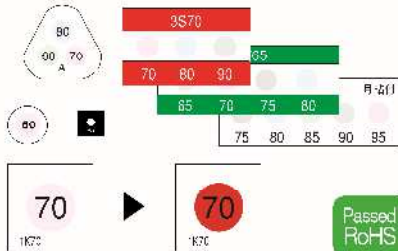


Asey INDICATOR

It displays it by the color.

Temperature monitoring label (irreversible) ▶ P1・2・3

Thermo Color Sensor®



Temperature monitoring ink with wax ▶ P3

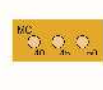
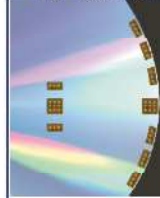


Prizewinner of chairperson encouragement prize of Japan Electrical Construction Association, Inc.



Passed RoHS

Temperature monitoring label for Semiconductor ▶ P4



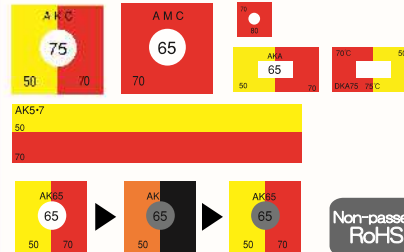
Passed RoHS

Liquid crystal display label ▶ P4

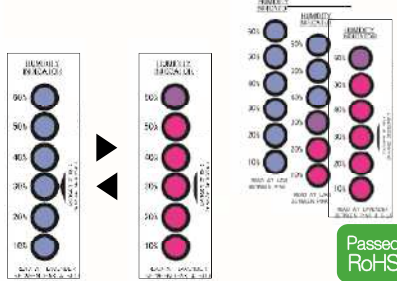


Temperature monitoring label (combination・reversible) ▶ P5・6

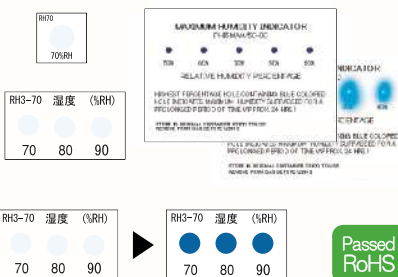
Thermo Color Sensor®



Humidity indicator (reversible) ▶ P7



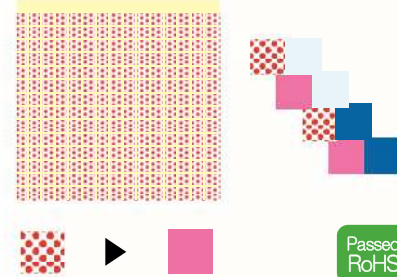
Humidity indicator (irreversible) ▶ P7



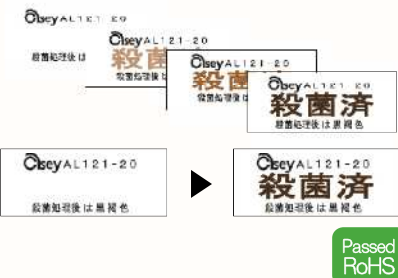
Low temperature indicator ▶ P8



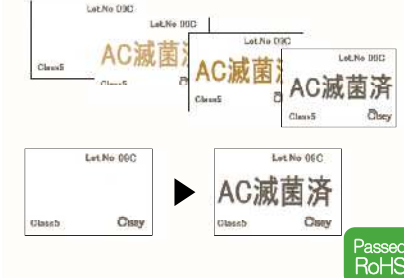
Submergence label ▶ P8



Sterilization label ▶ P9



AC Sterilization label ▶ P9



EOG Sterilization label ▶ P9



Asey Industry Co., Ltd.

Head office・Plant
〒243-0201 4280-1, kamogino, Atsugi-shi,
Kanagawa-ken, Japan
TEL (046) 241-5632 FAX (046) 241-5781
URL : <http://www.asey.co.jp>
E-mail : info@asey.co.jp

Please call to Sales Dept. 046-241-5632

Please refer willingly including special specification.

We do development, production and the sale of various indicators

- August 11, 2009 publication -

Temperature monitoring label (irreversible)
Temperature monitoring label (irreversible)
Temperature monitoring label for Semiconductor
Liquid crystal display label
Temperature monitoring label (combination・reversible)
Humidity indicator
Low temperature indicator
Submergence label
Sterilization label
asey Profile

Temperature monitoring label (irreversible)

Thermo Color Sensor

Accuracy
170°C or less ±2°C
180°C or more ±3°C

Passed
RoHS

Take out and Affix only!! Temperature Monitoring Label.

