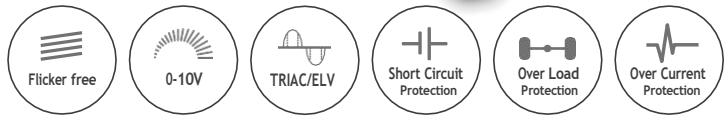
**MUP180AT-3W48V-BW**

## Product Features

· Three-channel constant voltage output, per channel 1.25A Max
· Input Voltage Range 120-277Vac
· Support 0/1-10V ,Potentiometer,PWM,Triac/ELV Dimming
· TRIAC and ELV dimming at 120 Vac only
· 0-10V Dimming range of 0.1-100%, and dimming effect smooth, flicker free
· 100% output when no dimming signal input, can be used as normal power supply
· Protection: Overload; short circuit; Overcurrent
· Class 2 Output
· Safety according to UL8750 &UL 1310
· Suitable for Dry , Damp & Wet Locations

Application

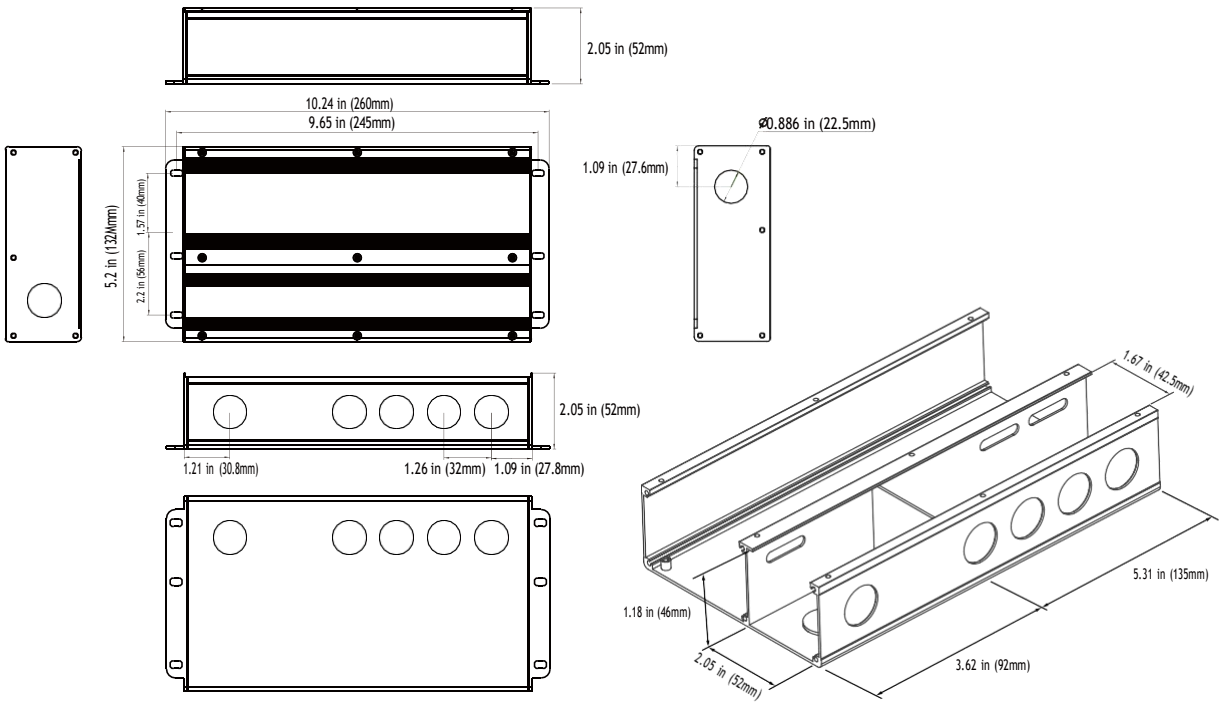
LED Strip Light




## Technical Paramaters

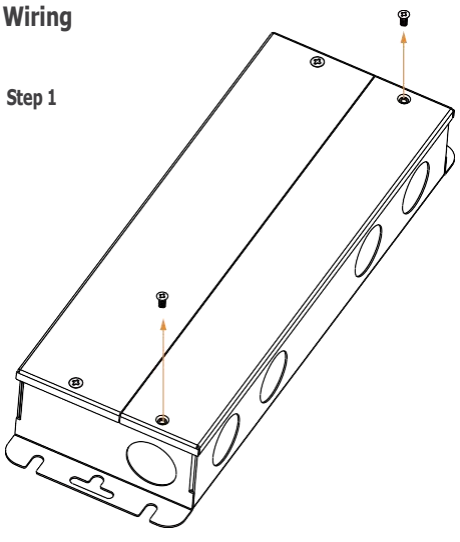
| Model | MUP180AT-3W48V-BW | |
|---|---|---|
| Input | Efficiency | ≥90%@120VAC, full load |
| | Voltage | 120VAC-277VAC |
| | Frequency Range(Hz) | 50/60Hz |
| | AC Current(max) | 1.78Amax@120VAC 0.91Amax @230VAC 0.76Amax @277VAC |
| | PF | ≥0.95@120VAC, ≥0.90@277VAC, full load |
| | THD | <10%@120VAC, <15%@277VAC, full load |
| | Inrush Current(max) | Cold start, 49.2A@120VAC 520us, 79.6A@277VAC 870us |
| | Standby power | <4W@120VAC |
| | No load power | <4W@120VAC |
| | Turn on delay Time | <0.75s, @120Vac (When the light begins to shine) |
| Output | Output Current | 3 Channel, 1.250A per channel |
| | Output Voltage | 48VDC |
| | Voltage Range | 48VDC ±3% |
| | Output Power | 60W per channel, 3 Channel, total 180W |
