

# Product Specification

Model: <b>BS10A-H24/2.0L</b>	Date: <b>May 19, 2005</b> Created by Engineering & Development Division
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This specification applies to Battery Package, Model BS10A-H24/2.0L  
This unit is Battery Package to back up optional DC stabilized Power Supplies at blackout.

## General Specification (All items are provided at normal temperature and humidity unless otherwise specified).

	Items	Specification and Standard	Measurement condition, etc.
Electrical Specification	Battery	1.2V 1800 mA 20 cells in series $\Delta$	Sealed Ni-MH battery
	Nominal Battery Voltage	DC 24.0V	
	Rated capacity	1800mAh $\Delta$	
	Max. Output Power	410W	
	Charging specification	0.20A typical (15 hours typical)	
	Heater	To operate at 15°C typical or below of battery temperature for improving the battery discharge characteristics at low temperature. (Heater power consumption: 10W typical)	Available when AC input is connected regardless of REMOTE-ON/OFF signal of the power supply main body.
	Built-in Fuse rating	30A 32V	
Environment	Operating Temp. & Humidity	0~45°C / 10~90%	No Condensation. However, the heater circuit is activated at 15°C typical or lower.
	Storage Temp. & Humidity	-20°C to lower than 30°C: One year or less storage -20°C to lower than 40°C: within 90 days storage -20°C to 50°C: within 30 days storage	No Condensation.
	Vibration	To endure 0.075mm of displacement amplitude with 10 to 55Hz of Frequency in each direction of X, Y, and Z for 10 sweep cycles.	To follow JIS-C-60068-2-6 at No operation
	Drop Test	Lift one bottom edge of the unit up to 50mm high with the opposite edge placed on the test bench, and let it fall. Repeat 3 times for each of four bottom edges, and no malfunction shall be observed.	To follow JIS-C-60068-2-31 at No operation
	Dimension	200(L) by 146(W) by 38(H)	
	Weight	1.8kg typical	
	Reliability Grade	FA	To follow our standard
	Short lifetime component	Battery	Periodical maintenance and replacement is required.
Storage condition	Re-charging once at least per year (or half a year if available) is required for six months or longer storage.	When re-charging is not conducted beyond the period on the left, the battery may not recover the enough capacity.	
Others	Warranty	One year after delivery. However, if any faults belong to us, the defective unit shall be repaired or replaced at our cost except the defect caused by over discharge.	Except wrong operation out of the specification.
	Documents	Any technical-related documents except the specification including General specification and Outline drawing are not submitted in principle.	
	Battery condition before shipment	The battery has been charged for approx. 15 hours in forcible charging mode before shipment.	

Note 1: Warm-up period from 0°C is approx. one hour, and No Charging during warm-up period.

Note 2: How to re-charge; Provided that the battery package is at auxiliary charging mode, make Pin1 and 3 of CN1 shorted, and plug the AC cable to the dedicated Nonstop power supply to which Output cable is connected. And then, turn on the power switch of the power supply. Thus, the battery starts forced re-charging of approx. 15 hours.

Also, make sure to remove the short between Pin1 and 3 of CN1 after start or completion of charging to prevent the battery from deterioration due to unnecessary charging.



The internal battery is compliant with the safety standard IEC62133-1.

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Ver. A  $\Delta$  × 2: 2012.02.08 Yodo I-240122A

