

Precautions for use

EZ-0012

RL78/I1A DC/DC LED Control Evaluation Board

Target device

RL78/I1A

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Safety Precautions

This document explains matters to be noted for safe use of this evaluation board. Be sure to read this document before using this evaluation board.

Symbols Used

This document used the following symbols for matters to be observed for the safe use of the unit. The symbols are followed by a brief explanation of the possible extent of problems which may occur if the notices are not observed.

	Danger	The user may suffer death or serious injury and it's risk is high if the warning is not observed.
	Warning	The user may suffer death or serious injury if the warning is not observed.
	Caution	Human injury or property damage may occur if the caution is not observed.

The following symbols express matters which are prohibited in order to prevent injury or accident.

	General prohibition The action mentioned is prohibited.		Do not touch Touching the specified location may cause injury.		Do not disassemble Disassembly may cause a problem such as electrical shock or product failure.
	Keep away from water Use near water poses the risk of electrical shock or product failure if moisture were to contact the unit.		Flammable A nearby flame may cause the unit to catch fire.		Do not touch with wet hands Touching with wet hands may cause electric shock or product failure.

The following symbols are used for cautions to prevent product failure and accidents.

	General caution Unspecified general cautions.		Caution Hot Human injury by high temperature may occur.
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The following symbols are used for instructions to prevent product failure and accidents.

	Compulsory action based on an instruction for the user.		Instruction to unplug from AC power supply.
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Warnings

 Warning	
	Be careful to burns. The part of board becomes high temperature during AC power is connected.
	Be careful to brightness of LEDs and On/Off period of LEDs Simulating of strong light may cause symptoms such as epilepsy by constitution.
	Do not use this board in the purpose except the evaluation of MCU. This board does not take safety measures or anti-EMI measures required for lighting equipment.
	Do not heat the board or expose it to fire and do not short the terminals. Doing so may cause product failure, generation of heat, fire or rupture.
	Do not disassemble or modify the board. Doing so may cause product failure, emission of smoke, fire or electric shock.
	Do not touch with wet hands. Doing so while power is supplied cause product failure or electrical shock.
	Do not look LEDs on this board directly. Doing so may cause weakening eyesight.
	Do not drop or jolt the board. Doing so may break or damage the board, causing fire or electric shock.
	Do not turn on the power switch in insufficient state of each cable connection such as AC adapter and interface cable. Doing so may cause product failure, generation of heat, fire or electric shock.
	Do not plug in or unplug a connector or cable with power applied to the board. Doing so may cause product failure, generation of heat, fire or rupture.
	Do not carry this board with connecting AC Adapter and any cable. Doing so may cause damage of cable and cause product failure, generation of heat, fire or electric shock.
	Use this board with spacer and on the isolated bench. In case conductor contact to the board, it may cause product failure, generation of heat, fire or electric shock.
	Use AC Adapter adapted to safety standard of each county. Using non-adopt AC adapter cause product failure, generation of heat, fire or electric shock.
	Use specified AC adapter. Using AC adapter except specified cause product failure, generation of heat, fire or electric shock.
	Use AC adapter with following size and polarity of DC plug. EIAJ Type2 Plug(Outer diameter:4.0mm, Inner diameter:1.7mm) 
	Using another type of AC adapter may cause Product failure, generation of heat, fire or electric shock.
	Confirm the outlet is near this board and easily unplugged.



Warning



If smoke or an abnormal smell or sound is emitted or heating occurs, promptly switch off the board power and unplug from AC power supply.

Using the board in such a state poses a risk of fire, burning or electric shock.

Cautions



Caution



Do not use or store this board in any of the following locations.

- Environments with copious water, humidity, steam, dust, fumes, etc.
- Environments where static electricity or electrical noise is readily generated.

Such influences can lead to electric shock or product failure.

In case liquid enters the board, cut the power supply, and consult your dealer or Renesas Electronics sales representative.

Even if the unit appears to be dry, internal moisture may remain.



Do not touch LEDs on this board directly.

Doing so may cause product failure.



To prevent static electricity damage, guard against energizing when touching metal parts such as the connector.

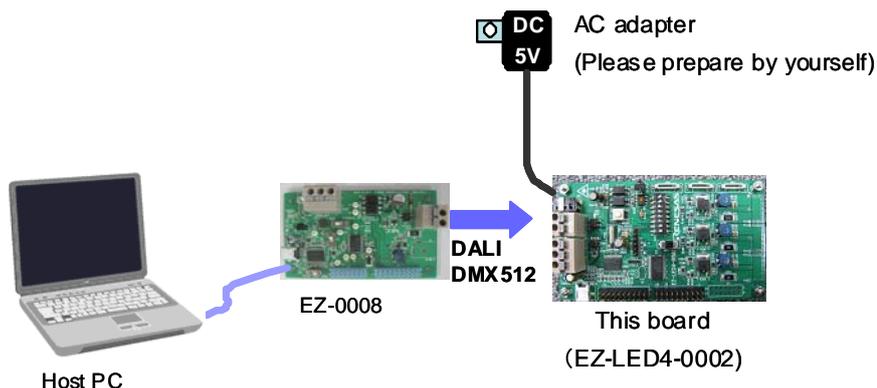
Static electricity can cause product failure.