| | Output Channel | 3 |
| | Power limit | ≥120% |
| | Ripple | ≤1440mV |
| | PWM Frequency | 20K Hz |
| Function | Dimming Type | 0/1-10V ,Potentiometer,PWM,Triac/ELV(@120VAC 60Hz) |
| | Dimming Range | 0.1%-100%(0-10V) 1%-100%(TRIAC/ELV) |
| | Dimming curve | Logarithm (for 0-10V & Tiac/ELV) |
| | Flicker | Flicker free |
| Protection | Short Circuit Protection | Shut down output, Auto-recovery after Fault Clearance |
| | Overload Protection | Hiccup Protection, Auto-recovery after Fault Clearance |
| | Overcurrent Protection | Hiccup Protection, Auto-recovery after Fault Clearance |
| Safety&EMC | Surge | L-N: 2kV L-N-PG:4kV |
| | Withstand Voltage | I/P-O/P: 2000Vac/1min/<5mA I/P-PG:1500Vac/1min/<5mA O/P-PG:500Vac/1min/<5mA O/P-DIM( Signal port ):500Vac/1min/<5mA |
| | Safety standards | UL8750 UL1310 CSA25013.CSA Class P |
| | EMC Eission | FCC PART15B |
| | EMC Immunity | IEC 61000-4-2-3-4-5-6-8-11 |
| | Insulation Resisance | 5MΩ |
| Others | Working Temp. | (-20~+60) ℃ [-4°F~140°F] |
| | Storage Temp., Humidity | (-40~+90)℃ [-40°F~194°F] 20~90%RH |
| | tc | 70℃ [ 158°F ] |
| | Material | Metal |
| | IP Rating | IP65 |
| | Lifetime | 50,000h@tc:70℃ [ 158°F ] |
| | Warranty Condition | 5 years |
| | Switch Cycle | 25,000 times |
| | Packing(weight) | Net weight: 1750g (3.86 lb)±5%/PCS; 10PCS/Carton;18kg(39.68 lb)±5%/Carton; Carton Size: 322*279*302mm(12.68*10.98*11.98 Inch)(L*W*H ) |
| | Dimension | 262*132*52mm (10.24*5.2*2.05 Inch) (L*W*H) |

