

CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

TRANSPORTING

B60 VEHICLES IN GENERAL

(NOTE omitted)

B60Q ARRANGEMENT OF SIGNALLING OR LIGHTING DEVICES, THE MOUNTING OR SUPPORTING THEREOF OR CIRCUITS THEREFOR, FOR VEHICLES IN GENERAL

NOTES

1. This subclass also covers the operation and control of lighting devices, for example:
 - arrangement or adaptation of lighting switches or signal-initiating means for vehicles;
 - control of lighting devices in relation to the vehicle as a whole, e.g. for levelling, swivelling or aiming.
2. This subclass does not cover optical, mechanical, thermal or electrical arrangement of elements within lighting devices, which are covered by groups [F21S 41/00](#) – [F21S 45/00](#).
3. Attention is drawn to the Note following the title of class [B60](#).

WARNING

The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

B60Q 1/128	covered by	B60Q 1/124
B60Q 1/132	covered by	B60Q 1/124
B60Q 1/136	covered by	B60Q 1/124

1/00	Arrangement of optical signalling or lighting devices, the mounting or supporting thereof or circuits therefor (for lighting vehicle interior B60Q 3/00)	1/0094	. . {Arrangement of electronic circuits separated from the light source, e.g. mounting of housings for starter circuits for discharge lamps (arrangements being part of the light source holder F21V 17/06, F21S 43/195)}
1/0005	. {Devices preventing the lights from becoming dirty or damaged, e.g. protection grids or cleaning by air flow (windshield wipers for cleaning optical devices of vehicles B60S 1/04)}	1/02	. the devices being primarily intended to illuminate the way ahead or to illuminate other areas of way or environments
1/0011	. {with light guides for distributing the light between several lighting or signalling devices}	1/04	. . the devices being headlights
1/0017	. {Devices integrating an element dedicated to another function}	1/0408	. . . {built into the vehicle body, e.g. details concerning the mounting of the headlamps on the vehicle body (B60Q 1/0491 , B60Q 1/05 take precedence, integrated front ends B62D 25/00)}
1/0023	. . {the element being a sensor, e.g. distance sensor, camera}	1/0416	. . . . {the housing being mounted on the vehicle body using rails}
1/0029	. {Spatial arrangement}	1/0425	. . . . {the housing being swivel mounted on the vehicle body}
1/0035	. . {relative to the vehicle}	1/0433	. . . . {the housing being fastened onto the vehicle body using screws (adjustable headlamp by rotation of a screw B60Q 1/0683)}
1/0041	. . {of several lamps in relation to each other}	1/0441	. . . . {the housing being fastened onto the vehicle body using means other than screws}
1/0047	. . . {Signalling unit mounted on a headlamp unit}	1/045	. . . . {with provision for adjusting the alignment of the headlamp housing with respect to the vehicle body}
1/0052	. . . {concentric}	1/0458	. . . . {the front cover being directly mounted onto the vehicle body}
1/0058	. . . {Stacked, i.e. one lamp located behind the other in the optical axis direction}	1/0466	. . . . {with arrangement for sealing the headlamp with respect to the vehicle body, or for concealing gaps between the headlamp and the vehicle body}
1/0064	. {with provision for maintenance, e.g. changing the light bulb (swivel arrangements B60Q 1/0425)}		
1/007	. . {via a removable cap}		
1/0076	. {Switches therefor (B60Q 1/1446 , B60Q 1/343 , B60Q 1/40 take precedence)}		
1/0082	. . {mounted on the steering wheel}		
1/0088	. {Details of electrical connections (B60Q 1/305 takes precedence; electrical connection of the light source itself F21S 41/192 , F21S 43/195)}		

