

**SLR-40-01/Rev.1**

**Matched pair in UN Regulation No. 149**

***- Stage 2 simplification -***

This proposal, based on the latest available draft of UN Regulation No. 149-01 (doc. SLR-39-10/Rev.1), reflects the latest outcome of discussion within GTB.

3.2.4.3. The symbols identifying the road illumination function for which type approval has been granted.

# Table 1

# **List of symbols/combinations (full list is provided in Annex 1 “Communication”)**

| *Lamp (function)* | *Symbol* | *Symbol if device is part of a matched pair*  |
| --- | --- | --- |
| Driving beam headlamp of Class A  | R | YR 3 |
| Passing beam headlamp of Class V (asymmetrical) | V | YV |
| Driving beam headlamp of Class B  | HR | YHR |
| Passing beam headlamp of Class C (asymmetrical) | C | YC |
| Auxiliary Driving Beam | RA | - |
| Adaptive Front lighting System (AFS): basic passing beam | XC[[1]](#footnote-2) | - |
| Adaptive Front lighting System (AFS): motorway passing beam | XCE[[2]](#footnote-3) | - |
| Adaptive Front lighting System (AFS): town passing beam | XCV~~4~~ | - |
| Adaptive Front lighting System (AFS): adverse weather passing beam | XCW~~4~~ | - |
| Adaptive Front lighting System (AFS): driving beam | XR~~4~~ | - |
| Passing beam headlamp of Class AS (symmetrical) | C-AS | YC-AS |
| Passing beam headlamp of Class BS (symmetrical) | C-BS | YC-BS |
| Passing beam headlamp of Class CS (symmetrical) | WC-CS | YC-CS |
| Passing beam headlamp of Class DS (symmetrical) | WC-DS | YC-DS |
| Driving beam headlamp of Class BS  | R-BS | YR-BS |
| Driving beam headlamp of Class CS  | WR-CS | YR-CS |
| Driving beam headlamp of Class DS  | WR-DS | YR-DS |
| Adaptive driving beam for vehicles of category L3 | ADB | YADB  |
| Front fog lamp Class F3 | F3 | YF3 |
| Cornering lamp | K | - |

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5.3.2.9. Provisions for passing-beam

# Table 9

# **Passing-beam photometric requirements in conjunction with Figure A4-VII**

|  |  |  |
| --- | --- | --- |
| *Tabled requirements expressed in cd* | *Position / deg.* | *Passing beam* |
| *horizontal* | *vertical* | *Class C* | *Class V* | *Class E* | *Class W* |
|  | *No.* | *Element* | *At/from* | *to* | *at* | *min* | *max* | *min* | *max* | *min* | *max* | *min* | *max* |
| Part A | 1 | B50L | 3.43 L | - | 0.57 U | - | 350 | -- | 350 | - | 6256 | - | 625 |
| 2 | BR | 2.50 R | - | 1.00 U | - | 1 750 |  | 1750 | - | 1 750 | - | 2 650 |
| 3 | Segment BLL | 8.00 L | 20 L | 0.57 U | - | 625 | - | 625 | - | 880 | - | 880 |
| 4 | P | 7.00 L | - | H | 63 | - | 63 | - | - | - | - | - |
| 5 | Zone III | As specified in Table 11 | - | 625 | - | 625 | - | 880 | - | 880 |
| 6 | S50+S50LL+S50RR4 | - | - | 4.00 U | 1905 | - | - | - | 1905 | - | 1905 | - |
| 7 | S100+S100LL+S100RR4 | - | - | 2.00 U | 3755 | - | - | - | 3755 | - | 3755 | - |
| 8 | 125 R | 1.15 R | - | 0.34 D | - | - | - | - | 12 000 | - | - | - |
| 9 | 50 R | 1.72 R | - | 0.86 D | 10 100 | - | 5 100 | - | - | - | - |  |
| 10 | 75 R | 1.15 R | - | 0.57 D | 12 100 | - | - | - | 15 200 | - | 15 200 | - |
| 11 | 50 V | V | - | 0.86 D | 5 1001 | - | 5 100 | - | 10 1001 | - | 10 1001 | - |
| 12 | 50 L | 3.43 L | - | 0.86 D | 5 0007 | 36 960 | 3 5507 | 36 960 | 6 8007 | - | 6 8007 | 36 960 |
| 13 | Segment 20 and below | 3.50 L | V | 2.00 D | - | - | - | - | - | - | - | 17 6002 |
| 14 | Segment 50 | 6.84 L | 6.84 R | 0.86 D | 2 540 | - | 1 800 | - | 2 540 | - | 2 540 | - |
| 15 | 40R | 9 R | - | 1.07 D | 2 800 | - | 1 950 | - | 2 800 | - | 2 800 | - |
| 17 | 40L | 9 L | - | 1.07 D | 2 800 | - | 1 950 | - | 2 800 | - | 2 800 | - |
| 18 | Segment 40RR | 14 R | 9 R | 1.07 D | 850 | - | 600 | - | 850 | - | 850 | - |
| 19 | Segment 40LL | 14 L | 9 L | 1.07 D | 850 | - | 600 | - | 850 | - | 850 | - |
| 20 | Segment 25R | 16 R | 9 R | 1.72 D | 1 180 | - | 825 | - | 1 180 | - | 1 180 | - |
| 21 | Segment 25 | 9 R | 9 L | 1.72 D | 1 700 | - | 1 200 | - | 1 700 | - | - | - |
| 22 | 25V | 0 | - | 1.72 D | 2 500 | - | 1 750 | - | 2 500 | - | - | - |
| 23 | Segment 25L | 16 L | 9 L | 1.72 D | 1 180 | - | 825 | - | 1 180 | - | 1 180 | - |
| 24 | Segment 15 | 20 L | 20 R | 2.86 D | 425 | - | 300 | - | 425 | - | - | - |
| 25 | Segment 10 and below | 4.50 L | 2.00 R | 4.00 D | - | 0.8xthe actual measured value at 50R | - | 0.8xthe actual measur ed value at 50R | - | 0.8xthe actual measured value at 50R | - | 7 1002 |
| 26 | Segment 10  | 4.50 L | 2.00 R | 4.00 D | 500 | - | 350 | - | 500 | - | - | - |
| 27 | Imax3 | - | - | - | - | - | - | 44 100 | - | - | - | - |

