

# 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:

<a href="#">B60Q 1/128</a>	covered by	<a href="#">B60Q 1/124</a>
<a href="#">B60Q 1/132</a>	covered by	<a href="#">B60Q 1/124</a>
<a href="#">B60Q 1/136</a>	covered by	<a href="#">B60Q 1/124</a>

<b>1/00</b>	<b>Arrangement of optical signalling or lighting devices, the mounting or supporting thereof or circuits therefor (for lighting vehicle interior <a href="#">B60Q 3/00</a>)</b>	<b>1/0094</b>	<b>. . {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 <a href="#">F21V 17/06</a>, <a href="#">F21S 43/195</a>)}</b>
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 <a href="#">B60S 1/04</a> )}	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 ( <a href="#">B60Q 1/0491</a> , <a href="#">B60Q 1/05</a> take precedence, integrated front ends <a href="#">B62D 25/00</a> )}
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 <a href="#">B60Q 1/0683</a> )}
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 <a href="#">B60Q 1/0425</a> )}		
1/007	. . {via a removable cap}		
1/0076	. {Switches therefor ( <a href="#">B60Q 1/1446</a> , <a href="#">B60Q 1/343</a> , <a href="#">B60Q 1/40</a> take precedence)}		
1/0082	. . {mounted on the steering wheel}		
1/0088	. {Details of electrical connections ( <a href="#">B60Q 1/305</a> takes precedence; electrical connection of the light source itself <a href="#">F21S 41/192</a> , <a href="#">F21S 43/195</a> )}		

- 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 ( <a href="#">B60Q 1/302</a> takes precedence; lighting devices for vehicle interior on or for windows <a href="#">B60Q 3/208</a> )}	1/444	. . . {with indication of the braking strength or speed changes, e.g. by changing shape or intensity of the indication ( <a href="#">B60Q 1/1407</a> , <a href="#">B60Q 1/442</a> , <a href="#">B60Q 1/447</a> 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 ( <a href="#">retractable headlights B60Q 1/05</a> )}	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 ( <a href="#">illuminated exterior door handles B60Q 1/2669</a> ; <a href="#">illuminated door locks E05B 17/10</a> )}	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 ( <a href="#">B60Q 1/22</a> 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 ( <a href="#">hand actuated multifunction switches B60Q 1/1461</a> ; <a href="#">B60Q 1/40</a> 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 ( <a href="#">indicating taxis' state of hire or fare G07B 13/045</a> )}
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	<b>Arrangement of lighting devices for vehicle interiors; Lighting devices specially adapted for vehicle interiors</b>
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}	<b>5/00</b>	<b>Arrangement or adaptation of acoustic signal devices</b>
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	<b>7/00</b>	<b>Arrangement or adaptation of portable emergency signal devices on vehicles</b>
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	<b>9/00</b>	<b>Arrangement or adaptation of signal devices not provided for in one of main groups B60Q 1/00 - B60Q 7/00 {, e.g. haptic signalling}</b>
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)	<b>11/00</b>	<b>Arrangement of monitoring devices for devices provided for in groups B60Q 1/00 - B60Q 9/00</b>
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	<b>2200/00</b>	<b>Special features or arrangements of vehicle headlamps</b>
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