Talking about micro mobility, we refer to smaller vehicles with electric drivetrains, such as electric kick scooters (e-scooters) and Segways. They are placed under the generic term “Personal Light Electric Vehicles”.

These vehicles are battery-driven and thus emit zero emissions. The special feature of these vehicles is that they are very small and lightweight making them foldable and portable. This allows the users to take the vehicles on public transport resulting in a special added value with regard to the combination of different means of transportation and for short distances in particular (so-called “last mile mobility”).

The entry into force of the Personal Light Electric Vehicles Regulations on 15 June 2019, laid the foundations to allow the use of Personal Light Electric Vehicles with handlebars or stanchion on public roads.

Thereby, we want to allow new forms of modern, environmentally-friendly and clean mobility in our cities, ensuring at the same time safety on our roads.

Below, you can find the most important questions and answers concerning Personal Light Electric Vehicles.
Where am I allowed to drive Personal Light Electric Vehicles?

On principle, Personal Light Electric Vehicles must use bicycle traffic spaces, where these exist. If there is a physically separated cycle track, an advisory cycle lane or a cycle lane, Personal Light Electric Vehicles must use it. This applies regardless of the fact whether the cycle lane is mandatory for cyclists or not. In this respect, the road traffic regulations for bicycles and Personal Light Electric Vehicles are different. If there are no physically separated cycle tracks or cycle lanes, the carriageway and, outside built-up areas, verges may also be used with Personal Light Electric Vehicles.

Can Personal Light Electric Vehicles be used on the sidewalk when the motor is switched off?

No, even if the motor is switched off, driving is only allowed on the designated traffic spaces. It is not possible to change the type of a vehicle in operation, for example by switching off the motor.

Do I need a driving license?

No. There is no driving license obligation or requirement to submit a test certificate for motor-assisted bicycles.

What is the minimum age?

Personal Light Electric Vehicles can be used from the age of 14 years.

Do I have to insure my Personal Light Electric Vehicle?

Yes. Personal Light Electric Vehicles are motor vehicles and thus have to be insured. Due to the small dimensions and the special features of the constructive design, a small insurance sticker has been introduced for these vehicles.

Can I drive a Personal Light Electric Vehicle under the influence of alcohol?

The 0.5 per mil legal alcohol limit according to Section 24a of the German Road Traffic Act also applies to Personal Light Electric Vehicles. However, even from 0.3 per mil, you are liable to prosecution if you are not longer able to drive safely when under the influence of alcohol. For under 21-year-olds and novice drivers in the probationary period, the zero-alcohol-level limit applies here, too. The relevant penalty and fine regulations for driving motor vehicles in road traffic apply here. For example, a blood alcohol concentration of 0.5 per mil may result in a fine of € 500 and a driving ban for 1 month. In addition, 2 points are recorded in the Register of Driver Fitness.

What else is prohibited?

Among other things, it is forbidden to carry passengers and objects on the running board, to use footways and pedestrian zones, to attach to other vehicles, and to cause disabilities or hazards. In addition, the general road traffic regulations apply, in particular the requirement of constant care and mutual respect.
Can Personal Light Electric Vehicles be carried on public transport?

The Federal Ministry of Transport and Digital Infrastructure supports the carriage of Personal Light Electric Vehicles on public transport, however it cannot make it obligatory. The respective transport operator decides on its conditions of carriage.

On principle, the rules on the carriage of objects on local public transport apply. Details can be found in section 11 of the Regulations on the General Conditions of Carriage for Tram and Trolleybus Services and Regular Motor Vehicle Services and, if appropriate, the special conditions of carriage of the respective transport operator. Rules on carriage by railway undertakings might also be found in the special conditions of carriage of the transport operator. The safety and the order of the operation must not be endangered and other passengers must not be bothered by the transport.

Are other road users safe?

The Personal Light Electric Vehicles Regulations ensure a balanced solution for the introduction of new forms of mobility on the one hand and the guarantee of road safety on the other hand. This applies to all road users. In addition, the implementation of the Personal Light Electric Vehicles Regulations is being scientifically monitored and evaluated by the Bundesanstalt für Straßenwesen (Federal Highway Research Institute).

What are the innovations concerning Personal Light Electric Vehicles after the German Road Traffic Regulations amendment?