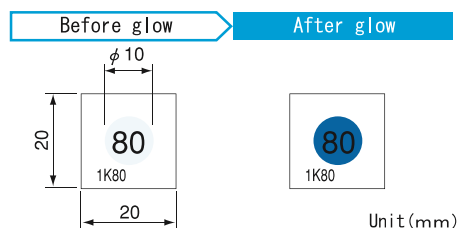
The temperature management is indispensable in a Japanese high technical plant now. Our Thermo color sensor has superior durability and is utilized with facilities such as electricity / railroad / car / food / chemistry.

When it did color development once, it is not restored. It leaves a history when reached the setting temperature. Our original Thermo colour sensor uses wax which is authorized as food additives.

Characteristics of Asey Original Wax Type

- Realized correct indication utilizing properties of matter change by the melting point of the wax.
- Very stable chemically due to the saturation hydrocarbon.
- Because it is oil-based natural wax which is authorized as **food additives**, it does not include substances affecting environment like lead, mercury and chrome.

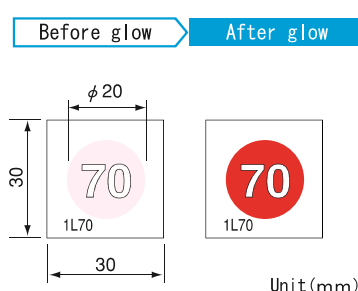
1K·1KC Standard size one temperature indication type



Note) The outline dimension of 1KC is 20x20 and the glow place is $\phi 6$.
Note) Polyimide film (dark brown) is used to 1KC170~200.

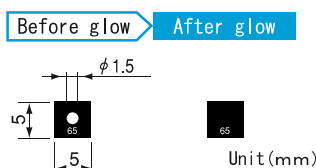
Model	Glow Temp (°C)	Glow Colours
1K40	40	White → Black
1K45	45	White → Red
1K50	50	White → Brown
1K55	55	White → Blue
1K60	60	White → Green
1K65	65	White → Black
1K70	70	White → Red
1K75	75	White → Brown
1K80	80	White → Blue
1K85	85	White → Green
1K90	90	White → Black
1K95	95	White → Red
1K100	100	White → Brown
1K105	105	White → Blue
1K110	110	White → Green
1KC120	120	White → Blue
1KC130	130	White → Black
1KC140	140	White → Black
1KC150	150	White → Black
1KC160	160	Yellowish Grey → Black
1KC170	170	Light Yellow → Black
1KC180	180	
1KC190	190	
1KC200	200	
1KC210	210	
1KC220	220	
1KC230	230	White → Red
1KC240	240	
1KC250	250	

1L Big size one temperature indication type



Model	Glow Temp (°C)	Glow Colours
1L50	50	White → Brown
1L60	60	White → Green
1L70	70	White → Red
1L80	80	White → Blue
1L85	85	White → Green
1L90	90	White → Black
1L100	100	White → Brown
1L105	105	White → Blue
1L110	110	White → Green

SS Extra small size one temperature indication type * Indoor only



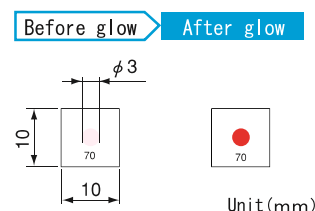
Model	Glow Temp (°C)	Glow Colours
SS40	40	White → Black
SS45	45	
SS50	50	
SS55	55	
SS60	60	
SS65	65	
SS70	70	
SS75	75	
SS80	80	
SS85	85	
SS90	90	
SS95	95	
SS100	100	
SS105	105	
SS110	110	
SS115	115	
SS120	120	
SS125	125	

Types

Wax type

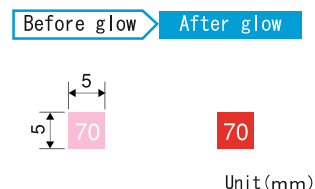
Chemical change type

1M Small size one temperature indication type



Model	Glow Temp (°C)	Glow Colours
1M50	50	White → Brown
1M60	60	White → Green
1M65	65	White → Black
1M70	70	White → Red
1M75	75	White → Brown
1M80	80	White → Blue
1M85	85	White → Green
1M90	90	White → Black
1M100	100	White → Brown
1M105	105	White → Blue
1M110	110	White → Green

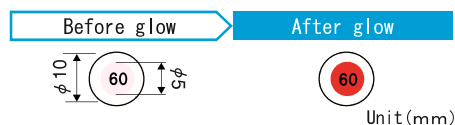
MM Small shape one temp indication type * Indoor only



Note) The surface is not laminated processing.