- 1/0475 {with provisions for pre-mounting, for temporary holding the headlamp before or during final mounting}
- 1/0483 . . . {mounted on a bracket, e.g. details concerning the mounting of the lamps on the vehicle body}
- 1/0491 . . . {Shock absorbing devices therefor}
- 1/0495 {Frangible brackets}
- 1/05 . . . retractable
- 1/06 . . . adjustable, e.g. remotely-controlled from inside vehicle ([B60Q 1/05](#) takes precedence)
- 1/064 by fluid means
- 1/068 by mechanical means
- 1/0683 {Adjustable by rotation of a screw}
- 1/0686 {using a position indicator mounted on the headlight and permanently attached thereto}
- 1/072 comprising a flexible element, e.g. chain
- 1/076 by electrical means {including means to transmit the movements, e.g. shafts or joints}
- 1/08 automatically
- 1/085 {due to special conditions, e.g. adverse weather, type of road, badly illuminated road signs or potential dangers ([B60Q 1/10](#), [B60Q 1/12](#), [B60Q 1/1423](#) take precedence)}
- 1/10 due to vehicle inclination, e.g. due to load distribution
- 1/105 by fluid means
- 1/11 by mechanical means
- 1/115 by electric means {(details of the electric drive components, e.g. motors, shafts, ball joints [B60Q 1/076](#))}
- 1/12 due to steering position
- 1/121 {with fluid actuating means}
- 1/122 {with electrical actuating means (details of the electric drive components, e.g. motors, shafts, ball joints [B60Q 1/076](#))}
- 1/124 by mechanical means
- 1/14 . . . having dimming means
- 1/1407 {General lighting circuits comprising dimming circuits}
- 1/1415 {Dimming circuits}
- 1/1423 {Automatic dimming circuits, i.e. switching between high beam and low beam due to change of ambient light or light level in road traffic}
- 1/143 {combined with another condition, e.g. using vehicle recognition from camera images or activation of wipers}
- 1/1438 {Actuating means for dimming masks or screens}
- 1/1446 {controlled by mechanically actuated switches}
- 1/1453 {Hand actuated switches}
- 1/1461 {Multifunction switches for dimming headlights and controlling additional devices, e.g. for controlling direction indicating lights}
- 1/1469 {controlled by or attached to a single lever, e.g. steering column stalk switches}
- 1/1476 {comprising switch controlling means located near the free end of the lever, e.g. press buttons, rotatable rings}
- 1/1484 {mounted on the steering wheel}
- 1/1492 {Foot actuated switches}
- 1/16 . . . illuminating the way asymmetrically
- 1/18 . . . being additional front lights {([bracket mounted headlights B60Q 1/0483](#))}
- 1/20 Fog lights
- 1/22 . . for reverse drive
- 1/24 . . for lighting other areas than only the way ahead
- 1/245 . . . {Searchlights, e.g. adjustable from within the vehicle ([adjustable headlights B60Q 1/06](#))}
- 1/247 . . . {for illuminating the close surroundings of the vehicle, e.g. to facilitate entry or exit ([for reverse drive B60Q 1/22](#); [by opening a side door B60Q 1/323](#))}
- 1/249 . . . {for illuminating the field of view of a sensor or camera}
- 1/26 . the devices being primarily intended to indicate the vehicle, or parts thereof, or to give signals, to other traffic
- 1/2603 . . {Attenuation of the light according to ambient luminosity, e.g. for braking or direction indicating lamps}
- 1/2607 . . {comprising at least two indicating lamps}
- 1/2611 . . {Indicating devices mounted on the roof of the vehicle}
- 1/2615 . . {mounted on the vehicle body, e.g. with magnets}
- 1/2619 . . {built in the vehicle body}
- 1/2623 . . . {Details of the fastening means}
- 1/2626 {Screw-nut fasteners}
- 1/263 {Snap-in fasteners}
- 1/2634 {Fastening by rotating the device housing about its longitudinal axis, e.g. bayonet fasteners}
- 1/2638 . . . {Positioning the device housing by indexing means separate from the fastening means, e.g. pins, rails}
- 1/2642 . . . {with provision for adjusting the alignment of the device housing with respect to the vehicle body}
- 1/2646 {using dowels or expansible elements}
- 1/2649 . . . {with provision for pre-mounting or temporary holding the device before or during final mounting}
- 1/2653 . . . {with arrangement for sealing the device with respect to the vehicle body, or for concealing gaps between the device and the vehicle body}
- 1/2657 . . {mounted on a shaft, e.g. telescopic}
- 1/2661 . . {mounted on parts having other functions ([on wheels B60Q 1/326](#))}
- 1/2665 . . . {on rear-view mirrors ([lighting devices for vehicle interior on or for rear-view mirrors B60Q 3/258](#))}
- 1/2669 . . . {on door or boot handles ([lighting devices for vehicle interior on door handles B60Q 3/267](#))}
- 1/2673 . . . {on parts worn by the driver, e.g. clothes, gloves or bags, specially adapted to provide auxiliary vehicle signalling}
- 1/2676 {Helmets}