- Motor vehicles are only allowed to overtake persons operating Personal Light Electric Vehicles, pedestrians and cyclists with a minimum lateral distance of 1.5 m in built-up areas and 2 m outside built-up areas.
- The symbol "Personal Light Electric Vehicle within the meaning of the Personal Light Electric Vehicles Regulations" was introduced. This makes it possible to provide particular parking areas for Personal Light Electric Vehicles, also in combination with bicycles.
- When one-way streets are opened in the opposite direction for cyclists with the additional sign "Radverkehr frei" (for use by cyclists), this also applies to Personal Light Electric Vehicles within the meaning of the Personal Light Electric Vehicles Regulations.
- Cycling zones that were introduced with the German Road Traffic Regulations amendment can also be used by Personal Light Electric Vehicles such as by bicycle traffic.

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Why do we need national regulations on Personal Light Electric Vehicles?

At European level, the Type Approval Regulation (EU) No 168/2013 for two- or three-wheel vehicles and quadricycles entered into force in January 2016. Self-balancing vehicles and vehicles without a seat are explicitly excluded from the scope of application of this regulation.

In Germany, only certain self-balancing mobility aids – e.g. so-called “Segways” – could be used in public road traffic via the Mobility Aid Regulations until the Personal Light Electric Vehicles Regulations came into force on 15 June 2019. Therefore, the Federal Ministry of Transport and Digital Infrastructure has developed the Personal Light Electric Vehicles Regulations to enable Personal Light Electric Vehicles with handlebars or stanchion to participate in public road traffic, regardless of type.

What are the key elements of the regulations?

Personal Light Electric Vehicles with the following characteristics are allowed to participate in public road traffic:

- handlebars or stanchion,
- maximum design speed between 6 kph and 20 kph,
- power limitation to 500 W (1400 W for self-balancing vehicles),
- minimum traffic safety requirements (e.g. in the field of braking and lighting systems, driving dynamics and electrical safety),
- the vehicle must have a general type approval or individual type approval and a valid insurance sticker.

Source: BMVI
What is the difference between Personal Light Electric Vehicles, Pedelecs and S-Pedelecs?

Pedelecs are vehicles with an electric auxiliary drivetrain whose supporting function decreases progressively with increasing speed. This means that as soon as a speed of 25 kph has been reached or the rider has stopped pedalling, the auxiliary drivetrain automatically stops. The distinguishing feature of a Pedelec is therefore that the electric motor acts in addition to muscle power and only has a supportive effect. The rules that apply to bicycles also apply to these vehicles.

So-called S-Pedelecs are vehicles with an electric auxiliary drivetrain that can reach a speed of up to 45 kph, when muscle and motor power are combined, and are therefore classified as mopeds. Their riders are obliged to wear a helmet, to have insured their vehicle, to have a driving license and to use the carriageway.

In this respect, Personal Light Electric Vehicles are a new vehicle category, because they are only powered by electric motor.

Source: BMVI
What about Personal Light Electric Vehicles that can drive faster than 20 kph?

Currently, the approval of such vehicles for public road traffic is not planned.

Which regulations apply to Personal Light Electric Vehicles in other EU countries?

Since there is no uniform European framework, the requirements for Personal Light Electric Vehicles vary between the member states of the European Union (EU). Individual EU Member States have not regulated or even completely ruled out the use of Personal Light Electric Vehicles on public roads. However, there are regulations in most EU member states. In most cases, a speed limit of 20 to 25 kph is set for Personal Light Electric Vehicles. There are also different approaches regarding permissible traffic spaces.

What applies to previously approved Personal Light Electric Vehicles (e.g. Segways)?

The Mobility Aid Regulations has been replaced by the new Personal Light Electric Vehicles Regulations. However, the approvals issued remain valid. Since the new Personal Light Electric Vehicles Regulations came into force, these regulations have also been applied to vehicles already approved.

Can vehicles which are offered for sale but do not comply with the requirements set out in the Personal Light Electric Vehicles Regulations be retrofitted?

Yes.

Since the Regulations came into force, manufacturers can apply for a general type approval from the Kraftfahrt-Bundesamt (Federal Motor Transport Authority) for vehicles that meet the requirements of the Personal Light Electric Vehicles Regulations.

Vehicles already on the market that do not comply with the Regulations can be retrofitted by the manufacturer so that they meet the requirements of the new Regulations.

Vehicles that comply with the Regulations but which are not provided with a subsequent general type approval by the manufacturer can be used on public roads, if the owner applies for individual type approval, in case the corresponding technical requirements are met.