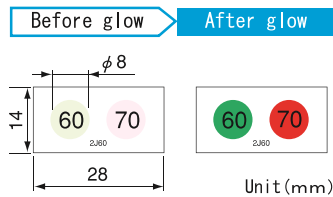
Model	Glow Temp (°C)	Glow Colours
MM50	50	White → Red
MM60	60	
MM65	65	
MM70	70	
MM75	75	
MM80	80	
MM85	85	
MM90	90	

1RA Round shape one temperature indication type



Model	Glow Temp (°C)	Glow Colours
1RA60	60	White → Red
1RA65	65	
1RA70	70	
1RA75	75	
1RA80	80	

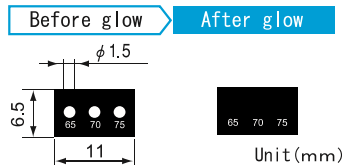
2J Two temperature indication type



Model	Glow Temp (°C)	Glow Colours
2J50	50・60	White→Brown・Green
2J60	60・70	White→Green・Red
2J70	70・80	White→Red・Blue
2J80	80・90	White→Blue・Black
2J90	90・100	White→Black・Brown
2J100	100・110	White→Brown・Green

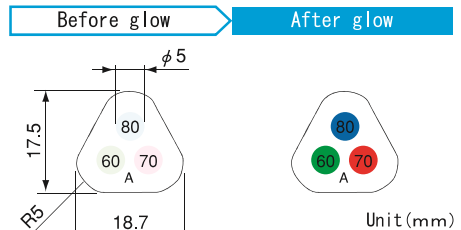
3SS Extra small size three temperature indication type

* Indoor only



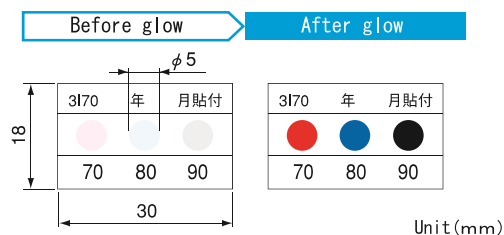
Model	Glow Temp (°C)	Glow Colours
3SS40	40・45・50	White→Black
3SS50	50・55・60	
3SS65	65・70・75	
3SS80	80・85・90	
3SS95	95・100・105	
3SS110	110・115・120	
3SS130	130・140・150	

H Three temperature indications triangle shaped type



Model	Glow Temp (°C)	Glow Colours
H50D	50・60・70	White→Brown・Green・Red
H60A	60・70・80	White→Green・Red・Blue
H70B	70・80・90	White→Red・Blue・Black
H80E	80・90・100	White→Blue・Black・Brown
H90F	90・100・110	White→Black・Brown・Green

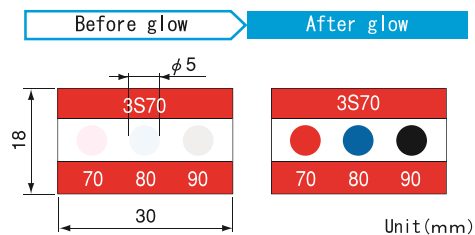
3I-3IC Three temperature indications type (10°C interval)



Note) There is no indication of month/year in 3IC
Note) The outline dimension of 3IC is 18×33 and the glow place is $\phi 5$.
Note) Polyimide film (dark brown) is used to 3IC150~260.

