

Required Lamps For trailers

For Information purposes only. Summarised version of UN-ECE Regulation 48 requirements. Please note that requirements within Regulation 48 supersede version below and are subject to changes

	Colour	Presence	Number	Arrangement	Position*	Geometric Visibility β =horizontal angle α = vertical angle	Electrical Connections	Tell-Tale
Reversing Lamp	White	Mandatory O2, O3, O4, optional on O1 trailers	1 mandatory 2nd optional	No individual specification	Width - no requirement Height -above 250 – below 1200 mm	α =15° upwards and 5° downwards β =45° to right and left if one device. 30° if two installed	Only light when in reverse	Optional
Direction Indicators	Amber	Mandatory Category 2a or 2b	2	2 rear	W: < 400mm from edge H: 350- 1500mm (2100mm if 1500mm not possible)	α = 15° upwards and downwards β =80° outwards and 45° inwards	See R-48	Visible or auditory or both
Hazard Warning	Amber	Mandatory	2	2 rear	See direction indicators above	See direction indicators above	See R-48	Circuit closed tell-tale see R-48
Stop Lamp	Red	Mandatory Category S1 or S2	2	no special arrangements	Width-inner edges not less than 600mm apart. 400mm if overall width trailer less 1300mm H: 350-1500mm (2100mm if 1500mm not possible)	α = 15° upwards and downwards β =45° to right and left	Must light up when brake applied	Optional, see R- 48
Rear Registration Plate Lamp	White	Mandatory	Such that the device illuminates the plate	Such that the device illuminates the plate	Such that the device illuminates the plate	Such that the device illuminates the plate	See R-48	Optional
Front Position Lamp	White	Mandatory on trailers if > 1600mm wide Optional if < 1600mm wide	2	no special arrangements	W: < 150mm from edge H: 350- 2100mm	α = 15° upwards and downwards β =80° outwards and 45° inwards	See R-48	Circuit closed tell-tale
Rear Position Lamp	Red	Mandatory Category RorR1orR2	2, see R-48	no special arrangements	W: <400mm H: 350-1500mm (2100mm if 1500mm not possible)	α = 15° upwards and downwards β =80° outwards and 45° inwards	See R-48	Circuit closed tell-tale see R-48

* Note 1: width indicates distance from external edge of trailer to nearest edge of illuminated area, height indicates distance from ground to lower edge of illuminated area,

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	Colour	Presence	Number	Arrangement	Position*	Geometric Visibility β =horizontal angle α = vertical angle	Electrical Connections	Tell-Tale
Rear Fog Lamp	Red	Mandatory Category F or F1 or F2	1 or 2	no special arrangements	See R-48 H: 250-1000mm	$\alpha = 5^\circ$ upwards and downwards $\beta=25^\circ$ right and left	See R-48	Circuit closed tell-tale
End-Outline Marker Lamp	White Front, Red Rear	Mandatory if width >2.1m A or AM (front) R,R1,R2,RM1 or RM2 (Rear)	2 front, 2 rear	no special arrangements	W: < 400mm and as close as possible to edge H: at max. height compatible with design	$\alpha = 15^\circ$ above and below $\beta=30^\circ$ inwards and outwards	See R-48	Optional, see R-48
Rear Retro-Reflector Triangular	Red	Mandatory Category class IIIA or IIIB	2	Apex of ▲ directed upwards	W: < 400mm H: 250-900 or 1200 or 1500 See R-48	$\alpha = 15^\circ$ above and below $\beta=30^\circ$ inwards and outwards	n/a	n/a
Front Retro-Reflector Non-Triangular	White	Mandatory Category class IA or IB	2	No special arrangements	W < 150mm H: 250-900mm (1500mm if 900mm not possible)	$\alpha = 10^\circ$ above and below $\beta=30^\circ$ inwards and outwards	n/a	n/a
Side Retro-Reflector Non-Triangular	Amber	Mandatory Category class IA or IB	See R-48	No special arrangements	H: 250-900mm(1500mm if 900mm not possible) L: fitted middle third and distance between adjacent reflectors <3m. See R-48	$\alpha = 10^\circ$ above and below $\beta=45^\circ$ front and to the rear	n/a	n/a
Side-Marker Lamps	Amber	Mandatory if: > 6m long, Category SM1	See R-48	No special arrangements	H: 250-900mm(1500mm if 900mm not possible) L: fitted middle third and distance between adjacent reflectors <3m. See R-48	$\alpha = 10^\circ$ above and below $\beta=45^\circ$ front and to the rear	See R-48	See R-48
Conspicuity Markings	white/yellow side, red/yellow rear	Mandatory if: >2100mm width O3, O4 Full contour markings rear >6m long partial contour to side	See R-48	See R-48	See R-48	See R-48	n/a	n/a

* Note: width indicates distance from external edge of trailer to nearest edge of illuminated area; height indicates distance from ground to lower edge of illuminated area