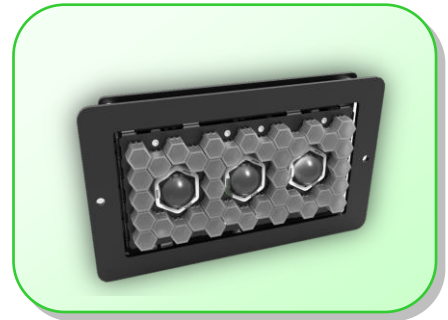


Product Description:

MTL11 is designed for lighting railway vehicles. The lamp consists of a modular optical system that allows using the same fixed number of optical elements to create various custom light shapes on customer request. The lamp uses SMD LEDs with high luminosity as the light source, incorporated in a modular optical system. The optical system is designed to meet the requirements of standards ČSN EN 15153-1, TSI 1302/2014 LOC&PAS and UIC 534 for conventional and high-speed vehicles when using 36 plastic and 3 glass customised optical elements.



The lamp is fitted with 36 white LEDs for use in marker lamp mode and 3 powerful LEDs for use in front head lamp mode. For use in all modes (front head lamp, marker and tail lamp), it is also fitted with 36 red LEDs for use in tail lamp mode.

These diodes are controlled by LED driver, which also performs diagnostics of the LEDs and indicates any fault states on the diagnostic relay output. The luminous intensity of MTL11 can be adjusted to multiple levels via inputs. MTL11 operates in dimmed and undimmed mode. This allows the same type of signal lamp to serve as upper and lower position lights in dimmed and undimmed mode.

An advantage of MTL11 lies in significantly improved utility properties thanks to the customer-designed optical system and the use of LEDs instead of classic light bulb- or halogen lamp-based lighting, which brings high reliability, longer service life and lower operating and maintenance costs and thus also higher safety in the use of the railway vehicle. MTL11 can be used on new railway vehicles or as a full-fledged replacement for existing light bulb lights.

Technical Parameters:

Type designation	MTL11/AA00	MTL11/BA00
Number of optical elements	36 for signal and tail lamp mode, 3 for front head lamp mode	36 for signal lamp mode, 3 for front head lamp mode
Supply voltage U_n	16.8 – 30 V DC	
Recommended input protection	6 A circuit breaker	
Diagnostic relay output	0.00001 A / 24 V minimum	
	1 A / 24 V maximum	
Maximum input consumption	4 to 8 mA at 16.8 to 30 V DC, resistance load	
Design in line with	ČSN EN 50155, ČSN EN 15153-1, TSI 1302/2014 LOC&PAS, UIC 534	
Ambient temperature	OT2	
Ambient storage temperature	-40 °C to +70 °C	
Humidity	In line with ČSN EN 50155	
Impacts and vibrations	Category 1, class A, in line with ČSN EN 61373	
Supply voltage tolerance	0.7 U_n to 1.25 U_n , supply voltage interruption S1	
Insulation resistance	In line with ČSN EN 50155	
Electric strength	Between live sections and frame 500 V	
Enclosure rating pursuant to ČSN EN 60529	IP20	
Mounting position	Vertical, in accordance with print on the rear of the lamp	
Termination	SUPERSEAL connector, 13 conductors	SUPERSEAL connector, 11 conductors

Manufacturing quality is guaranteed by the observance of procedures for quality management in accordance with ČSN EN ISO 9001:2015.