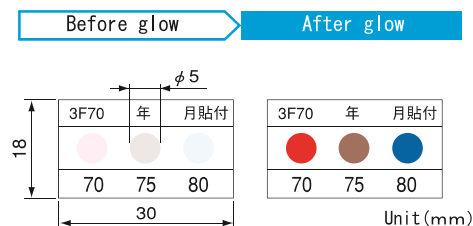
Model	Glow Temp (°C)	Glow Colours
3I40	40・50・60	White→Black・Brown・Green
3I45	45・55・65	White→Red・Blue・Black
3I50	50・60・70	White→Brown・Green・Red
3I55	55・65・75	White→Blue・Black・Brown
3I60	60・70・80	White→Green・Red・Blue
3I65	65・75・85	White→Black・Brown・Green
3I70	70・80・90	White→Red・Blue・Black
3I75	75・85・95	White→Brown・Green・Red
3I80	80・90・100	White→Blue・Black・Brown
3I85	85・95・105	White→Green・Red・Blue
3I90	90・100・110	White→Black・Brown・Green
3I95	95・105・115	White→Red・Blue・Black
3IC100	100・110・120	White→Dark Red・Deep Blue・Blue
3IC105	105・115・125	White→Green・Red Orange・Black
3IC110	110・120・130	White→Deep Blue・Blue・Black
3IC120	120・130・140	White→Blue・Black・Black
3IC130	130・140・150	White→Black
3IC140	140・150・160	White→Black
3IC150	150・160・170	Light Yellow→Black
3IC160	160・170・180	
3IC170	170・180・190	
3IC180	180・190・200	
3IC190	190・200・210	
3IC200	200・210・220	
3IC210	210・220・230	
3IC220	220・230・240	
3IC230	230・240・250	
3IC240	240・250・260	
3IC250	250・260・270	
3IC260	260・270・280	

3S Three temperature indications type (10°C interval)



Model	Glow Temp (°C)	Glow Colours
3S40	40・50・60	White→Black・Brown・Green
3S45	45・55・65	White→Red・Blue・Black
3S50	50・60・70	White→Brown・Green・Red
3S55	55・65・75	White→Blue・Black・Brown
3S60	60・70・80	White→Green・Red・Blue
3S65	65・75・85	White→Black・Brown・Green
3S70	70・80・90	White→Red・Blue・Black
3S75	75・85・95	White→Brown・Green・Red
3S80	80・90・100	White→Blue・Black・Brown
3S85	85・95・105	White→Green・Red・Blue
3S90	90・100・110	White→Black・Brown・Green
3S95	95・105・115	White→Red・Blue・Black

3F Three temperature indications type (5°C interval)

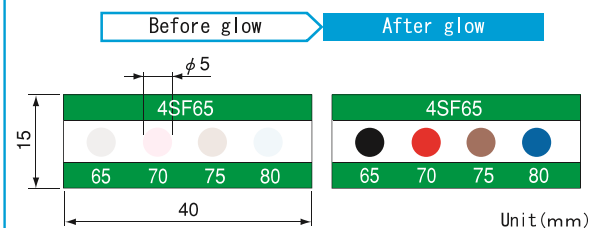


Model	Glow Temp (°C)	Glow Colours
3F40	40・45・50	白→黒・赤・茶
3F45	45・50・55	白→赤・茶・青
3F50	50・55・60	白→茶・青・緑
3F55	55・60・65	白→青・緑・黒
3F60	60・65・70	白→緑・黒・赤
3F65	65・70・75	白→黒・赤・茶
3F70	70・75・80	白→赤・茶・青
3F75	75・80・85	白→茶・青・緑
3F80	80・85・90	白→青・緑・黒
3F85	85・90・95	白→緑・黒・赤
3F90	90・95・100	白→黒・赤・茶
3F95	95・100・105	白→赤・茶・青
3F100	100・105・110	白→茶・青・緑

Oil-based natural wax

used for our original Thermo color sensor is

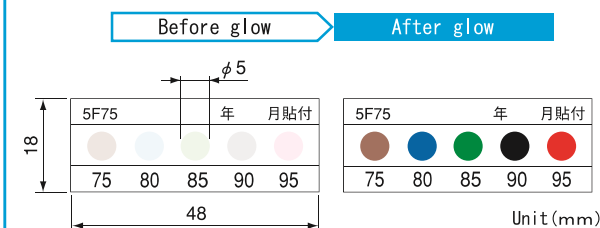
- **Very stable chemically** due to the saturation hydrocarbon.
- **High material of safety** authorized by food additives.
- **Eco-friendly material** that is disintegrated easily by a microbe.

4SF For temp indication type(5°C interval)

Model	Glow Temp (°C)	Glow Colours
4SF65	65・70・75・80	White→Black・red・Brown・Blue
4SF75	75・80・85・90	White→Brown・Blue・Green・Black

Safekeeping method

Please keep it in the cool and dark space where around 20 degrees Celsius are in lower than setting temperature.

5F・5FC Five temperature indications type

Note) There is no indication of month/year in 5FC
Note) The outline of 5FC is 18×51 and the glow place φ5.

