

Precautions for use

EZ-0008

Lighting Communication Master Evaluation Board

ZBB-CE-09-0008-E

Data Published March 2009

© NEC Electronics Corporation

EZ-0008

Packaging List

Item	Number
☐ 1. This board (EZ-DLMST-002)	1
☐ 2. Precautions for use (English)	1
☐ 3. Precautions for use (Japanese)	1
☐ 4. Table of Toxic and Hazardous Substance and Elements	1
☐ 5. Spacer	4
☐ 6. USB cable	1

- The information in this document is current as of March, 2009. The information is subject to change without notice. For actual design-in, refer to the latest publications of NEC Electronics data sheets or data books, etc., for the most up-to-date specifications of NEC Electronics products. Not all products and/or types are available in every country. Please check with an NEC Electronics sales representative for availability and additional information.
- No part of this document may be copied or reproduced in any form or by any means without the prior written consent of NEC Electronics. NEC Electronics assumes no responsibility for any errors that may appear in this document.
- NEC Electronics does not assume any liability for infringement of patents, copyrights or other intellectual property rights of third parties by or arising from the use of NEC Electronics products listed in this document or any other liability arising from the use of such products. No license, express, implied or otherwise, is granted under any patents, copyrights or other intellectual property rights of NEC Electronics or others.
- Descriptions of circuits, software and other related information in this document are provided for illustrative purposes in semiconductor product operation and application examples. The incorporation of these circuits, software and information in the design of a customer's equipment shall be done under the full responsibility of the customer. NEC Electronics assumes no responsibility for any losses incurred by customers or third parties arising from the use of these circuits, software and information.
- While NEC Electronics endeavors to enhance the quality, reliability and safety of NEC Electronics products, customers agree and acknowledge that the possibility of defects thereof cannot be eliminated entirely. To minimize risks of damage to property or injury (including death) to persons arising from defects in NEC Electronics products, customers must incorporate sufficient safety measures in their design, such as redundancy, fire-containment and anti-failure features.
- NEC Electronics products are classified into the following three quality grades: "Standard", "Special" and "Specific".

The "Specific" quality grade applies only to NEC Electronics products developed based on a customer-designated "quality assurance program" for a specific application. The recommended applications of an NEC Electronics product depend on its quality grade, as indicated below. Customers must check the quality grade of each NEC Electronics product before using it in a particular application.

"Standard": Computers, office equipment, communications equipment, test and measurement equipment, audio and visual equipment, home electronic appliances, machine tools, personal electronic equipment and industrial robots.

"Special": Transportation equipment (automobiles, trains, ships, etc.), traffic control systems, anti-disaster systems, anti-crime systems, safety equipment and medical equipment (not specifically designed for life support).

"Specific": Aircraft, aerospace equipment, submersible repeaters, nuclear reactor control systems, life support systems and medical equipment for life support, etc.

- The quality grade of NEC Electronics products is "Standard" unless otherwise expressly specified in NEC Electronics data sheets or data books, etc. If customers wish to use NEC Electronics products in applications not intended by NEC Electronics, they must contact an NEC Electronics sales representative in advance to determine NEC Electronics' willingness to support a given application.

(Note)

- (1) "NEC Electronics" as used in this statement means NEC Electronics Corporation and also includes its majority-owned subsidiaries.
- (2) "NEC Electronics products" means any product developed or manufactured by or for NEC Electronics (as defined above).

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.

- Be sure to observe all dangers, warnings, cautions, and other instructions contained herein when using this evaluation board.
- This document should be kept handy at all times for ready reference.

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.
---	---

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.
---	---

Warnings

 Warning	
	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 drop or jolt the board. Doing so may break or damage the board, causing fire or electric shock.
	Do not turn on power switch in insufficient state of cable connection such as USB cable, 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 USB cable 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.
	If smoke or an abnormal smell or sound is emitted, or heating occurs, promptly unplug USB cable. 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 NEC Electronics sales representative. Even if the unit appears to be dry, internal moisture may remain.
	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 can be used as communication master in case controlling each lighting evaluation board ^{Note} by communication.

Each lighting evaluation board can be controlled via this communication master board by using GUI. Control GUI can be download from NEC Electronics WEB site)

This board is using USB bus power for its operation.

