

Vision standards for Driving license in Sri Lanka

With the ever increasing number of vehicles using our roads, it is inevitable that drivers need to call upon increasing use of sensory and motor skills in order to negotiate safely through the traffic. Approximately 95% of the sensory input to the brain required for driving comes from vision. So it is obviously essential for adequate standards of vision to be set for the driver of any vehicle and these are set down as either statutory requirements or guidance from the professional body i.e. The College of Ophthalmologists of Sri Lanka

Initial and renewal applicants are required to take and pass a vision test before being issued a license.

The "private /personal vehicle/Non Commercial" standards should be applied to:

- Drivers applying for or holding a license for a car, motorcycle, three wheeler or a light rigid vehicle not used to carry public passengers for hire.
- The vehicle need not be under their name
- The department of motor traffic should indicate that it is a "**non commercial license holder**" in the license so that police can check and take action against improper use of the license

The "commercial vehicle" standards should be applied to:

- Drivers of 'heavy vehicles', (i.e. those holding or applying for a license of classes DE,D,C,D1,C1,CE,J and PT)
- Drivers carrying public passengers for hire (taxi/cab drivers, chauffeurs, drivers of hiring three wheelers and school vans, etc.)

Vehicle Type	Commercial passenger transport vehicles and all Heavy vehicles	Light vehicles for personal use (not for commercial passenger transport)	Three Wheeler for personal use (not for commercial passenger transport) and Motorcycles
Visual acuity In examining Snellens test type and the standard near vision testing should be used.	6/9, 6/12 or vice versa with or without glasses Should wear corrective lenses (Spectacles/ contacts) when driving. The appropriate correction needs to be tolerated by the driver.	6/12 in each eye with or without glasses Should wear corrective lenses (Spectacles/ contacts) when driving. The appropriate correction needs to be tolerated by the driver.	6/12 in each eye with or without glasses Should wear corrective lenses (Spectacles/ contacts) when driving. The appropriate correction needs to be tolerated by the driver

Intermediate Vision	Absolute contraindication	Corrected vision Better eye 6/12 Worse eye: 6/18 to 6/36 Refer to eye surgeon - check visual fields - if adequate can allow Indicate: “For personal use <u>without</u> modifications”	Corrected vision Better eye 6/12 Worse eye: 6/18 to 6/36 Refer to eye surgeon - check visual fields - if adequate can allow. For three wheelers indicate: “For personal use ”
Field of vision Test should be carried out binocular Esterman visual fields (white target size Goldman iii4 e)	140 ° in the horizontal meridian No defect within 20 ° from fixation horizontally or vertically	140 ° in the horizontal meridian Defect in one eye should be completely compensated by the other eye	140 ° in the horizontal meridian No defect within 20 ° from fixation horizontally or vertically
Monocular vision	Absolute contraindication (worse eye less than 6/12)	Monocular vision (worse eye: 6/60 or less) Under special circumstances on an individual basis could be considered provided that following criteria are met 1. Visual acuity is 6/9 or better with or without correction. 2. Uncorrected minimum vision should be 6/36 3. Visual fields – 120 ° in the horizontal meridian No extension of peripheral defect within 20 ° from fixation horizontally	Monocular vision (worse eye: 6/60 or less) Contraindicated as modifications cannot be done

		<p>or vertically Within central 20° single missed point or cluster of 3 adjoining points is acceptable if there are no other field defects</p> <p>Indicate: “For personal use <u>with</u> modifications”</p>	
Colour blindness	No restriction	No restriction	No restriction
Diplopia	Absolute contraindication	<p>Assess on an individual basis. Diplopia in the primary position presents an extreme hazard to safe driving. Cessation of driving until the diplopia is controlled with patching or glasses with prisms. Can allow as long as criteria for vision and visual fields are met after a period of 6 months if there is satisfactory functional adaptation.</p>	<p>Assess on an individual basis. Diplopia in the primary position presents an extreme hazard to safe driving. Cessation of driving until the diplopia is controlled with patching or glasses with prisms. Can allow as long as criteria for vision and visual fields are met after a period of 6 months if there is satisfactory functional adaptation.</p>
Progressive disorders affecting vision / visual field or night vision	Absolute contraindication	<p>Can allow as long as criteria for vision and visual fields are met. Review every 2 years for renewal of the license.</p>	<p>Can allow as long as criteria for vision and visual fields are met. Consider on an individual basis renewal on individual basis – eye surgeon will decide</p>
Nystagmus	Absolute contraindication	<p>Can allow as long as criteria for vision and visual fields are met.</p>	<p>Can allow as long as criteria for vision and visual fields are met.</p>