Model	Glow Temp (°C)	Glow Colours
5F60	60・65・70・75・80	White→Green・Black・Red・Brown・Blue
5F75	75・80・85・90・95	White→Brown・Blue・Green・Black・Red
5F90	90・95・100・105・110	White→Black・Red・Brown・Blue・Green
5FC100	100・105・110・115・120	White→Dark Red・Green・Deep Blue・Red Orange・Black
5FC125	125・130・140・150・160	Excluding 160°C White→Black 160°C Yellowish Grey→Black



Temperature monitoring ink with wax (irreversible)

Passed RoHS

It is convenient for performing the temperature management of the unevenness part and/or wide area and of the place that it is hard to put the thermocouple, because of an ink type. Our irreversible wax type temperature indication ink utilizes properties of matter of the oil-based natural wax (An article additive). When it did color development once, it is not restored. It leaves a history when reached the setting temperature.

Characteristic

It is possible to perform the temperature management of the unevenness part and/or wide area and of the place that it is hard to put the thermocouple.

Safekeeping method

Please keep it in the cool and dark space where around 20 degrees Celsius are in lower than setting temperature.

WL To the unevenness part and/or wide area and of the place that it is hard to put the thermocouple.

* Indoor only



<Reaction example>

Before glow → After glow



At "electrical construction industry exhibition product contest" of June, 2006, we won the chairperson encouragement prize of Japan Electrical Construction Association, Inc.

How to Use

- ① Paint the ink to the place that wants to check temperature by a brush attached to a cap (When a solvent evaporates during save and is hard to paint it, Please dilute it in a wash for temperature indication ink. It can take time to dry when I paint it thick)
- ② Please confirm that it became white, after completely dry from a semitransparent color.
- ③ When the place where you painted with ink becomes a setting temperature and turns into transparence or semitransparency from white, it indicates that the place reached to a setting temperature.

Temperature monitoring ink with wax (50g contents)

Model	Glow Temp (°C)
WL-40	40
WL-45	45
WL-50	50
WL-55	55
WL-60	60
WL-65	65
WL-70	70
WL-75	75
WL-80	80
WL-85	85
WL-90	90
WL-95	95
WL-100	100
WL-105	105
WL-110	110
WL-115	115
WL-120	120



a wash
(50g contents)
Model
BL

Temperature monitoring label for Semiconductor (irreversible)

Accuracy
170°C or less $\pm 2^{\circ}\text{C}$
180°C or more $\pm 3^{\circ}\text{C}$

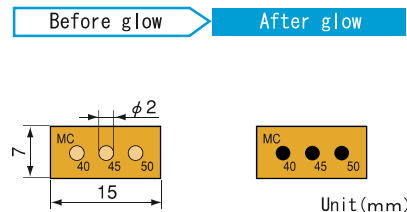
Passed
RoHS

Stick it on a wafer. Because it is superior in the high temperature durability, the monitoring of wide ranges from 40 degrees Celsius to 280 degrees Celsius is possible.

Because our original temperature monitoring label for semiconductor is covered the surface with a polyimide film and printed on reverse side, scattering of the print ink is prevented.

When it did color development once, it is not restored. It leaves a history when reached the setting temperature.

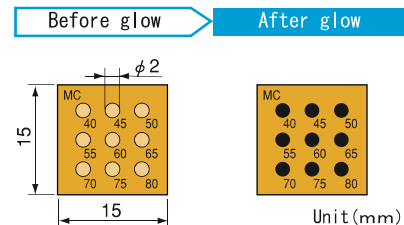
3MC 3 temperature type ※Print on Plymide film



Note) The base materials of 3MC40~100 use a polyimide film.
Note) The base materials of 3MC120~260 use a polyimide film.

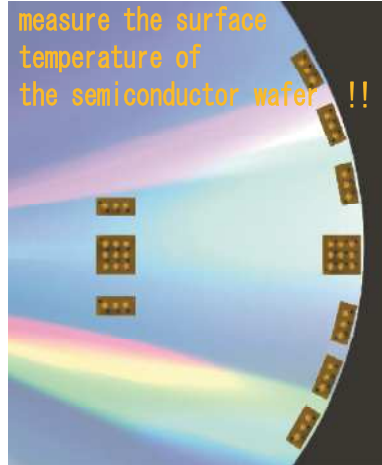
Model	Glow Temp (°C)	Glow Colours
3MC40	40・45・50	Light Yellow→Black
3MC55	55・60・65	
3MC70	70・75・80	
3MC85	85・90・95	
3MC100	100・105・110	
3MC120	120・125・130	Light Yellow→Black
3MC135	135・140・145	
3MC150	150・155・160	
3MC165	165・170・175	
3MC180	180・185・190	
3MC195	195・200・210	
3MC200	200・210・220	
3MC230	230・240・250	
3MC260	260・270・280	

9MC 9 temperature type ※Print on Plymid film



Note) The base materials of 9MC40~80 use a thin aluminum film.
Note) The base materials of 9MC120~200 use a polyimide film.