## Dimension(mm)

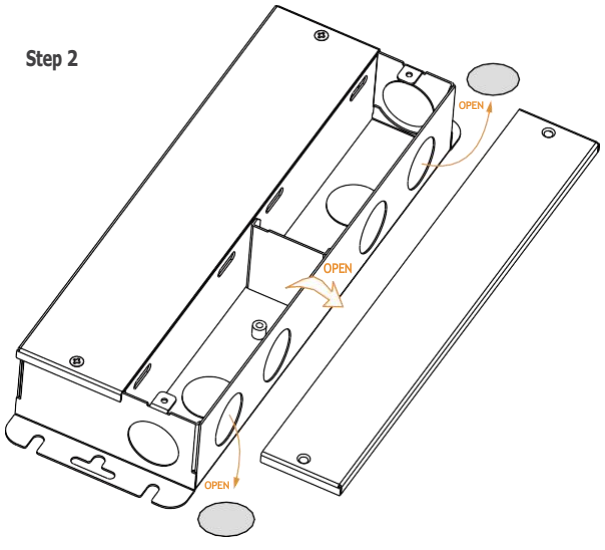



## Wiring

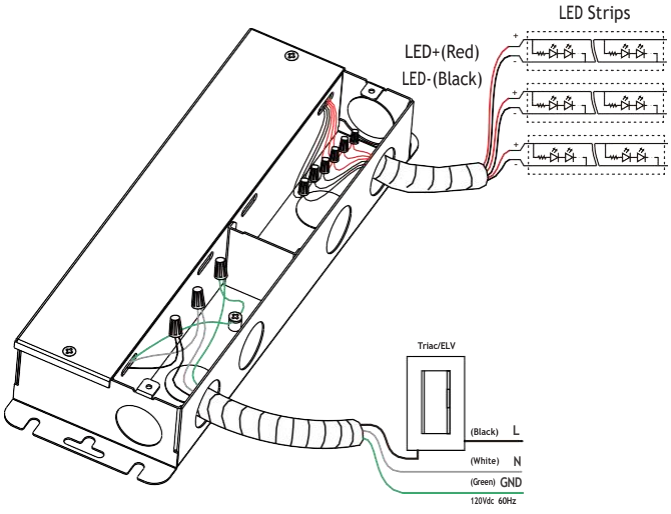
### Step 1



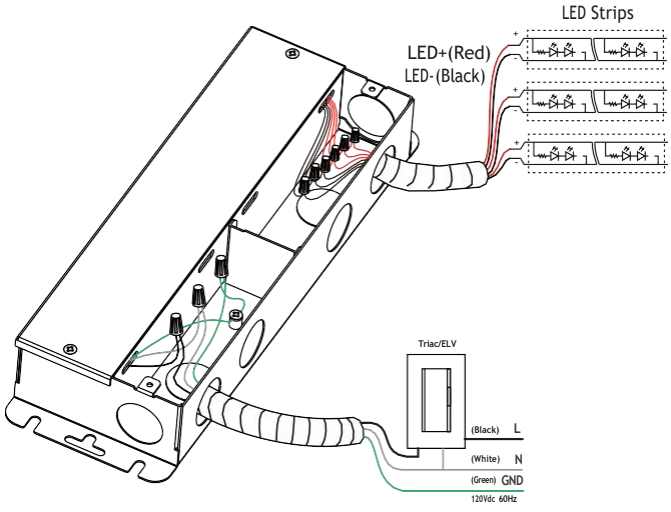
### Step 2



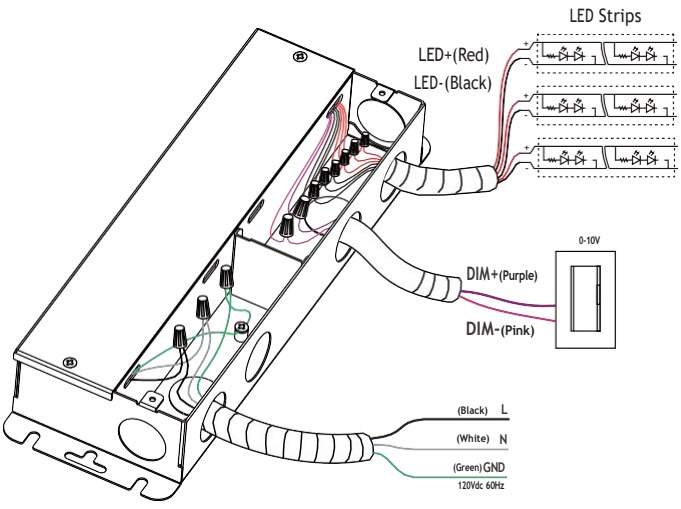

### Step 3 UsingTriac MLV wiring diagram



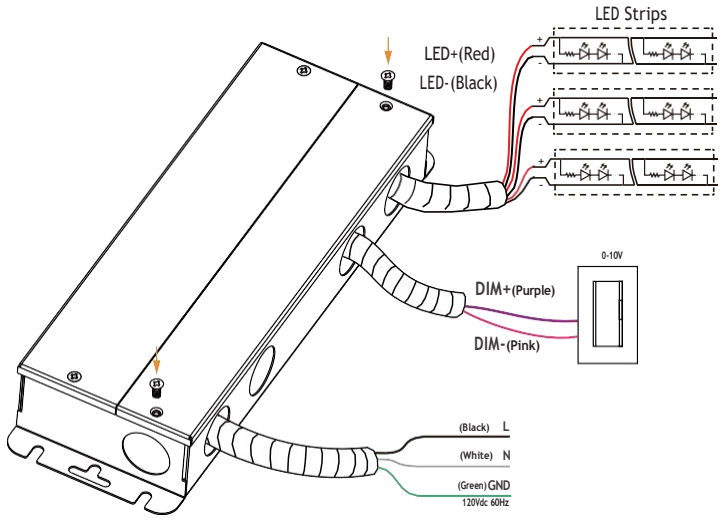

### Step 4 UsingTriac ELV wiring diagram



**Step 5 0-10V wiring diagram**




**Step 6**




## Mode switching

1. Dimming Mode Switching Window: Operation is only allowed within 30 seconds after power-on, and the device must remain powered off for at least 5 seconds before re-powering.
2. Activation Condition: The target action must be continuously maintained for 5 seconds to take effect.
3. Device Limitation: Only one dimming mode can be used at a time (e.g., if 0-10V mode is selected, a TRIAC dimming knob cannot be connected simultaneously. If TRIAC mode is selected, the 0-10V signal must remain disconnected and insulated).
4. Mode Persistence: Once a dimming mode is activated, it remains in effect until the next mode switch.

| Dimming Mode Operation Steps Reference Table | | |