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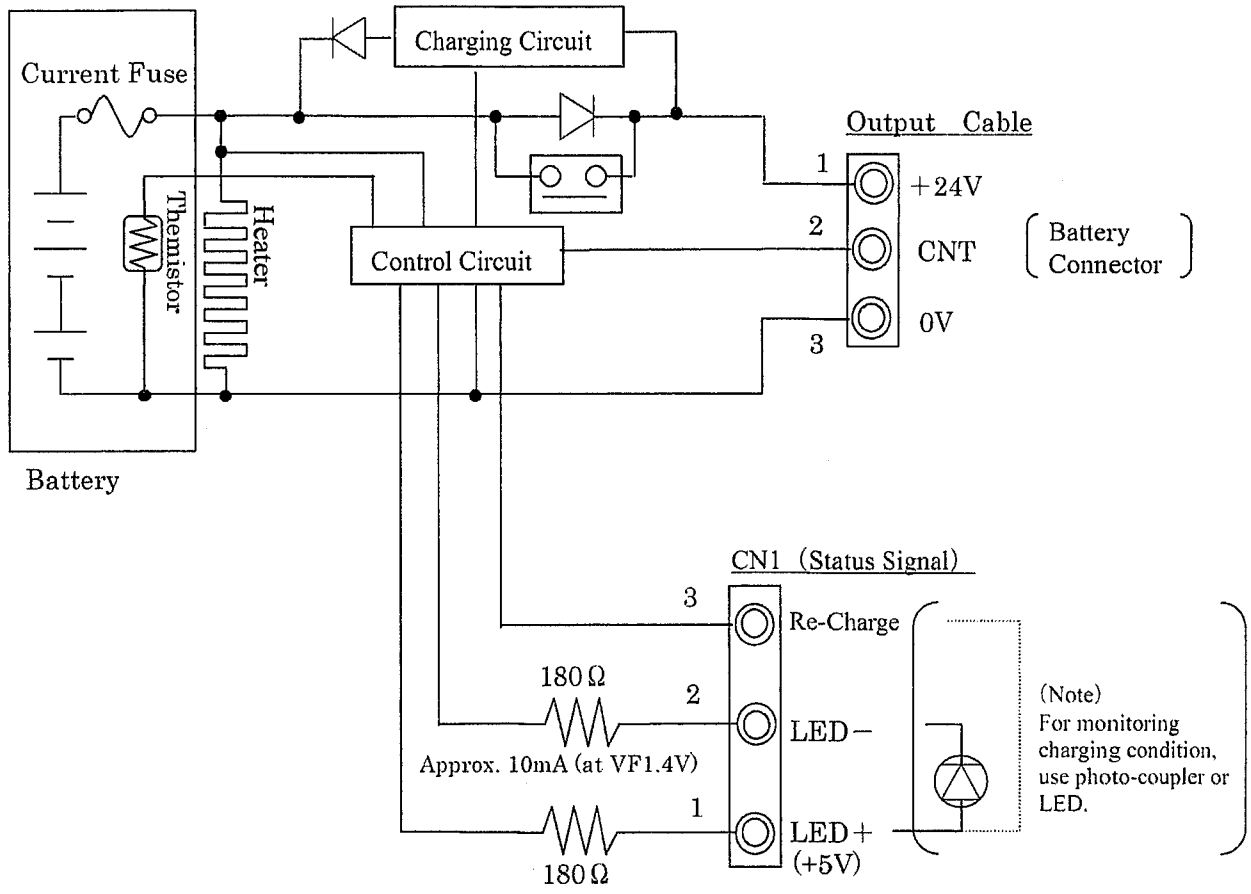
Nipron Co., Ltd.

Due to the technical improvement, the specifications and functions are subject to change without notice.

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## Circuit Block Diagram



LED display when LED is connected between Pin1 and 2 ofCN1.

