Lighting Guide

Add LEDs to any DriveMania 3D slot car body · Carrera® Digital 132 / Evolution 1:32 chassis

Every body has **3 mm light channels**: white LEDs at the front (eyes, headlights), red LEDs at the rear. Many bodies already glow from the car's stock lights — extra LEDs make them much brighter. The car supplies about **14–15 V DC** on its light ports; the values below are calculated for 16 V to be safe. **Never connect a bare LED to a port — it burns out.** One 0.25 W resistor per chain.

> Coming soon from DriveMania 3D: ready-made LED kits and bodies with the lights already fitted.

1. Connectors and polarity

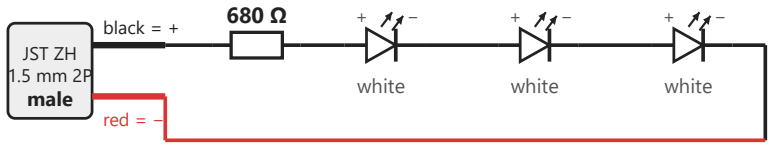
Connector: **JST ZH 1.5 mm, 2-pin**, the same as the Carrera stock one — a male + female pair with 10 cm leads.

Where	Plug on the body	Red wire	Black wire
Front (eyes, headlights)	male	**minus −**	plus +
Rear (tail lights)	female	**plus +**	minus −
Beacons (each on its own port)	female	**plus +**	minus −

LED long leg = plus (anode), short leg = minus (cathode). A reversed LED does not burn — it just stays dark: swap the wires.

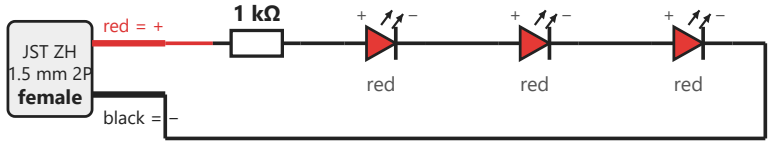
2. Wiring diagrams

FRONT: 3 white LEDs in series, resistor 680 Ω (bright: 330 Ω)



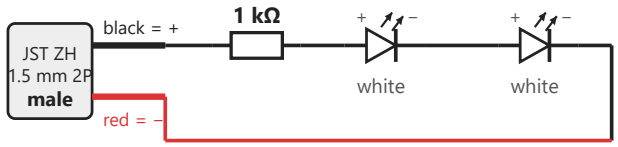
Front: MALE plug, red wire = MINUS. LED long leg (+, anode) towards the resistor, short leg (−) to the next LED.

REAR: 3 red LEDs in series, resistor 1 kΩ (bright: 470–510 Ω)



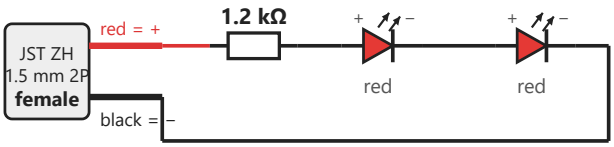
Rear: FEMALE plug, red wire = PLUS.

FRONT, pair: 2 white LEDs in series, resistor 1 kΩ (bright: 470–510 Ω)



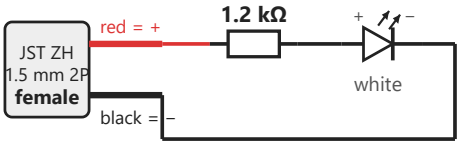
Most bodies have two eyes / headlights: use this chain. MALE plug, red wire = MINUS.

REAR, pair: 2 red LEDs in series, resistor 1.2 kΩ (bright: 560–620 Ω)



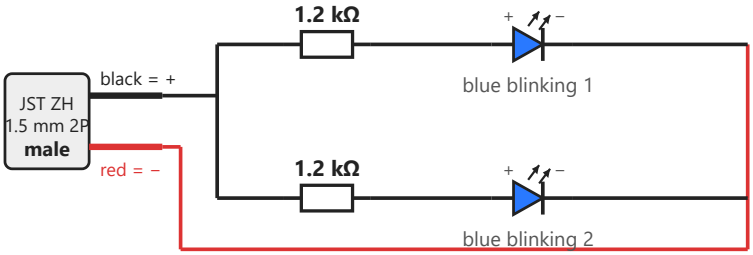
FEMALE plug, red wire = PLUS.

BEACON (one kit per beacon): 1 white LED, resistor 1.2 kΩ (bright: 620–680 Ω)



FEMALE plug, red = PLUS. Two beacons = two kits, each on its own port. The coloured dome gives the colour.

BLINKING LEDs (Reaper front): 2 blue blinking, in PARALLEL, 1.2 kΩ EACH



MALE plug, red = MINUS. Never put blinking LEDs in series: they blink out of step and switch each other off.

3. Resistor table (16 V supply, 0.25 W)

Chain (in series)	Normal, 10 mA	Bright, 20 mA (maximum)
1 white or blue	1.2 kΩ	620–680 Ω
1 red	1.5 kΩ	680–750 Ω
2 white	1 kΩ	470–510 Ω
2 red	1.2 kΩ	560–620 Ω
3 white	680 Ω	330 Ω
3 red	1 kΩ	470–510 Ω
2 red + 1 white	910 Ω – 1 kΩ	470 Ω

Not more than 3 white or 5 red LEDs in one chain. Parallel branches: one resistor per branch. Check: chain current not above 20 mA.