Part B (bending mode): Table 9 applies, however with the lines Nos. 1, 5 and 12 being replaced by those listed hereunder

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Part B* | 1 | B50L | 3.43 L | - | 0.57 U | - | 530 | - | 530 | - | - | - | 790 |
| 5 | Zone III | As specified in Table 11 | - | 880 | - | 880 | - | 880 | - | 880 |
| 12 | 50 L | 3.43 L | - | 0.86 D | 1 700 | - | 1 700 | - | 3 400 | - | 3 400 | - |

*Notes:* In the Table 9, Part A and B:

1 The contribution of each side of the system shall not be less than 2 500 cd.

2 Requirements according to the provisions indicated in Table 12 apply in addition.

3 Position requirements according to the provisions of Table 10 ("Segment Imax").

4 Position requirements according to the provisions of Table 13.

5 One pair of position lamps, being incorporated with the system or being intended to be installed together with the system may be activated according to the indications of the applicant.

6 Requirements according to the provisions indicated in Table 14 apply in addition.

7 The contribution of each side of the system shall not be less than 50% of the required minimum value.

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5.4.3.1. For Class AS headlamps (Figure A4-VIII in Annex 4):

# Table 16

# **Passing-beam Class AS**

|  |  |  |
| --- | --- | --- |
| *Test point / line / zone* | *Angular coordinates - degrees\** | *Required luminous intensity in cd* |
| Any point in Zone 1 | 0° to 15°U | 5°L to 5°R | ≤ 320 cd |
| Any point on line 25L to 25R (\*\*) | 1.72°D | 5°L to 5°R | ≥ 1,100 cd |
| Any point on line 12.5L to 12.5R | 3.43°D | 5°L to 5°R | ≥ 550 cd |

Note to Table 16

\* 0.25° tolerance allowed independently at each test point for photometry unless indicated otherwise.

\*\* In case of a matched pair the contribution of each lamp shall not be less than 50% of the required minimum value on 25V (1.72° D- V)

5.4.3.2. For Class BS headlamps (Figure A4-IX in Annex 4):

# Table 17

# **Passing-beam Class BS**

|  |  |  |
| --- | --- | --- |
| *Test/point/**line/zone* | *Angular coordinates - degrees*\* | *Required luminous intensity in cd* |
| Any point in Zone 1 | 0°to 15°U | 5°L to 5°R | ≤ 700 cd |
| Any point on line 50L to 50R except 50V | 0.86°D | 2.5°L to 2.5°R | ≥ 1,100 cd |
| Point 50V \*\* | 0.86°D | 0 | ≥ 2,200 cd |
| Any point on line 25L to 25R | 1.72°D | 5°L to 5°R | ≥ 2,200 cd |
| Any point in Zone 2 | 0.86°D to 1.72°D | 5°L to 5°R | ≥ 1,100 cd |

Note to Table 17

\* 0.25° tolerance allowed independently at each test point for photometry unless indicated otherwise.

\*\* In case of a matched pair the contribution of each lamp shall not be less than 50% of the required minimum value.

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**Annex 1**

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9.4. For headlamps of Classes AS, BS, CS and DS

9.4.1. Category as described by the relevant marking[[3]](#footnote-4):

9.4.1.1. Matched pair: yes/no2

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9.5. For front fog lamps Class F3

9.5.1. Matched pair: yes/no2

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Annex 4

1.5. Upon request of the applicant, in case of a matched pair of lamps the photometric requirements for each single measuring point, segment or zone (angular position) apply to half of the sum of the respective measured values from both lamps together.

1.5.1. However, in the cases described in paragraphs 5.1.3.4. and 5.1.3.5 5.1.4.2. and 5.1.4.3. of this Regulation where a provision is specified for one side only, the division by the factor of 2 does not apply.

1. In the case of a single installation unit the symbol "XC" is marked only once. [↑](#footnote-ref-2)
2. In the case of more installation units each providing one or more AFS function(s) each unit is marked with the symbol "X" followed by the identification symbol(s) of the specific AFS function(s) provided. [↑](#footnote-ref-3)
3. Indicate the appropriate marking(s) based on the symbols listed on table 1 combined with the relevant additional symbol(s) described in paragraph 3.3.2.4 if any (examples in Annex 13):

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 [↑](#footnote-ref-4)