Blepharospams	Absolute contraindication	Consider on an individual basis. Can allow grade one and two as long as criteria for vision and visual fields are met.	Consider on an individual basis. Can allow grade one and two as long as criteria for vision and visual fields are met.
Squint	<p>Absolute contraindication for new applicants</p> <p>Consider if it is a renewal of license: Refer to ophthalmologist—criteria for visual acuity and visual fields should be met. Some grade of BSV should be present</p>	<p>If an alternative squint with adequate visual acuity and visual fields in each eye can be allowed even if there is no BSV.</p> <p>Squint with diplopia, consider criteria for diplopia.</p>	<p>If an alternative squint with adequate visual acuity and visual fields in each eye can be allowed even if there is no BSV.</p> <p>Squint with diplopia, consider criteria for diplopia.</p>

Notes on visual fields

The minimum visual field for safe driving is a field of vision of at least 120° on the horizontal meridian measured by the Goldmann perimeter on the III4e settings (or equivalent perimetry). In addition there should be not more than a cluster of 3 non seeing spots in the binocular field which encroaches within the central 20o of fixation. By this means, homonymous or bitemporal defects which come within 20o of fixation, whether hemianopic or quadrantanopic, are not accepted as safe for driving. Isolated scotomata represented in the binocular field near to the central fixation area are also inconsistent with safe driving.

The test must therefore monitor the central area of field as well as its outer perimeter and the intervening meridians. It is obviously essential that the application of the standard should not be equipment specific and the phrase "equivalent perimetry" allows the development of equivalent programs using other perimeters including autoperimeters. Suprathreshold screening tests which cover the central and peripheral field in each eye are commonly available on most autoperimeters and will satisfy the standard. Central threshold tests, commonly used for routine monitoring of glaucoma, are helpful in assessing the significance of a scotoma in the central field but in isolation are not useful.

Where the driver has obvious field defects such as a homonymous hemianopia or quadrantanopia then no confusion arises and the licence is refused. This applies even when the patient has, for whatever reason, been driving with this condition for many years. The problem arises, however, when there are equivocal field losses that only just encroach into the permitted field for driving. These may not necessarily be repeatable especially in the elderly who can have problems

mastering the perimeter, or in patients with early glaucoma or lightly photocoagulated diabetics. To be fair to these patients, it is important to test them on more than one occasion to enable an appropriate decision to be made regarding their driving ability. The Esterman binocular field test allows some enhancement of the binocular field as occurs naturally and also allows fixation by the dominant eye. Hence it can be seen to be the least stringent test fulfilling the required standard. It may therefore be used to the benefit of the patient. However, it must be stated that if the Esterman test is failed, even by one spot within the 20° limit, it is likely that this represents a significant scotoma which will lead to the loss of the driving licence. The score given by the program is weighted to the areas of field important to driving but is of little help in the assessment of the standard. Severe bitemporal hemianopia which extends to the midline on either side can still give a horizontal binocular field of 120° on an Esterman or other binocular field by way of binasal vision. It is felt that despite this "full" field, driving is unsafe due to the instability of the two hemifields and the inability of the driver to "lock" the fields from the two eyes together.

Some patients produce very different field test results at different times and it is important to maximise reliability and reproducibility of the visual field test in all cases. False negative and positive errors as well as fixation losses must be minimised to produce accurate results. A field should be rejected if there are more than 20% of false positive errors. A perimetrist should be present with the patient at all times during the test and should carefully explain the test to the patient prior to beginning. Spectacles, especially for a high ametropes, may produce aberrations and a more accurate test may be produced without them.

Notes on monocular vision

Monocular vision is not a cause for disqualification for **light vehicles for personal use (not for commercial/hiring passenger transport)** providing the visual field in the remaining eye is within the above definition. This physiological blind spot may be picked up on an Esterman test in a monocular patient and if this is the case, other central visual field tests such as the Humphrey 24-2 threshold tests should be supplied to demonstrate the otherwise normality of the central field.

For drivers with monocular vision following modifications to the vehicle should be considered. Modified vehicle must present at the time of examination.

1. Disable symbol should be displayed
2. Only specified motor vehicle
3. 2 rear mirrors and 2 front mirrors
4. Speed has to be decided by the DMT
5. After making modifications to the vehicle need to allow at least 6 months adaptation time from the time of loss of vision on one side or as decided by the consultant ophthalmologist.