4. Assembly

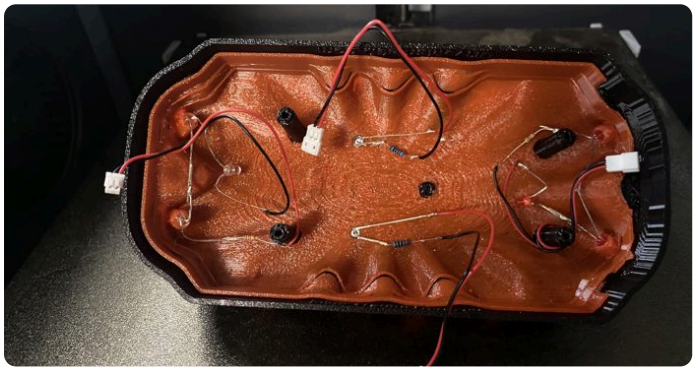
1. Trim the LED legs, solder the resistor to the plus leg of the first LED, join the LEDs minus-to-plus. Cover every joint with 1.5–2 mm heat-shrink.
2. Solder the plug leads to the chain ends following the polarity table (front: red to minus; rear and beacons: red to plus).
3. Push each LED into its 3 mm channel until it stops (the channel holds it). Lay the wires along the wall and fix them with **cloth tape**.

4. Plug into the chassis board: front chain to the front port, rear chain to the rear port, each beacon to its own port.
5. Test on the track before closing the body: all LEDs on, nothing gets warm.

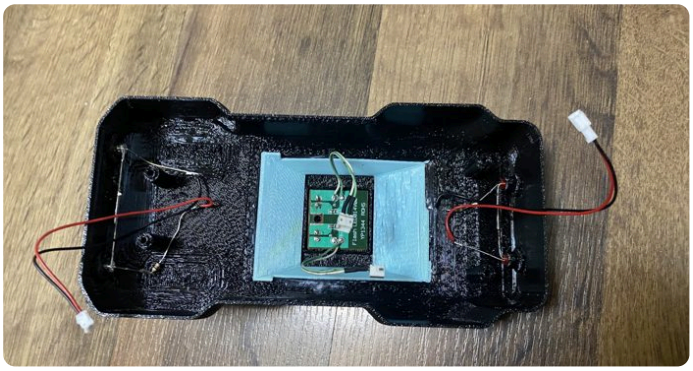
5. Shopping list

Part	Search for
Connectors with leads	JST ZH 1.5 mm 2 pin connector, male + female pair, 100 mm leads, AWG 26–28
White LEDs	3 mm white LED, water-clear lens, 20 mA
Red LEDs	3 mm red LED, 20 mA
Blinking LEDs (Reaper)	3 mm blue flashing / blinking LED (self-flashing)
Resistors	1/4 W resistor kit: 330, 470, 510, 620, 680, 750 Ω, 1, 1.2, 1.5 kΩ
Heat-shrink, tape	heat shrink tubing 1.5 / 2 mm · cloth tape 19 mm (e.g. Tesa 51608)

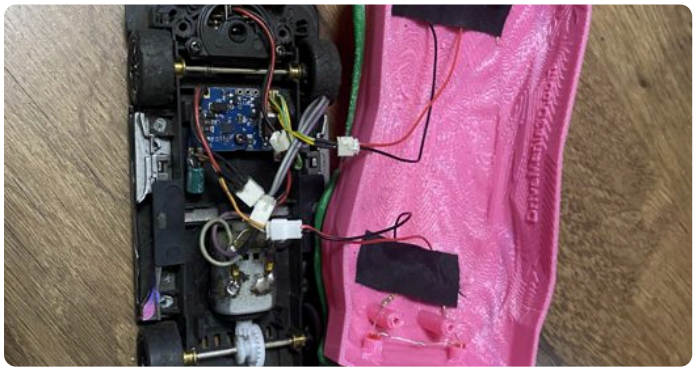
6. Real installs



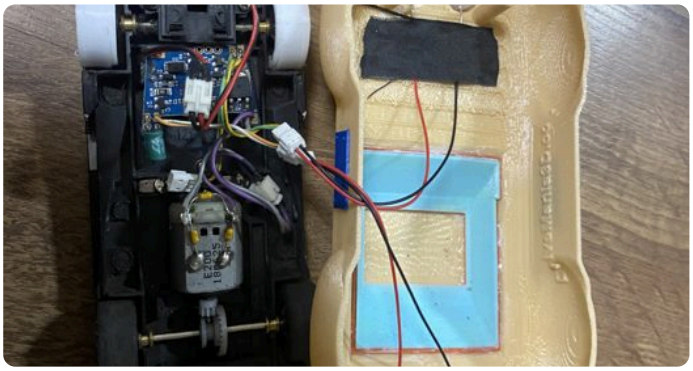
Pumpkin Patrol: LEDs for the beacons and the extra light, wires taped to the liner



Reaper Patrol: roof light board and LED leads inside the body



Mutant Brain: eye LEDs and rear red LEDs, plugs to the chassis board



Zombie Hot Rod: front and rear chains plugged into the stock ports

DriveMania 3D · not affiliated with or endorsed by Carrera. Carrera is a trademark of its owner.