|---|---|---|
| Target mode | Action requirements | Effective verification |
| 0-10V mode | Control voltage ≤ 5V (hold for 5 seconds) | 0-10V Mode: Normal Dimming |
| TRIAC/ELV Mode | Adjust the knob to 80%~50% brightness (hold for 5 seconds) | Triac/ELV Mode: Normal Dimming |

## TRIAC Compatible Dimmer Recommendations

| Mfg. | Lutron | Lutron | Lutron | Lutron | Lutron | Lutron |
|---|---|---|---|---|---|---|
| Model | SCL-153P-WH | DVCL-153PR-WH | MACL-153MR-WH | CTCL-150H-LA | CTCL-153-PDH-WH | DVCL-153PH-WH |

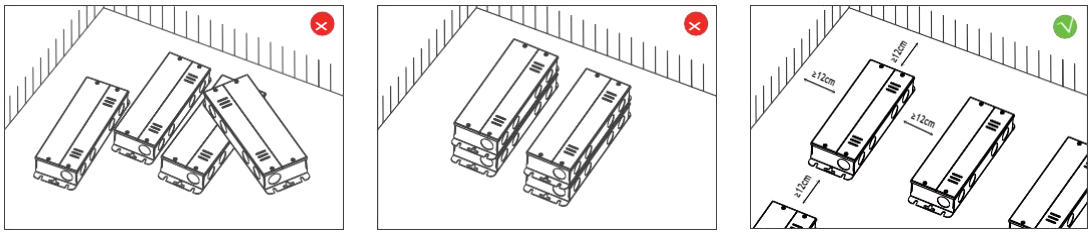
Note: "The list above recommends dimmers for TRIAC testing. Unlisted TRIAC dimmers should only be used after verification through actual testing to ensure no abnormalities. 0-10V dimming has no compatibility issues."

**Max. quantity of drivers per miniature circuit breaker**

| Specification item | Value | Value | Condition |
|---|---|---|---|
| Inrush current $I_{peak}$ | 49.20A (120V) | 79.6A (277V) | Input Voltage120V/277V |
| Inrush current $T_{width}$ | 520us (120V) | 870us (277V) | Input Voltage120V/277V, measured ta 50% $I_{peak}$ |

