



Photo interrupter RPI-0 series AI bag packing specifications unification change application

No. 4822004
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Module Corporate Headquarters
Module Quality Control Department

【Target Device model】

RPI-0 series (surface mount type photo interrupters, see the table on the right)

【Content of Change】

The following three points are unified for the reel packing specifications in aluminum bags.

- ① Humidity Indicator Card is included.
 - … Follows J-STD-033D Table 3-1 Dry Packing Requirements
- ② Mark MSL on the aluminum bag.
 - … Follows J-STD-033D 3.3.3 Labels
- ③ Abolish air discharge (evacuation) in the aluminum bag.
 - … Follows J-STD-033D 3.3.5.3 Moisture Barrier Bag Sealing

【Background】

Conventionally, the packaging specifications for surface-mounted photo interrupters have been met according to the user's request.

As a result, some models were inconsistent with the JEDEC specifications, and the packaging specifications differed for each model, which made the management of error prevention complicated.

Therefore, we will change all models of surface-mounted photo interrupters to packaging specifications that comply with JEDEC specifications.

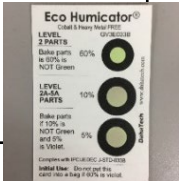
【Scheduled change date】

October 1, 2022

Target Device Model
RPI-0126A
RPI-0126K
RPI-0126P
RPI-0127B
RPI-0127W2B
RPI-0128
RPI-0128G
RPI-0128G1
RPI-0128G1Z1
RPI-0128M
RPI-0128T81
RPI-0128W1
RPI-0128W2
RPI-0128W2C
RPI-0128W3
RPI-0128W5
RPI-0128X
RPI-0129
RPI-0132
RPI-0225
RPI-0226
RPI-0226S030150
RPI-0226V
RPI-0226V1
RPI-0226V1S00
RPI-0226Z1
RPI-0227EV
RPI-0441E
RPI-0451E

4M Change Sheet

No.	Item	Before	After
1	Purpose of change	The packaging specifications, which are different depending on the model, will be unified to the JEDEC specifications. (1)Includes a humidity indicator card. (2)Mark the MSL on the aluminum bag. (3)Completely discharge the air inside the aluminum bag (vacuum packaging) will be abolished.	
2	Target device model	RPI-0 * * * (all surface mount type photo interrupters)	
3	Product structure	No change	
4	Changes in appearance (device)	No change	
5	Inclusion in aluminum bag Refer to P.3	Product / Reel / Taping / Drying material (1)Humidity display card is included in some models.	No change: Product / Reel / Taping / Drying material (1) Unified HIC inclusion for all models HIC
6	Changes in appearance (packing) Refer to P.4,5	(2) There is a model without MSL notation on the aluminum bag. (3)The air inside the aluminum bag is exhausted so that the outer shape of the reel can be clearly identified.	(2) Unified with MSL notation on aluminum bag. (3)The outer shape of the reel cannot be clearly identified
7	Electrical characteristics	No change	
8	Optical characteristics	No change	
9	Reliability	No change	
10	Changes in environmentally hazardous substances	No change	
11	Process Change	Machine	No change
		Method	After exhausting the air inside the aluminum bag, seal the aluminum bag. Does not exhaust the air inside the aluminum bag, only seals the aluminum bag
12	Specification	No change	
13	Label change	No change	
14	Management contents	No change	



Includes Humidity Indicator Card

【Purpose of use of HIC】 Judgment material for judging the presence or absence of abnormalities in aluminum packaging.

【How to use】 Check the discoloration state of HIC immediately after opening the aluminum.

If there is something wrong with the aluminum packaging, the HIC display color immediately after opening will be as shown in the red frame on the right of the photo, and baking in the reel state must be carried out.

Items	Confirmation details	Conventional	JEDEC specification	Effect
HIC	Checking the moisture absorption state immediately after opening	Simple judgment by silica gel only	Humidity 5%,10% can be determined by HIC	More accurate judgement is possible

HIC(Humidity Indicator Card)

Eco Humicator™
Cobalt & Heavy Metal FREE
GV3E033B

LEVEL 2 PARTS
Bake parts if 60% is NOT green

LEVEL 2A-5A PARTS
Bake parts if 10% is NOT green and 5% is violet

Complies with IPC/JEDEC J-STD-033B
Initial Use: Do not put this card into a bag if 60% is violet.

60% : Green
10% : Green
5% : Green

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Cobalt & Heavy Metal FREE
GV3E033B

LEVEL 2 PARTS
Bake parts if 60% is NOT green

LEVEL 2A-5A PARTS
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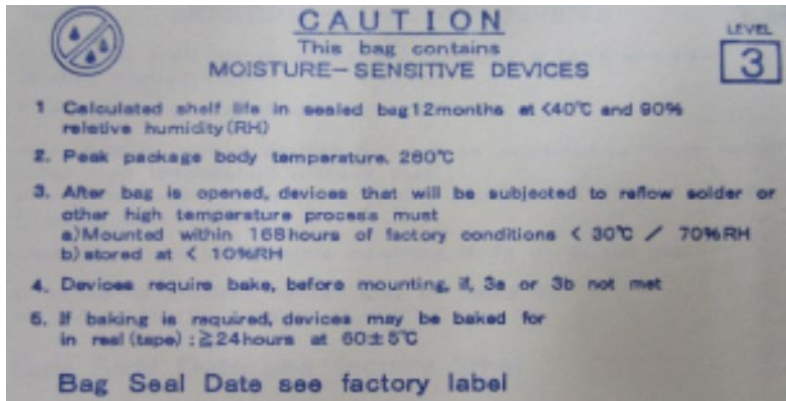
No Need baking **Need baking**

If the display color of 5% has changed to a color other than green, please perform baking in the reel state at 60°C for 12 hours.