1/268	. . . {on windscreens or windows (B60Q 1/302 takes precedence; lighting devices for vehicle interior on or for windows B60Q 3/208)}	1/444	. . . {with indication of the braking strength or speed changes, e.g. by changing shape or intensity of the indication (B60Q 1/1407 , B60Q 1/442 , B60Q 1/447 take precedence)}
1/2684	. . . {on wipers or windscreen washers}	1/445	. . . {controlled by inertial devices}
1/2688	. . . {on exhaust pipes}	1/447	. . . . {with indication of the braking strength or speed changes, e.g. by changing the shape or intensity of the indication}
1/2692	. . {retractable lights (retractable headlights B60Q 1/05)}	1/448	. . . {specially adapted for vehicles with ABS}
1/2696	. . {Mounting of devices using LEDs}	1/46	. . for giving flashing caution signals during drive, other than signalling change of direction, e.g. flashing the headlights {or hazard lights}
1/28	. . for indicating front of vehicle	1/48	. . for parking purposes
1/30	. . for indicating rear of vehicle, e.g. by means of reflecting surfaces	1/482	. . . {for locating vehicle in parking lot}
1/301	. . . {by means of surfaces, e.g. metal plate, reflecting the light of an external light source}	1/484	. . . {for showing outline of vehicle}
1/3015	. . . . {combined with a lamp}	1/486	. . . {for indicating that vehicle is in a parked state}
1/302	. . . {mounted in the vicinity, e.g. in the middle, of a rear window}	1/488	. . . {for indicating intention to park}
1/303	. . . {Rear fog lamps}	1/50	. . for indicating other intentions or conditions, e.g. request for waiting or overtaking
1/304	. . . {Adaptations of signalling devices having a part on the vehicle body and another on the boot door}	1/503	. . . {using luminous text or symbol displays in or on the vehicle, e.g. static text}
1/305	. . . {Indicating devices for towed vehicles}	1/5035	. . . . {electronic displays}
1/307	. . . {mounted on loading platforms}	1/5037	. . . . . {the display content changing automatically, e.g. depending on traffic situation}
1/32	. . for indicating vehicle sides {, e.g. clearance lights}	1/506	. . . {specific to silent vehicles, e.g. for warning that a hybrid or electric vehicle is approaching}
1/323	. . . {on or for doors (illuminated exterior door handles B60Q 1/2669 ; illuminated door locks E05B 17/10)}	1/507	. . . {specific to autonomous vehicles}
1/324	. . . . {for signalling that a door is open or intended to be opened}	1/508	. . . {specific to vehicles driving in fleets or convoys}
1/325	. . . {on or for running boards or steps}	1/509	. . . {specific to unauthorised use, e.g. for indicating stolen vehicles or infringements of traffic rules}
1/326	. . . {on or for wheels}	1/52	. . . for indicating emergencies
1/34	. . for indicating change of drive direction (B60Q 1/22 takes precedence)	1/525	. . . {automatically indicating risk of collision between vehicles in traffic or with pedestrians, e.g. after risk assessment using the vehicle sensor data}
1/343	. . . {Manually actuated switching arrangements therefor (hand actuated multifunction switches B60Q 1/1461 ; B60Q 1/40 takes precedence)}	1/535	. . . . {to prevent rear-end collisions, e.g. by indicating safety distance at the rear of the vehicle}
1/346	. . . {with automatic actuation}	1/54	. . . for indicating speed {outside of the vehicle}
1/36	. . . using movable members, e.g. arms with built-in flashing lamps	1/543	. . . {for indicating other states or conditions of the vehicle (indicating taxis' state of hire or fare G07B 13/045)}
1/38	. . . using immovably-mounted light sources, e.g. fixed flashing lamps	1/544	. . . {for indicating other states or conditions of the vehicle occupants, e.g. for indicating disabled occupants}
1/381	. . . . {with several light sources activated in sequence, e.g. to create a sweep effect}	1/545	. . . {for indicating other traffic conditions, e.g. fog, heavy traffic}
1/382	. . . . {Electronic temporisation with semiconductor amplification}	1/547	. . . {for issuing requests to other traffic participants; for confirming to other traffic participants they can proceed, e.g. they can overtake}
1/385	. . . . {Electronic temporisation with relay amplification}	1/549	. . . {for expressing greetings, gratitude or emotions}
1/387	. . . . {Mechanical temporisation}	1/56	. . for illuminating registrations or the like {, e.g. for licence plates}
1/40	. . . having {mechanical, electric or electronic} automatic return to inoperative position	3/00	Arrangement of lighting devices for vehicle interiors; Lighting devices specially adapted for vehicle interiors
1/42	. . . . {having mechanical automatic return to inoperative position} due to steering-wheel position {, e.g. with roller wheel control}	3/10	. for dashboards
1/425	. . . . . {using a latching element for resetting a switching element}	3/12	. . lighting onto the surface to be illuminated
1/44	. . for indicating braking action {or preparation for braking, e.g. by detection of the foot approaching the brake pedal}		
1/441	. . . {Electric switches operable by the driver's pedals}		
1/442	. . . {visible on the front side of the vehicle, e.g. for pedestrians}		