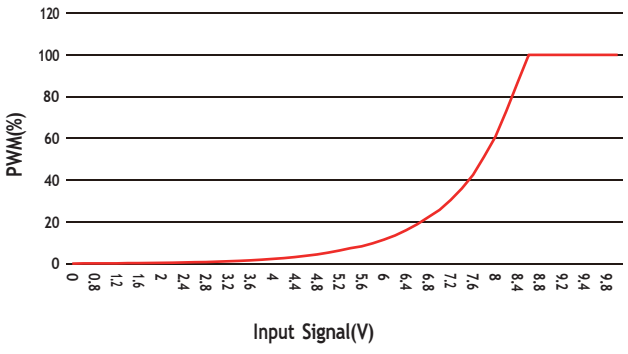
| MCB | Input Voltage 120V Drivers | Input Voltage 277V Drivers | MCB | Input Voltage 120V Drivers | Input Voltage 277V Drivers |
|---|---|---|---|---|---|
| B10 | 2pcs | 1pcs | C10 | 4pcs | 1pcs |
| B13 | 3pcs | 1pcs | C13 | 6pcs | 2pcs |
| B16 | 4pcs | 1pcs | C16 | 7pcs | 2pcs |
| B20 | 5pcs | 2pcs | C20 | 9pcs | 3pcs |
| | | | D16 | 8pcs | 5pcs |

## Installation Precautions

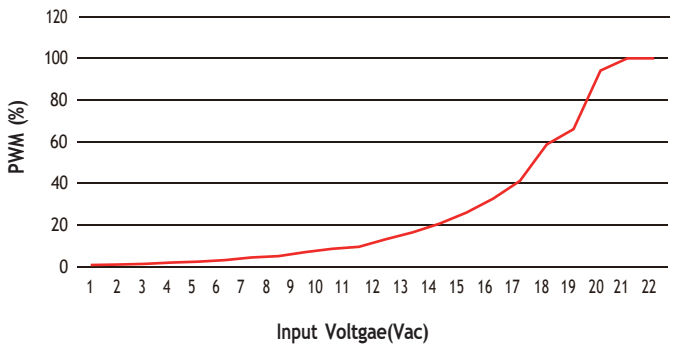



Please do not stack the products. The distance between two products should be>12cm so as not to affect heat dissipation and the lifespan of the products.