MSL : Moisture Sensitivity Level

I would like to unify the specifications with the following label on the aluminum bag.

Label example

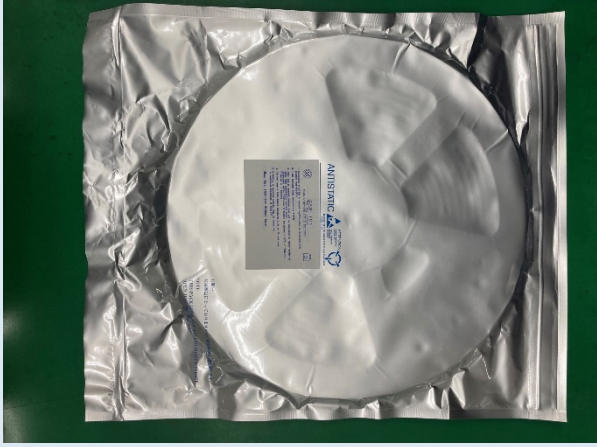
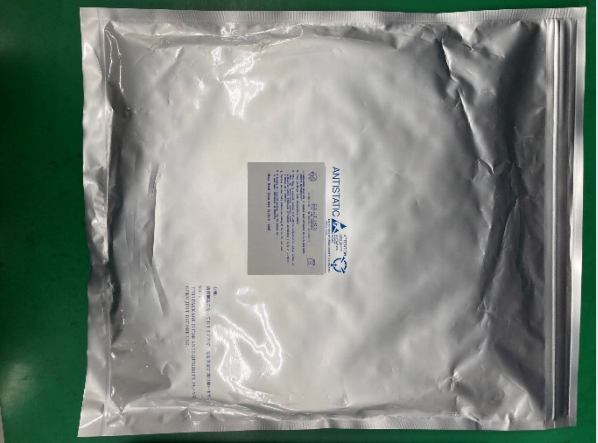
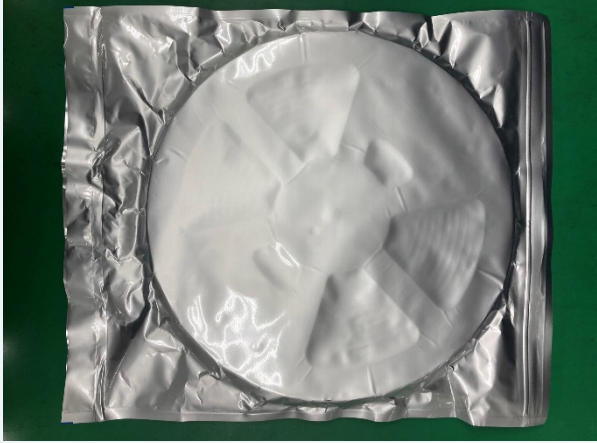
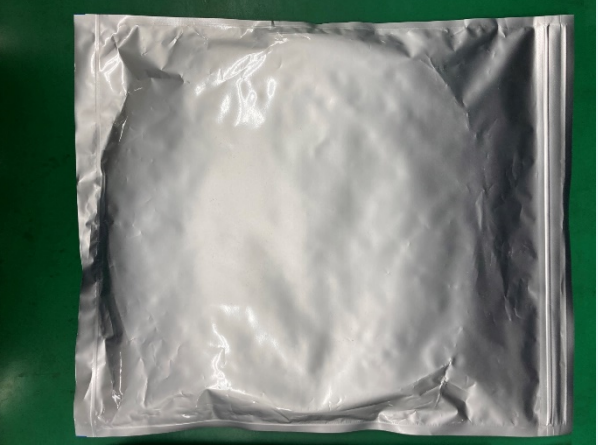


Level	Floor life (Moisture absorption life when the PI package is left in the atmosphere of 30°C or less and 60% RH after opening the aluminum bag.) ※
3	168hr
4	72hr
5	48hr

※If you exceed the floor life, please carry out the baking process described in the specifications.

MSL will be indicated according to the specifications of each PKG, so please cooperate in storage management after opening the aluminum bag.

Abolish the air discharge in the aluminum bag

Items	Before the Change (There is air discharge in the aluminum bag)	After the Change (No air discharge in the aluminum bag)
Front Side		
Back Side		

According to J-STD-033D 3.3.5.3 Moisture Barrier Bag Sealing, in order not to deteriorate the function of the desiccant/HIC and to reduce the risk of damage to the aluminum bag on the reel outer shape, we abolish the air discharge in the aluminum bag.

[Reliability test results]

As a representative, the reliability test results of the RPI-0441E design modified product are described below.

Test item	Test conditions	N	Judgment conditions	Pn/n	Judgement
Drop test	Fall from a height of 1.5m 3 times	1 reel (1000pcs)	No bag punk No reel deformation No product damage	0/1(1000pcs)	OK
Vibration test	frequency 10~55 Hz acceleration 1.5G 2hr×3acceleration (XYZ)	1 reel (1000pcs)		0/1(1000pcs)	OK

<Opinion>

As a result of the above reliability test, it is judged that there is no problem in the reliability due to the change of packaging specifications.