3/14	. . lighting through the surface to be illuminated	3/745	. . . {using lighting panels or mats, e.g. electro-luminescent panels, LED mats}
3/16	. . Circuits; Control arrangements	3/76	. . for spotlighting, e.g. reading lamps (spotlighting on or for specific fittings B60Q 3/20; spotlighting in mass transit vehicles B60Q 3/44)
3/18	. . . for varying the light intensity	3/78	. . for generating luminous strips, e.g. for marking trim component edges
3/20	. for lighting specific fittings of passenger or driving compartments; mounted on specific fittings of passenger or driving compartments (lighting for dashboards B60Q 3/10)	3/80	. Circuits; Control arrangements (for dashboards B60Q 3/16; for mass transit vehicles B60Q 3/47)
3/208	. . Sun roofs; Windows	3/82	. . Switches specially adapted for vehicle interior lighting, e.g. switching by tilting the lens
3/217	. . Doors, e.g. door sills; Steps	3/85	. . for manual control of the light, e.g. of colour, orientation or intensity
3/225	. . Small compartments, e.g. glove compartments	3/88	. . Means for plugging to the electrical power supply of the vehicle, e.g. by using cigarette lighter sockets
3/229	. . . {Cup holders}	5/00	Arrangement or adaptation of acoustic signal devices
3/233	. . Seats; Arm rests; Head rests	5/001	. {Switches therefor}
3/242	. . Safety belts; Body harnesses	5/003	. . {mounted on the steering wheel}
3/252	. . Sun visors	5/005	. {automatically actuated}
3/258	. . Rear-view mirrors	5/006	. . {indicating risk of collision between vehicles or with pedestrians}
3/267	. . Door handles; Hand grips	5/008	. . {for signaling silent vehicles, e.g. for warning that a hybrid or electric vehicle is approaching}
3/275	. . Smoking-related fittings, e.g. cigarette lighters or ashtrays	7/00	Arrangement or adaptation of portable emergency signal devices on vehicles
3/283	. . Steering wheels; Gear levers	7/005	. {Devices without lamps}
3/292	. . Ignition locks	7/02	. to be attached to overhanging loads or extending parts of vehicle
3/30	. for compartments other than passenger or driving compartments, e.g. luggage or engine compartments	9/00	Arrangement or adaptation of signal devices not provided for in one of main groups B60Q 1/00 - B60Q 7/00 {, e.g. haptic signalling}
3/35	. . Portable lighting devices	9/001	. {Alarm devices when the motor is stopped and the lights are on}
3/40	. specially adapted for specific vehicle types	9/002	. {for parking purposes, e.g. for warning the driver that his vehicle has contacted or is about to contact an obstacle (warning arrangements in garages E04H 6/42)}
