

# Precautions for use

78K0/IB2 Fluorescent Ballast Evaluation Board

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**ZBB-CE-09-0005-E**

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# **EZ-BLST-003**

## Packaging List

| Item  | Number |
|---|--------|
| <input type="checkbox"/> 1. This board (EZ-BLST-003)                            | 1      |
| <input type="checkbox"/> 2. Precautions for use (English)                       | 1      |
| <input type="checkbox"/> 3. Precautions for use (Japanese)                      | 1      |
| <input type="checkbox"/> 4. Table of Toxic and Hazardous Substance and Elements | 1      |
| <input type="checkbox"/> 5. Communication cable                                 | 2      |
| <input type="checkbox"/> 6. USB cable   | 1      |
| <input type="checkbox"/> 7. Cable for Fluorescent lamp connection               | 2      |

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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.

- 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.

|   |   |
|---|---|
|  <b>Danger</b>   | The user may suffer death or serious injury and it's risk is high if the warning is not observed. |
|  <b>Warning</b>  | The user may suffer death or serious injury if the warning is not observed.                       |
|  <b>Caution</b> | 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.

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

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

|   |   |
|---|---|
|  <b>General caution</b><br>Unspecified general cautions. |  <b>Caution Hot</b><br>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

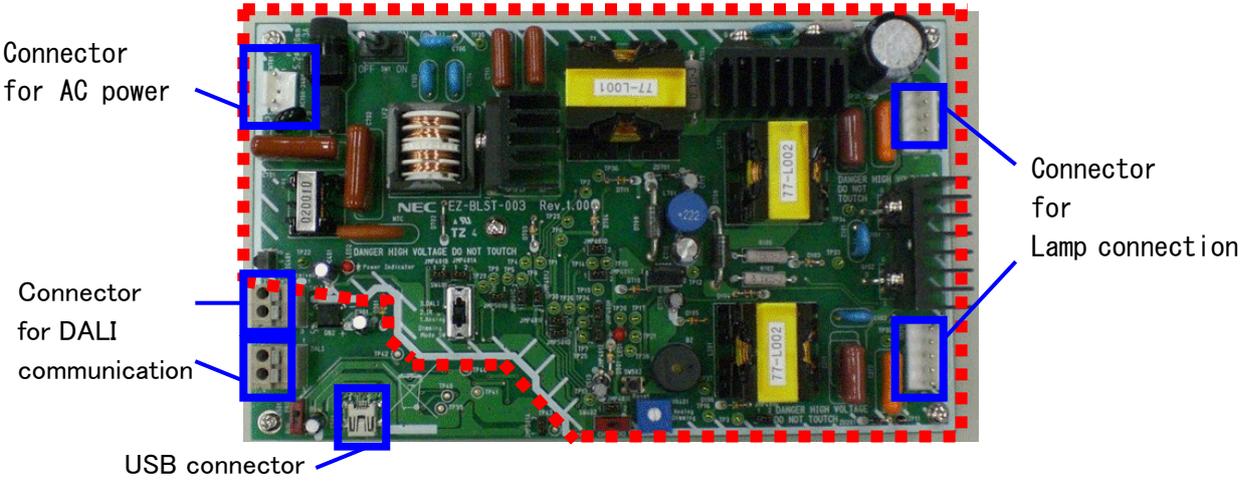
|  <b>Danger</b>   |  |
|---|--|
|                  | <p><b>Do not use this board in the purpose except the evaluation of MCU.</b><br/>This board does not take safety measures or anti-EMI measures required for lighting equipment.</p>  |
|                  | <p><b>Do not touch to the high voltage area of the board.</b><br/>Touching the board by tools or body while power is being supplied cause product failure or electric shock.</p>   |
|                  | <p><b>Do not touch with wet hands.</b><br/>Doing so cause product failure or electrical shock.</p>   |
|                  | <p><b>Do not use or store this board in any of the following locations.</b></p> <ul style="list-style-type: none"> <li>- Environments with copious water, humidity, steam, dust, fumes, etc.</li> <li>- Environments where static electricity or electrical noise is readily generated.</li> </ul> <p>Such influences can lead to electric shock or product failure.</p> |
|                  | <ul style="list-style-type: none"> <li>- Use glove to protect electric shock.</li> <li>- Limit the user of this board.</li> </ul>  |
|  <b>Warning</b> |  |
|                | <p><b>Be careful to burns.</b><br/>The part of board becomes high temperature during AC power is connected.</p>  |
|                | <p><b>Do not disassemble or modify the board.</b><br/>Doing so may cause product failure, emission of smoke, fire, or electric shock.</p>  |
|                | <p><b>Do not heat the board or expose it to fire, and do not short the terminals.</b><br/>Doing so may cause product failure, generation of heat, fire, or rupture.</p>  |
|                | <p><b>Do not drop or jolt the board.</b><br/>Doing so may break or damage the board, causing fire or electric shock.</p>   |
|   | <p><b>Use AC power supply in the range of AC100V~240V.</b><br/>Using AC power supply out of this range may cause product failure, generation of heat, fire, or electric shock.</p>   |
|   | <p><b>Do not plug in or unplug a connector or cable with power applied to the board.</b><br/>Doing so may cause product failure, generation of heat, fire or rupture.</p>  |
|   | <p><b>Do not turn on power switch in insufficient state of cable connection such as AC power, fluorescent lamp connection cable, and communication cable.</b><br/>Doing so may cause product failure, generation of heat, fire or electric shock.</p>  |
|   | <p><b>Do not carry this board with connecting any cable.</b><br/>Doing so may cause damage of cable and cause product failure, generation of heat, fire or electric shock.</p>   |
|                | <p><b>Use AC power supply cable and plug adapted to safety standard of each county with more than 5A rating.</b><br/>Using non-adopt cable or plug cause product failure, generation of heat, fire or electric shock.</p>  |

