle.

71.3 The principles of applicable type and scope of driving vision assistant system shall be as below:

- 71.3.1 The same vehicle category.
- 71.3.2 The same brand and vehicle type series.
- 71.3.3 The same type of series and design of the camera and monitor.
- 71.3.4 The same chassis brand.
- 71.3.5 The same chassis vehicle type series declared by chassis manufacturers
- 71.3.6 If use chassis vehicle instead of completed vehicle for entire or partial testing, The principles of applicable type and scope of driving vision assistant system shall be as below :
 - 71.3.6.1 The same vehicle category.
 - 71.3.6.2 The same chassis brand.
 - 71.3.6.3 The same chassis vehicle type series declared by chassis manufacturers.
 - 71.3.6.4 The same type of series and design of the camera and monitor.

71.4 Driving vision assistant system requirements

71.4.1 Declaration of design compliance: applicant shall ensure and declare to comply with the following requirements.

- 71.4.1.1 Camera resolution shall not be less than 640X480 pixels, and the illumination shall be less than 0.5 lux, the signal / noise ratio shall not be less than 40 dB, and images of camera shall be shown on the monitor clearly.
- 71.4.1.2 Dynamic range values of camera shall be more than 70 dB.
- 71.4.1.3 The effectiveness of this system shall not be adversely affected by magnetic or electrical fields.
- 71.4.1.4 System shall be powered by vehicle, and all of functions shall be automatically activated when the ignition (start) switch is turned to the "on" (run) position, and it is not allowed to deactivate the system manually.

71.4.2 Installation requirements of vehicle

71.4.2.1 Quantity and position of camera:

- 71.4.2.1.1 At least one camera shall be mounted on right, left and rear sides of vehicle, and depending on the length of vehicle, additionally cameras may be mounted on both right and left sides , all cameras mounted on vehicle shall be firmly fixed.
- 71.4.2.1.2 Cameras mounted on both right and left sides of vehicles shall not be less than 2 m from the ground when the vehicle is laden; or where the bottom edge of camera is less than 2 m above the ground when the vehicle is laden, this camera shall not project more than 250 mm beyond the overall width of the vehicle. The overall width of the vehicle measured without these devices and the cameras shall have a radii of curvature of no less than 2.5 mm.

- 71.4.2.2 Camera system of both right and left sides shall have image record function, and the total time of recorded images shall not be less than 30 minutes.

- 71.4.2.3 Field of vision for right and left side camera: the vision field shall not be less than the vision field stipulated for main exterior mirror (Class II) of “Installation of devices for indirect vision” of “VSTD”.
- 71.4.2.4 Field of vision for rearward camera: The field of vision shall be such that the driver can see at least the full width of the vehicle centered on the vertical longitudinal median plane of the vehicle, and starting from the plan which is 30 centimeters rearward of the rear edge of vehicle and extend to at least 3 m(see Figure 1).
- 71.4.2.5 Image display requirements:
- 71.4.2.5.1 Driver compartment shall at least have a monitor with size not smaller than 7 inches, and it shall be easily watched by the driver.
- 71.4.2.5.2 When vehicle is in reverse positions, the display of rearward vision shall be displayed within 2 seconds, and it may temporarily replace the image of right and left sides.
- 71.4.2.5.3 The rearview image shall continually be displayed when vehicle is in reverse positions, when the transmission is shifted from reverse positions to another positions, the display on the monitor shall be automatically return to the image of both right and left sides of vision.

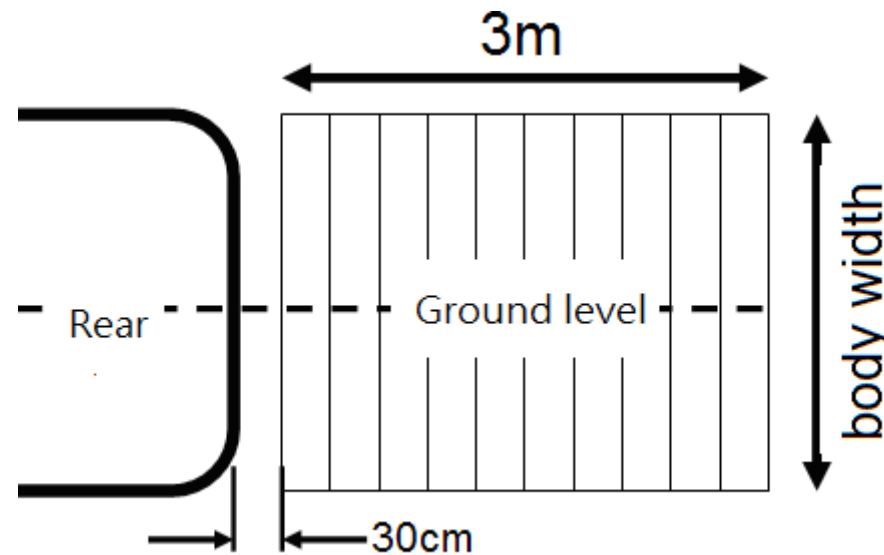


Figure 1: Field of vision for rearward camera