Overview

This board is for evaluation of LED control by RL78/I1A microcontroller.

This board can operate by DC5V power supply provided from AC Adapter. Please prepare AC Adapter by yourself.

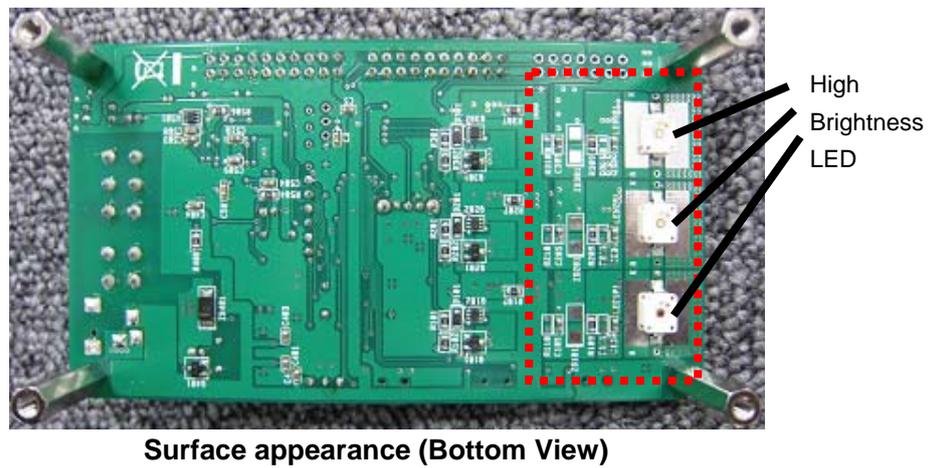
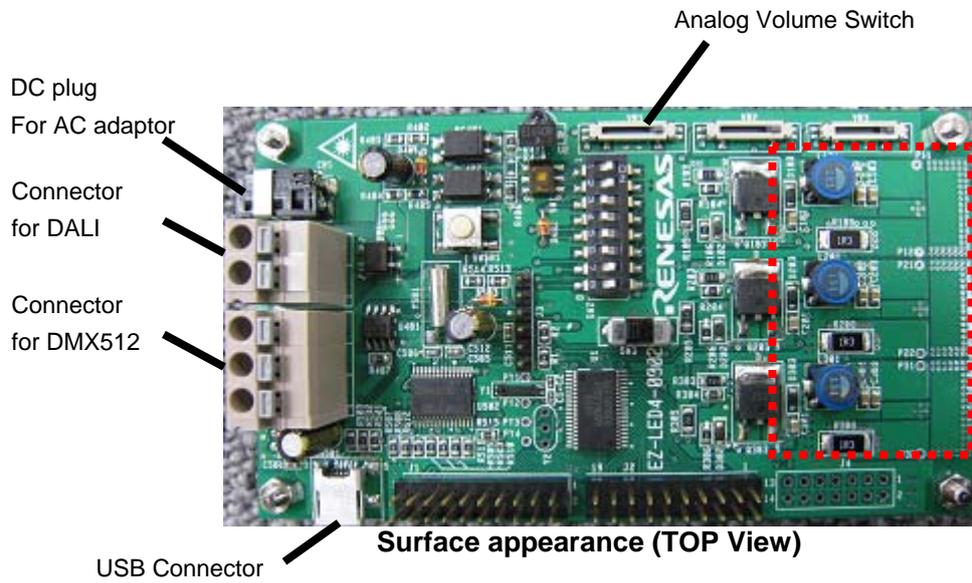
By using "Lighting Communication Master Evaluation Board (EZ-0008)" and using GUI tool which can be download from Renesas Electronics' WEB site, dimming evaluation by DALI, DMX512 or Infrared data communication protocol.



- *Please prepare following AC Adapter.
- Output voltage : DC5V
 - Output current : > 2A
 - Type : Switching regulator type with over current protect circuit
Do not use AC adapter which output voltage is guaranteed only when rated load current flows.
 - Connector Plug : EIAJ – 2 (Outer diameter: 4.0mm, Inner diameter: 1.7mm)
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 Warning	
	Use AC adapter adapted to safety standard of each county. Using non-adopt AC adapter cause product failure, generation of heat, fire or electric shock.

Appearance of the board





Warning



Be careful to burns.

The part of board especially the area enclosed with dot line becomes high temperature.



Do not look LEDs on this board directly.

Doing so may cause weakening eyesight.

Use this board so that LED mounting surface becomes the lower (the back).



Use specified AC adapter.

Using AC adapter except specified cause product failure, generation of heat, fire or electric shock.



Caution



Do not touch LEDs on this board directly.

Doing so may cause product failure.

As for usage of this board, please download the User's Manual from following URL.

URL: http://tool-support.renesas.com/eng/toolnews/download/exel/solution_lighting.html



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