3/41	. . for mass transit vehicles, e.g. buses	9/003	. . {using physical contactors, e.g. arms that trigger alarm upon contact with obstacle}
3/43	. . . General lighting	9/004	. . {using wave sensors (radar designed for anti-collision purposes between land vehicles or between land vehicles and fixed obstacles G01S 13/931)}
3/44	. . . Spotlighting, e.g. reading lamps	9/005	. . . {using a video camera}
3/46	. . . Emergency lighting, e.g. for escape routes	9/006	. . . {using a distance sensor}
3/47	. . . Circuits; Control arrangements	9/007	. . {providing information about the distance to an obstacle, e.g. varying sound}
3/49	. . for vehicles with non-fixed roofs, e.g. convertibles	9/008	. {for anti-collision purposes}
3/50	. Mounting arrangements (for compartments other than passenger or driving compartments B60Q 3/30; specially adapted for specific vehicle types B60Q 3/40)	11/00	Arrangement of monitoring devices for devices provided for in groups B60Q 1/00 - B60Q 9/00
3/51	. . for mounting lighting devices onto vehicle interior, e.g. onto ceiling or floor	11/002	. {Emergency driving lights in the event of failure of the principal lighting circuit}
3/53	. . . Modular mounting systems, e.g. using tracks, rails or multiple plugs	11/005	. {for lighting devices, e.g. indicating if lamps are burning or not}
3/54	. . Lighting devices embedded in interior trim, e.g. in roof liners	11/007	. . {the lighting devices indicating change of drive direction}
3/56	. . Lighting devices mounted on elongate supports, e.g. on flexible arms	2200/00	Special features or arrangements of vehicle headlamps
3/57	. . Retractable or concealable lighting devices		
3/59	. . Lighting devices mounted in the vehicle interior and adapted for portability		
3/60	. characterised by optical aspects		
3/62	. . using light guides		
3/64	. . . for a single lighting device		
3/66	. . . for distributing light among several lighting devices		
3/68	. . using ultraviolet light		
3/70	. characterised by the purpose		
3/72	. . for preventing the driver from being dazzled		
3/731	. . . {for autonomous vehicle travel}		
3/735	. . . {for preventing discomfort, e.g. for preventing motion sickness or for anticipating motion}		
3/74	. . for overall compartment lighting; for overall compartment lighting in combination with specific lighting, e.g. room lamps with reading lamps (general lighting mounted on specific fittings B60Q 3/20; general lighting for mass transit vehicles B60Q 3/43)		