Model	Glow Temp (°C)	Glow Colours
9MC40	40・45・50	Light Yellow→Black
	55・60・65	
	70・75・80	
9MC80	80・85・90	Light Yellow→Black
	95・100・105	
	110・115・120	
9MC120	120・125・130	Light Yellow→Black
	135・140・145	
	150・155・160	
9MC160	160・165・170	Light Yellow→Black
	175・180・185	
	190・195・200	
9MC200	200・210・220	Light Yellow→Black
	230・240・250	
9MC260	260・270・280	Light Yellow→Black



Characteristic

- Standard use of polyimide film as a cover
- Prevent scatter of ink by surface coating.
- The base materials equal to or less than 120 degrees Celsius use a thin aluminum film.
- The bases materials more than 120 degrees Celsius use a polyimide film.

※Can use it except wafer too

Safekeeping method

Please keep it in the cool and dark space where around 20 degrees Celsius are in lower than setting temperature.

30 35 Liquid crystal display Label (reversible)

Accuracy
All temperature $\pm 0.5^{\circ}\text{C}$

Passed
RoHS

The liquid crystal display label can display current temperature linearly and reacts to temperature within one second and changes color in green in pertinence temperature.

The all of liquid crystal label is reversibility.

Characteristic

- At the set temperature, green will glow and the accuracy is $\pm 0.5^{\circ}\text{C}$
- Reaction speed -Within 1 second
- Expiry period is approx. 3 years at indoor use.

Safekeeping method

- Please keep it with avoiding direct rays of the sun.
- Please do not leave it under the high humidity situation.

LCD (Liquid Crystal Display) Label Strip indicates proportional temperature !! Reversible type.

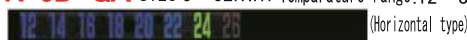
NV-M2-20D Size 6×62mm Temperature range:-2~20°C



N-26-46D Size 6×62mm Temperature range:26~46°C



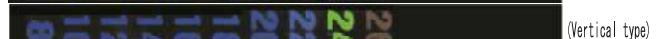
R-6D-GA Size 6×62mm Temperature range:12~34°C



S-95-12D Size 12×95mm Temperature range:5~35°C



R-10M-GA Size 10×105mm Temperature range:8~34°C



LC50 Size 10×100mm Temperature range:50~100°C



Temperature monitoring label (combination)

Accuracy
All temperature $\pm 2^{\circ}\text{C}$

Non-passed
a RoHS

Thermo Color Sensor

heavy metal is included
in a reversible part

This is the combination type of reversibility and irreversibility. This is suitable for the place that it is hard to look at such as high places. Because it is possible to monitor the current temperature and past record, there are various uses such as temperature investigation or data collection not to mention temperature monitor.

Characteristic

- It is possible to monitor the temperature record of both of current and past.
- In reversible type, there are hystereses more than 15 degrees Celsius.
- All types are chemical change types

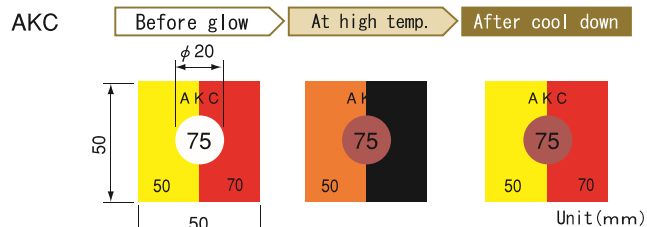
Safekeeping method

Please keep it in the cool and dark space where around 20 degrees Celsius are in lower than setting temperature.

