

Color Illumination ECU

Mass-Produced Product
Since 2023

Fine-grained illumination control for a more refined cabin space
Streamlines wiring by consolidating I/O through multiplex communication

Background or Challenges

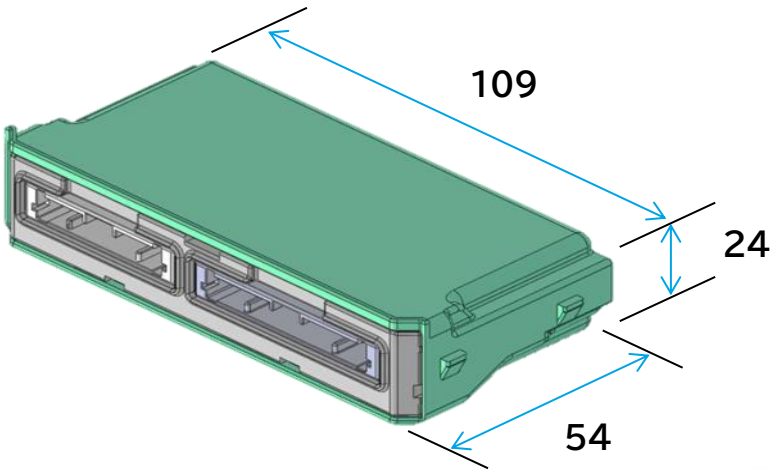
With the evolution of automobiles, how people spend time in cabin space is becoming more diversified.
Compared with conventional products, higher functionality such as more colors and brighter personal lighting for each seat is required.

Solutions to Challenges or Features

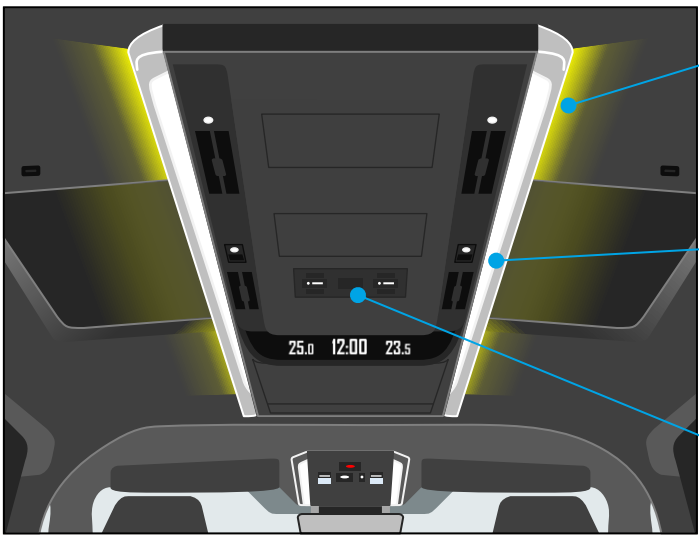
- 1 Improves illumination performance
(expanded color range from 16 to 64, up to 30 dimming levels available)
- 2 Secures output current that can drive high-brightness LEDs (from 0.12A to 1.1A)
- 3 Reduces the number of wires for all I/O channels through CXPI communication
(wires in total: from 30 to 1)

Main performance, specifications/stucture

Rated voltage	12.0V
Operating temperature range	-30°C to +85°C
External size	109mm × 54mm × 24mm
Output method	PWM
Output resolution	0.1%
Maximum output current	1.1A (some channels only)
Number of multi-color LED output channels	2ch
Number of single LED output channels	10ch
Number of switch input channels	18ch
Multiplex communication protocol	CXPI



Example of installation on roof lighting



Multi-color LED

Single LED
(Lighting modes for entire cabin space and personal modes for 3 areas per side)

Centralized switch