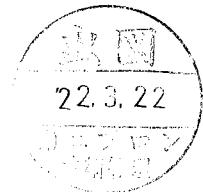
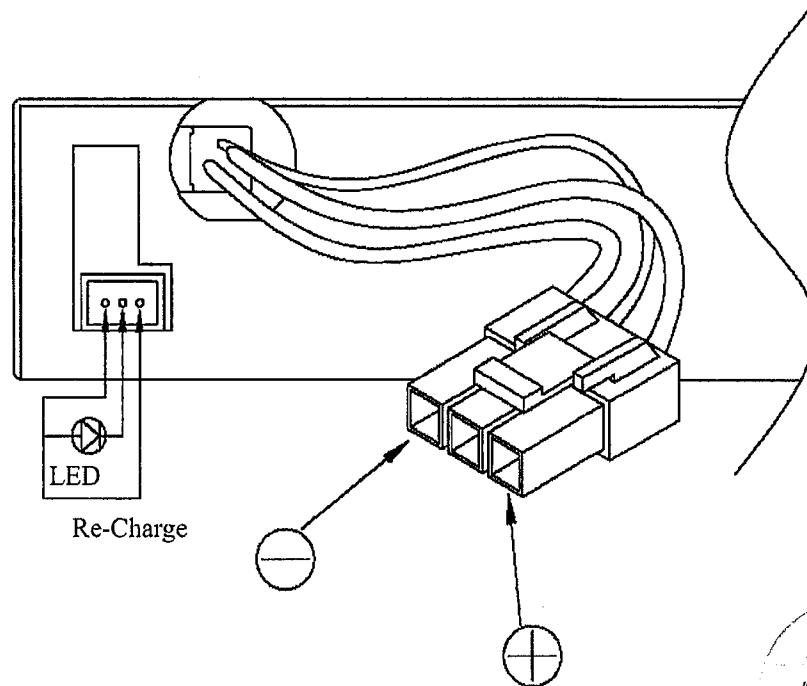
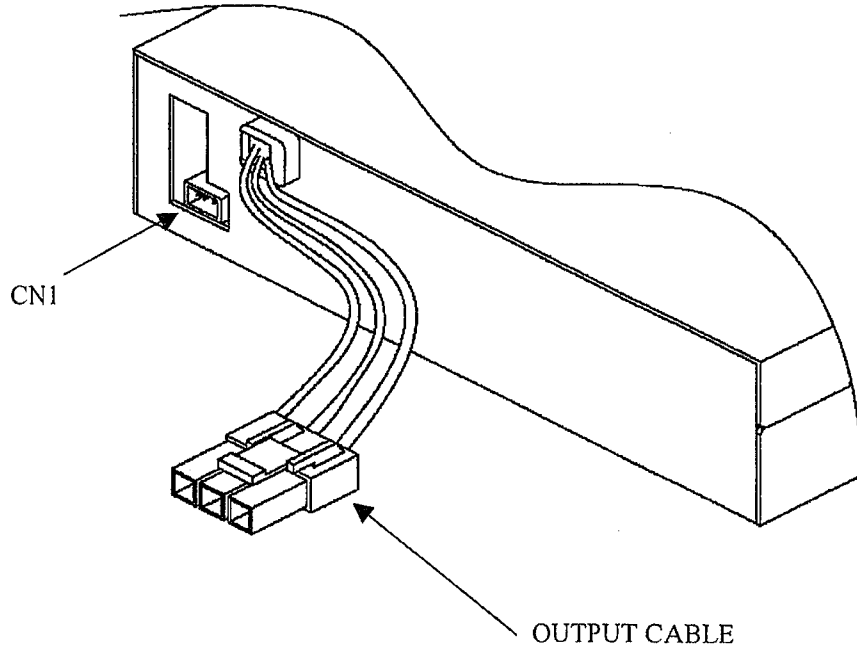
- In Charging: Lighting
- In Discharging: Blinking (0.25sec ON, 0.25sec OFF)
- In Auxiliary Charging: Flashing (0.1sec ON every 10 seconds)  
(Auxiliary Charge: Charge to compensate self-discharge)

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## Connector Pinout Assignment



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## Precaution before use

1. Dismantlement \* Danger  
Never dismantle the battery package as the electrolyte inside is strong alkaline and it may damage your skin and clothes. In particular, when it is caught in your eyes, you may lose your sight. In case the electrolyte should be caught in you eyes by accident during dismantlement, immediately wash you eyes with clean water and see your doctor. Do not rub your eyes. Also, when dismantled, its electrodes may catch fire reacting to oxygen in the air. NEVER DISMANTLE THE BATTERY PACKAGE!
2. Short Circuit \* Danger  
Do not touch the terminal area of the battery package or PCB portion with metal pieces or metal bars. It may damage the equipment or generate heat of the battery resulting in burn injury.
3. Throwing into a fire and Heating \* Danger  
Never throw the battery package into a fire or heat it up. It may cause the explosion of the battery or scatter of the electrolyte.
4. Reversed Charge \* Danger  
When re-charging the battery with any chargers other than designated charger, do not charge reversed. It may generate gas rapidly inside to increase gas pressure resulting in electrolyte leakage, swell, or explosion.
5. Installation in equipments \* Danger  
In installing the battery package in equipments, never seal it. In some cases, it may generate gas (oxygen and hydrogen) to cause explosion or fire ignited by spark of switches and/or motors.  
Besides, there might be the same danger generated even installed in the open structure because of positional relation between gas clump and flash source. Provide degassing holes or block off the ignition sources, such as motors and switches, in a proper way.
6. Diversion to other applications \* Danger  
Do not use the battery package for other equipments or applications. It may damage the battery or equipments as the specification varies.
7. Placing into water and Water leakage \* Warning  
Do not put the battery into water or seawater, or get it wet as it may generate heat of battery or cause rust resulting in malfunction of the battery.
8. Others \* Caution  
In addition, regarding the items that are not described in this specification, use the battery package in a proper way at your responsibility following the general instructions on sealed Ni-MH batteries. Pay attention not to operate wrong as it may cause electrolyte leakage, heat and explosion of the battery to damage operators or other personnel.