- 2200/30 . . Special arrangements for adjusting headlamps, e.g. means for transmitting the movements for adjusting the lamps
- 2200/32 . . Ball-joints
- 2200/34 . . Deformable parts, i.e. the adjustment is performed by bending or stretching a part
- 2200/36 . . Conjoint adjustments, i.e. a mechanical link allows conjoint adjustment of several units
- 2200/38 . . Automatic calibration of motor-driven means for adjusting headlamps, i.e. when switching on the headlamps, not during mounting at factories
- 2300/00 Indexing codes for automatically adjustable headlamps or automatically dimmable headlamps**
- 2300/05 . . Special features for controlling or switching of the light beam
- 2300/052 . . Switching delay, i.e. the beam is not switched or changed instantaneously upon occurrence of a condition change
- 2300/054 . . Variable non-standard intensity, i.e. emission of various beam intensities different from standard intensities, e.g. continuous or stepped transitions of intensity
- 2300/056 . . Special anti-blinding beams, e.g. a standard beam is chopped or moved in order not to blind
- 2300/10 . . Indexing codes relating to particular vehicle conditions
- 2300/11 . . Linear movements of the vehicle
- 2300/112 . . . Vehicle speed
- 2300/114 . . . Vehicle acceleration or deceleration
- 2300/116 . . . Vehicle at a stop
- 2300/12 . . Steering parameters
- 2300/122 . . . Steering angle
- 2300/124 . . . Steering speed
- 2300/126 . . . Hysteresis behavior based on steering
- 2300/128 . . . Steering dead zone
- 2300/13 . . Attitude of the vehicle body
- 2300/132 . . . Pitch
- 2300/134 . . . Yaw
- 2300/136 . . . Roll
- 2300/14 . . Other vehicle conditions
- 2300/142 . . . Turn signal actuation
- 2300/144 . . . Rearward ratio actuation
- 2300/146 . . . Abnormalities, e.g. fail-safe
- 2300/20 . . Indexing codes relating to the driver or the passengers
- 2300/21 . . Manual control
- 2300/22 . . Seat occupation
- 2300/23 . . Driver's line of sight
- 2300/30 . . Indexing codes relating to the vehicle environment
- 2300/305 . . Calendar date or clock time
- 2300/31 . . Atmospheric conditions
- 2300/312 . . . Adverse weather
- 2300/314 . . . Ambient light
- 2300/32 . . Road surface or travel path
- 2300/322 . . . Road curvature
- 2300/324 . . . Road inclination, e.g. uphill or downhill
- 2300/33 . . Driving situation
- 2300/331 . . . characterised by the driving side, e.g. on the left or right hand side
- 2300/332 . . . on city roads
- 2300/3321 Detection of streetlights
- 2300/333 . . . on suburban or country roads
- 2300/334 . . . on motorways
- 2300/335 . . . Number or size of road lanes
- 2300/336 . . . Crossings
- 2300/337 . . . Tunnels or bridges
- 2300/338 . . . Overtaking
- 2300/40 . . Indexing codes relating to other road users or special conditions
- 2300/41 . . preceding vehicle
- 2300/42 . . oncoming vehicle
- 2300/43 . . following vehicle
- 2300/45 . . Special conditions, e.g. pedestrians, road signs or potential dangers
- 2300/47 . . Direct command from other road users, i.e. the command for switching or changing the beam is sent by other vehicles or road devices
- 2400/00 Special features or arrangements of exterior signal lamps for vehicles**
- 2400/10 . . Electro- or photo- luminescent surfaces, e.g. signalling by way of electroluminescent strips or panels
- 2400/20 . . Multi-color single source or LED matrix, e.g. yellow blinker and red brake lamp generated by single lamp
- 2400/30 . . Daytime running lights [DRL], e.g. circuits or arrangements therefor
- 2400/40 . . Welcome lights, i.e. specific or existing exterior lamps to assist leaving or approaching the vehicle
- 2400/50 . . Projected symbol or information, e.g. onto the road or car body
- 2500/00 Special features or arrangements of vehicle interior lamps**
- 2500/20 . . associated with air conditioning arrangements
- 2500/30 . . Arrangements for illuminating different zones in the vehicle, e.g. front/rear, different seats
- 2800/00 Features related to particular types of vehicles not otherwise provided for**
- 2800/10 . . Autonomous vehicles
- 2800/20 . . Utility vehicles, e.g. for agriculture, construction work
- 2800/30 . . Mass transport vehicles
- 2900/00 Features of lamps not covered by other groups in B60Q**
- 2900/10 . . Retrofit arrangements
- 2900/20 . . Arrangements for easy recycling, e.g. for easy dismantling or use of special materials
- 2900/30 . . Lamps commanded by wireless transmissions
- 2900/40 . . Several lamps activated in sequence, e.g. sweep effect, progressive activation
- 2900/50 . . Arrangements to reconfigure features of lighting or signalling devices, or to choose from a list of pre-defined settings