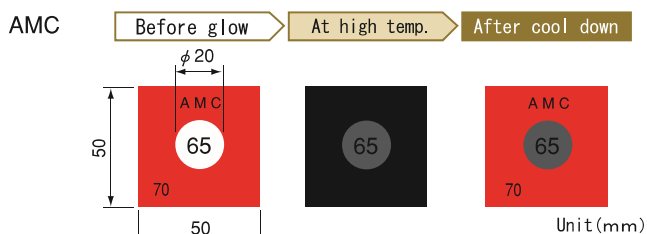
AKC-AMC

Big size (50×50mm) indication type!! For the place where you cannot see easily like high place!!

Non-passed
a RoHS



Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
AKC65	65	White→Black	Change at 50°C Yellow	Change at 70°C Red
AKC75	75	White→Dark Red	Yellowish Orange	Dark Brown Purple

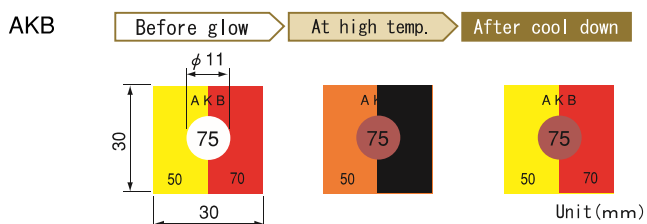


Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
AMC65	65	White→Black	70	Red
AMC75	75	White→Dark Red		Dark Brown Purple

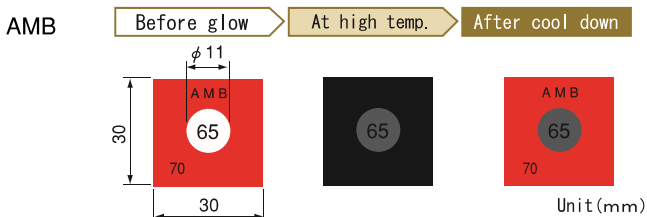
AKB-AMB

Standard size (30×30mm) type. For various temperature management and investigation.

Non-passed
a RoHS



Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
AKB65	65	White→Black	Change at 50°C Yellow ↓ Yellowish Orange	Change at 70°C Red ↓ Dark Brown Purple
AKB70	70	White→Red Orange		
AKB75	75	White→Dark Red		
AKB80	80	White→Blue		
AKB85	85	White→Deep Blue		
AKB90	90	White→Red		

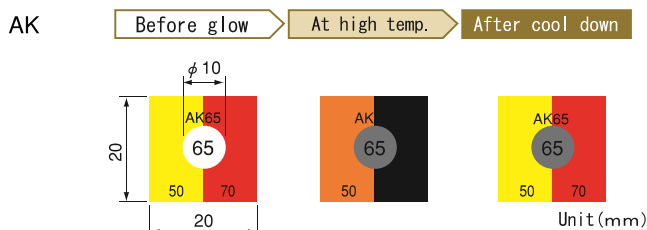


Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
AMB65	65	White→Black	70	Red
AMB75	75	White→Dark Red		Dark Brown Purple

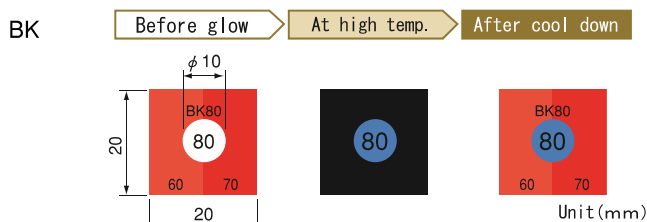
AK-BK

The outline (20×20mm) and the glow place $\phi 10$ are the best balanced space too see easily.

Non-passed
a RoHS



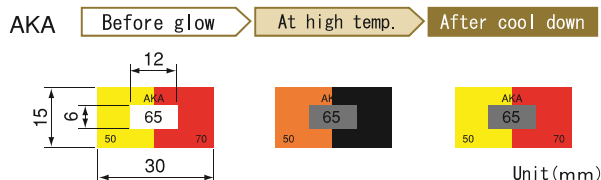
Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
AK65	65	White→Black	Change at 50°C Yellow ↓ Yellowish Orange	Change at 70°C Red ↓ Dark Brown Purple
AK70	70	White→Red Orange		
AK75	75	White→Dark Red		
AK80	80	White→Blue		
AK85	85	White→Deep Blue		
AK90	90	White→Red		



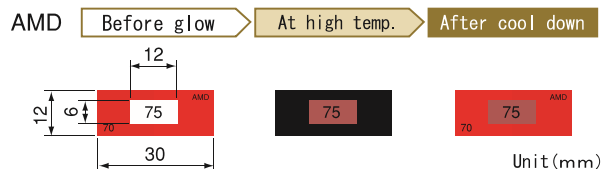
Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
BK65	65	White→Black	Change at 60°C Yellow Red ↓ Dark Brown Purple	Change at 70°C Red ↓ Dark Brown Purple
BK70	70	White→Red Orange		
BK75	75	White→Dark Red		
BK80	80	White→Blue		
BK85	85	White→Deep Blue		
BK90	90	White→Red		

AKA-AMD Rectangular type, Suitable for the long and slender place!!