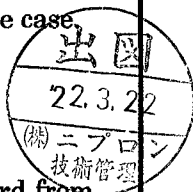


### Others



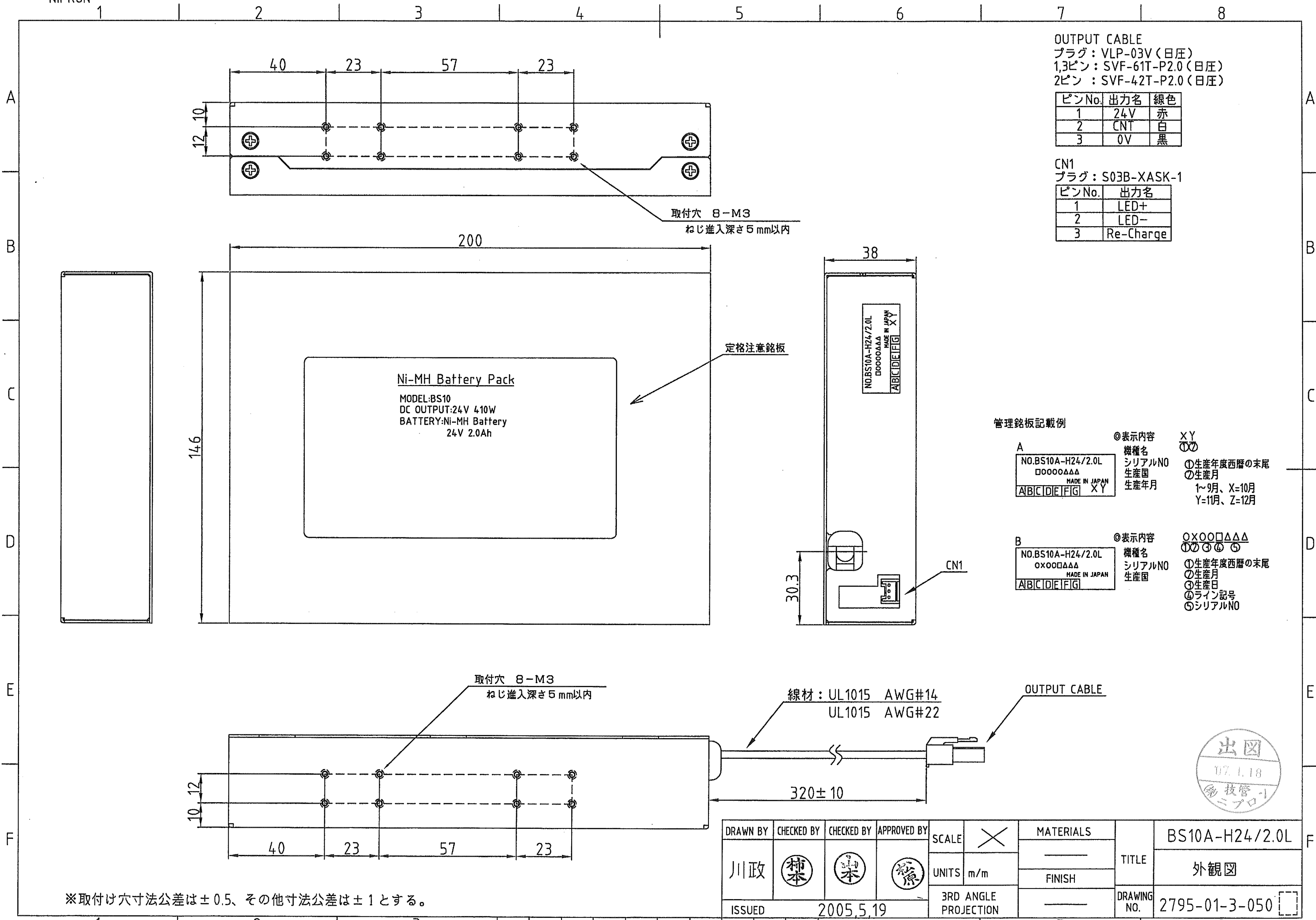
### About harmful substances

- If the gas discharge valve of the battery pack is activated, the electrolyte may leak out of the case.
  - If the liquid gets on your skin, it may cause skin damage.  
Rinse it out immediately with clean water.
  - Battery packs are built-in devices.  
Please use them properly built into the device.
- If liquid is leaking, be careful not to touch it, turn off the power and unplug the power cord from the outlet.



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川政	柳本	柳本	柳本	UNITS		m/m		
ISSUED	2005.5.19			3RD ANGLE PROJECTION			DRAWING NO.	2795-01-3-050