|   |   |
|---|---|
|  | <p><b>Use this board with spacer and on the isolated bench.</b><br/>         In case conductor contact to the board, it may cause product failure, generation of heat, fire or electric shock.</p>  |
|  | <p><b>Confirm the outlet is near this board and easily unplugged.</b></p>   |
|  | <p><b>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.</b><br/>         Using the board in such a state poses a risk of fire, burning, or electric shock.</p> |

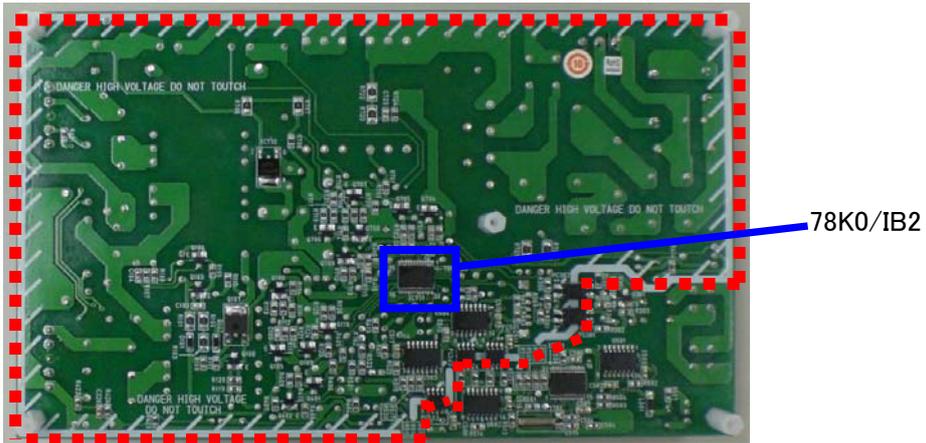
# Cautions

|  |  |
|--|--|
|  <b>Caution</b> |  |
|                 | <p><b>To prevent static electricity damage, guard against energizing when touching metal parts such as the connector.</b></p> <p>Static electricity can cause product failure.</p> |

# Appearance of the board



Surface appearance (TOP View)



Surface appearance (Bottom View)

|   |  |
|---|--|
|  <b>Danger</b> |  |
|                | <p><b>Do not touch the area enclosed with RED line because of high voltage while power is being supplied.</b></p> <p>This area is also indicated by white heavy line on the board.</p>       |
|                | <p><b>Use this board with spacer and on the isolated bench.</b></p> <p>In case conductor contact to the board, it may cause product failure, generation of heat, fire or electric shock.</p> |

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>