

Characteristics:

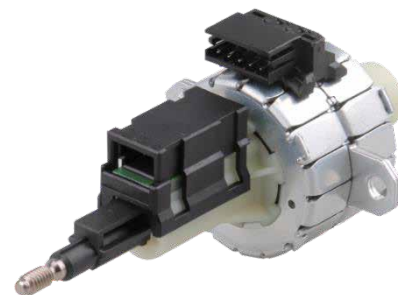
Internal Dynamic Leveler with Hall effect sensor
IDL Hall 12V

Main function 1:

IDL Hall adjusts the headlamp light beam vertical and horizontal position by translation of a shaft. The motor is a linear stepper.

Main function 2:

IDL Hall has a stroke of 22mm. This allows to cover whether +/- 20° of swiveling range or the manual aiming range with is electrical stroke.



Performance:

Performance (typical, other requirements can be passed)

Electrical stroke	22 mm
Manual stroke	-
Nominal axial force	50N
Temperature Range Of Operation	-40 to +120°C
Noise level	45dBA (with micro at 500mm)
Speed	10 mm / s (at 13.5V, 23°C, 300 Full steps / s)
Initialization	In or out for bottom or top position on headlamp
Axial Assembly Force	< 200 N
Axial Play	< 0.15 mm
Holding force	150N @ 100mA @ 23°C
Weight	100g
Vibration	According LV124
Durability	>5 million movements (dynamic leveling + motorway + high beam up)

Electrical connection and control

Motor design	2 phase bipolar
Voltage range / Nominal	10 to 16V / 13.5V
Connexion	JST EH
Resolution	30 steps / mm
Solder	Nosoldering
EMC	No active components
Typical driving parameters	500–800 mA / phase
Step mode	Full step (1/1), Half step (1/2), Microstep (1/8, 1/16)
Recommended driving speeds	200 Full Step/s Vmax, 76 Full Step/s Vmin
Ramp	8848 HS/s ²
Winding resistance / inductance	6.9 Ohm +/-10%, 12mH +/-10%
Duty cycle	40% max @ Tmax +120°C

Design features (see drawing for details)

Fixation on headlamp	Metal brackets
Fixation to module	M4
Location	Internal to headlamp on top or bottom position
Manual aiming interface	-
Dimensions x y z	108 x 54 x 43 mm
Protection	IP40