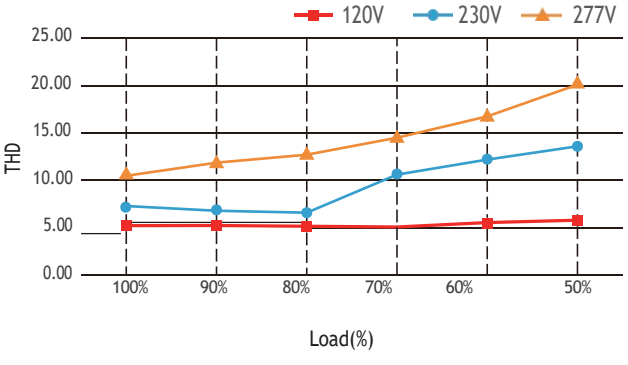
### 0-10V Dimming Curve



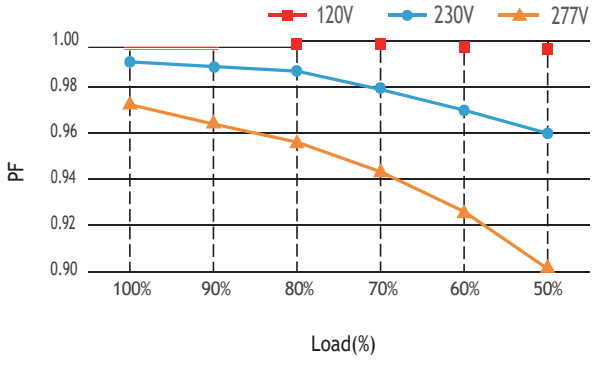

### Trailing edge (ELV) Dimming Curve



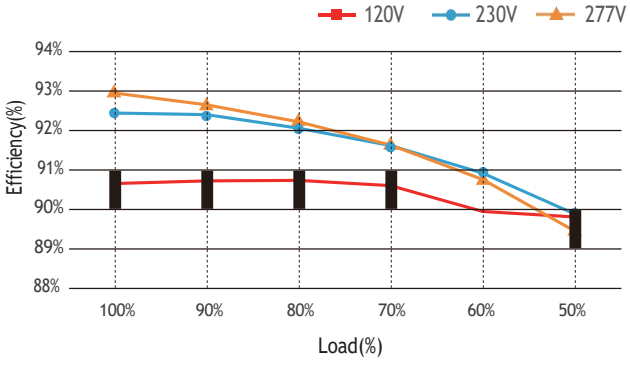

### THD vs Load



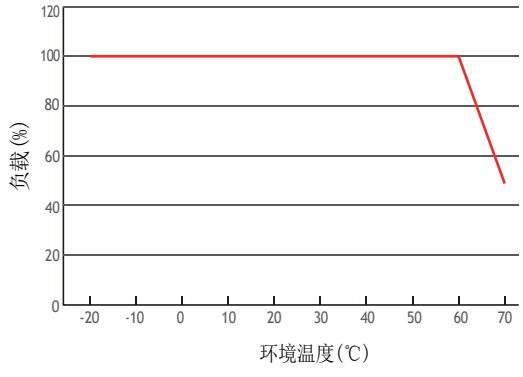

### PF vs Load



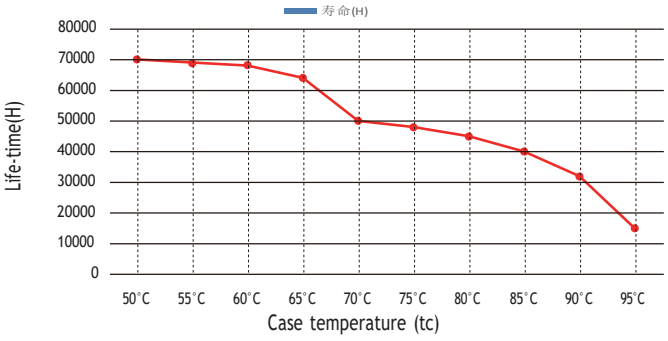

### Efficiency vs Load%




### Derating Curve



### Life-time vs. case temperature




The life-time of the led driver is shown in the figure above
(calculated based on the 90% survival rate).
The relation of tc ta temperature depends also on the luminaire design.

## Cautions

| This product must be installed and adjusted by a qualified professional. | | |
|---|---|---|
| 1 | Confirmation of installation conditions | · **Waterproof and Protection:** Install in a suitable location according to the waterproof and protection requirements of the power supply. Products without waterproof function should be protected from direct sunlight and rain. When installing outdoors, please use a waterproof box for protection.<br>· **Heat dissipation requirements:** The drive power supply should avoid exposure to high temperature environments. Please ensure that the working environment temperature is within the recommended range. To ensure proper heat dissipation of the drive power supply, a well ventilated area should be selected for installation. Good heat dissipation conditions can help extend product lifespan. |
| 2 | Power check | · Before use, check the product parameters and confirm that the output voltage and current of the LED power supply meet the requirements |
| 3 | Safe wiring | · Use cables that meet the specifications to ensure that the cross-section of the wire matches the requirements of the driving power supply. Solid cables typically measuring 0.75-2.5 $mm^2$,<br>(Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements).<br>· If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded. |
| 4 | Wiring confirmation | · Before power on debugging, ensure that the wiring is secure and avoid poor contact to prevent unstable current or equipment damage. |
| 5 | Repair suggestions | · If the product malfunctions, please do not repair it without authorization. If you have any questions, please contact the supplier or sales team for assistance. |

※ The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions,the function of the product shall prevail. Please contact us if you have any questions .

### Warranty Agreement

1. Warranty periods from the date of delivery : 5 years.
2. Free repair or replacement services for quality problems are provided within warranty periods.

### Warranty exclusions below:

The following situations are not covered by the free warranty or replacement service:

1. Exceeding the warranty period.
2. Damage caused by human factors such as high voltage, overload, and improper operation.
3. The appearance of the product is severely damaged or deformed.
4. Wear or aging that occurs during normal use of the product.
5. Damage caused by natural disasters or force majeure factors.
6. The quality inspection label of the product is damaged (QC PASS).
7. No contract or valid invoice proof signed with EUCHIPS has been provided.

※Remedial measures: Repair or replacement is the only remedy provided by Oches to the customer, and Oches shall not be liable for incidental damages arising from repair or replacement, unless within the scope of applicable law.

※Adjustment of Warranty Terms: EUCHIPS reserves the right to modify or adjust the warranty terms, which shall be published in writing.