Non-passed
RoHS



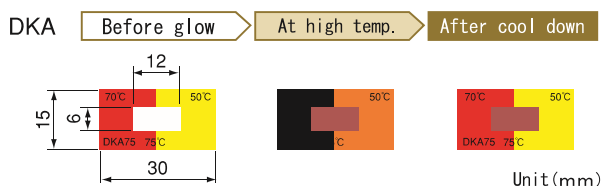
Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
AKA65	65	White→Black	Change at 50°C Yellow ⇕ Yellowish Orange	Change at 70°C Red ⇕ Dark Brown Purple
AKA70	70	White→Red Orange		
AKA75	75	White→Dark Red		
AKA80	80	White→Blue		
AKA85	85	White→Deep Blue		
AKA90	90	White→Red		



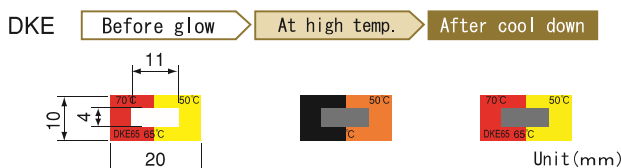
Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
AMD65	65	White→Black	70	Red ⇕ Dark Brown Purple
AMD70	70	White→Red Orange		
AMD75	75	White→Dark Red		
AMD80	80	White→Blue		
AMD85	85	White→Deep Blue		
AMD90	90	White→Red		

DKA-DKE Rectangular type Rectangular type, Suitable for the long and slender place!!

Non-passed
RoHS



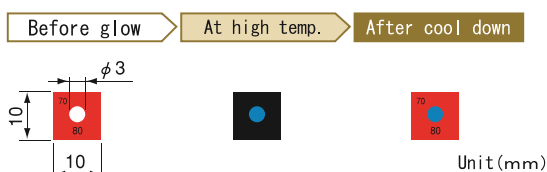
Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
DKA60	60	White→Green	Change at 70°C Red ⇕ Dark Brown Purple	Change at 50°C Yellow ⇕ Yellowish Orange
DKA65	65	White→Black		
DKA70	70	White→Red Orange		
DKA75	75	White→Dark Red		
DKA80	80	White→Blue		
DKA85	85	White→Deep Blue		
DKA90	90	White→Red		
DKA105	105	White→Green		



Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
DKE65	65	White→Black	Change at 70°C Red ⇕ Dark Brown Purple	Change at 50°C Yellow ⇕ Yellowish Orange
DKE75	75	White→Dark Red		
DKE80	80	White→Blue		
DKE90	90	White→Red		

AM The small indicator(10×10)type!! It is suitable for the limited space as a precision machine!!

Non-passed
RoHS



Model	Irreversible part		Reversible part	
	Glow Temp (°C)	Glow Colours	Low Temp part	High Temp part
AM70	70	White→Red Orange	70	Red ⇕ Dark Brown Purple
AM80	80	White→Black		
AM90	90	White→Red		
AM100	100	White→Dark Red		

Temperature monitoring label (reversible)

Accuracy
All temperature $\pm 2^\circ\text{C}$

Non-passed
RoHS

Thermo Color Sensor

heavy metal
is included

It changes color at setting temperature, and returns to an original color at lower than setting temperature, can confirm a current temperature change and convenient for confirmation of the temperature being changed.

TW One temperature indication badge type

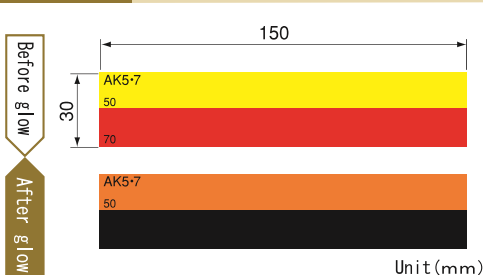
Non-passed
a RoHS



Model	Glow Temp (°C)	Low Temp ⇌ Color High Temp
TW40	40	Reddish Yellow ