Light module for Märklin Re 460 locomotives, item no. 8086

The light module 8086 was developed especially for Märklin locomotives of the Re 460 series, which are still equipped with incandescent lamps. It not only expands these locomotives with red tail lights, but also the possible signal patterns. The module fits exactly where the bulbs used to be and is glued there.

Front Side

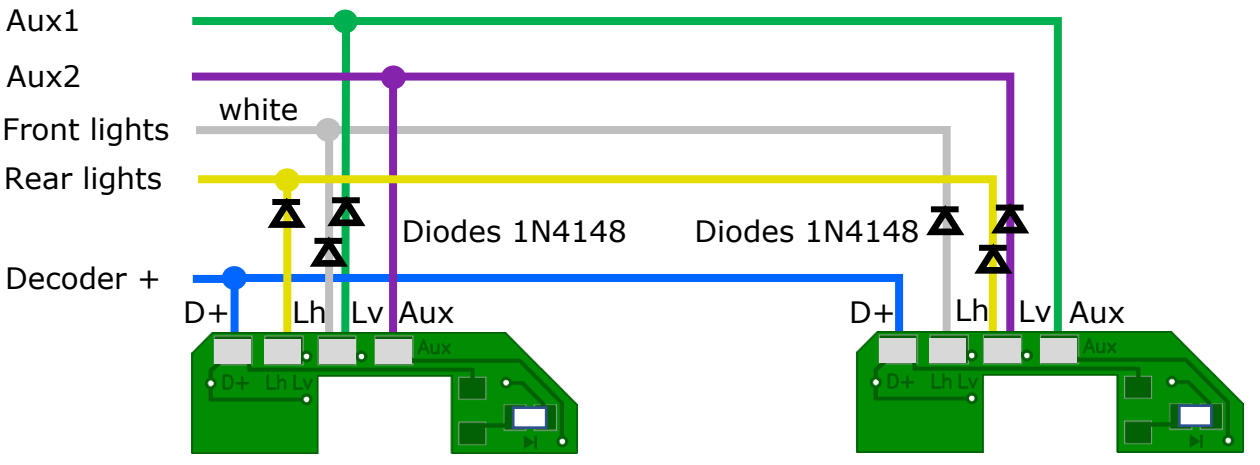
8086 Connections (Pads):

D+	Decoder Plus
Lv	A light
Lh	Single white LED lower right
Aux	Red LED

Decoder connections and strand colours (according to NEM standard):

Blue	Decoder Plus, return wire for all functions.
White	F0 forward light front (Lv, F0v)
Yellow	F0 backward light rear (Lh, F0h)
Green	Aux1 function key 1
Purple	Aux2 function key 2

Connection example, variant 1 (here you need additionally 6 pieces of diodes 1N4148, item no **dio_1N4148**)



Loco front
Printed circuit board rear

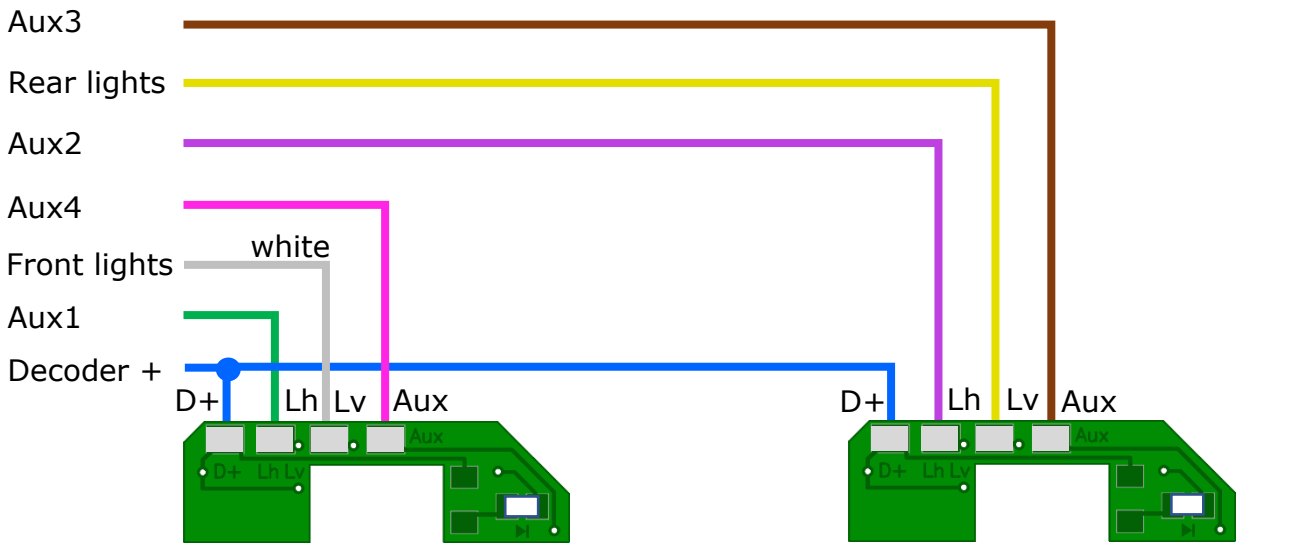
Loco rear
Printed circuit board rear

Functions connection variant 1

Light (F0)	Light in direction of travel front white (A-light), rear white right bottom
only F1 (Aux1)	Light front white, light rear 2x red (loco solo run)
only F2 (Aux2)	Light rear white, light front 2x red (loco solo run)

To be able to display all possible signal patterns, all connections must be routed to separate decoder outputs. In addition to the two outputs for light (F0v and F0h), you need four more outputs Aux1 to Aux4.

Connection example, variant 2



Loco front
Printed circuit board back side

Loco rear
Printed circuit board back side

Functions with connection variant 2

In order to make use of the extensive possibilities of the circuit boards, a decoder mapping is necessary.

What this mapping looks like depends on your personal preferences.
For example, you can use a function key to switch the light of a shuttle train automatically with the direction of travel.

Note

All LEDs are routed via series resistors so that the connections can be directly wired to the decoder outputs.