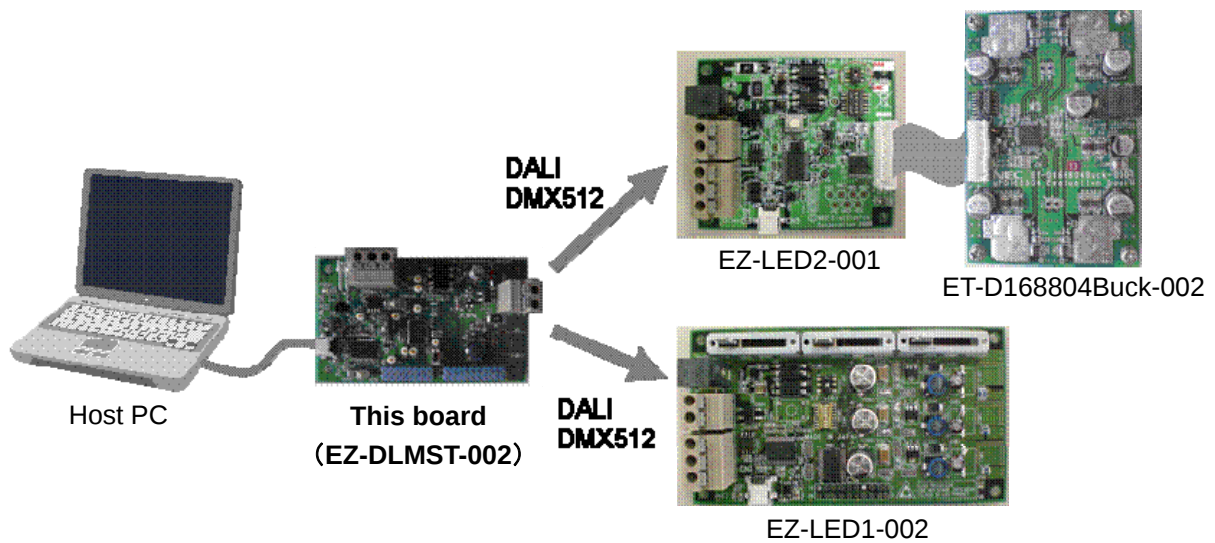
Note. Following boards can be controlled

78K0/IB2 HBLED Evaluation board (EZ-LED1-002)

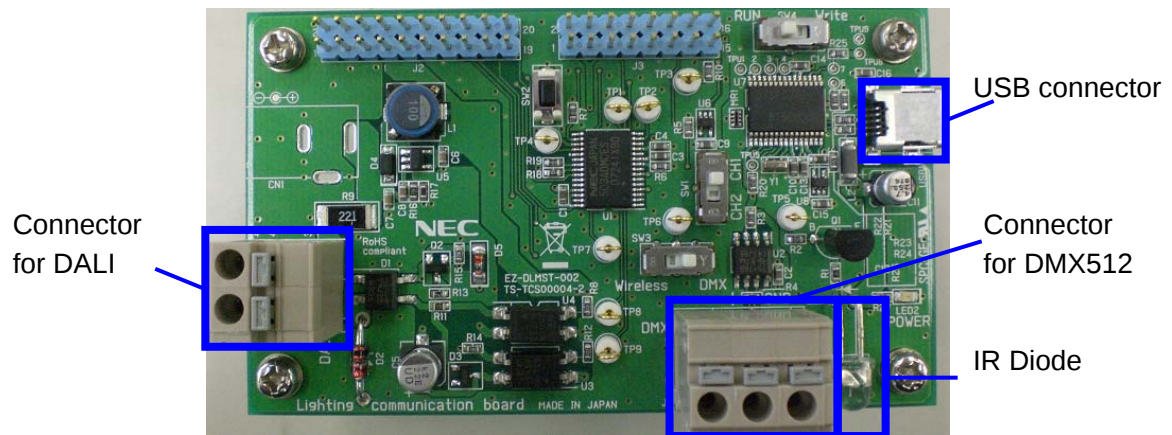
Part number: EZ-0005

78K0/IA2 PWM Evaluation board (EZ-LED2-001)

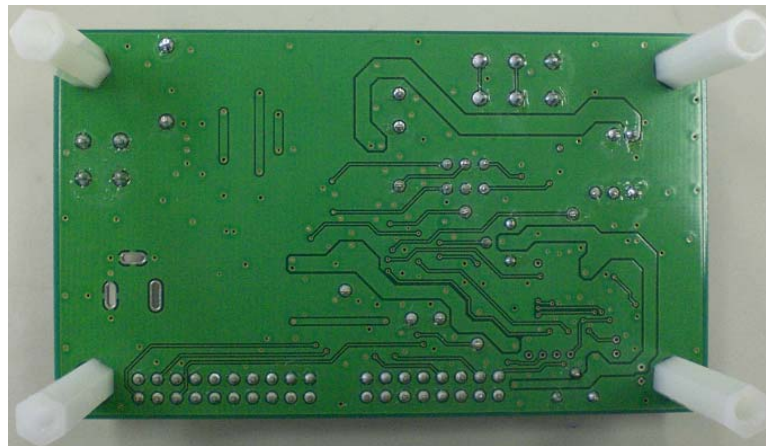
Part number: EZ-0006



Appearance of the board



Surface appearance (TOP View)



Surface appearance (Bottom View)

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

URL: <http://www.necel.com/micro/en/solution/lighting/index.html>

***For further information,
please contact:***

NEC Electronics Corporation

1753, Shimonumabe, Nakahara-ku,
Kawasaki, Kanagawa 211-8668,
Japan

Tel: +81-44-435-5111

<http://www.necel.com/>

[Technical Support]

Multipurpose Microcomputer System Division, NEC Electronics

Tel: +81-44-435-9452

Data Published March 2008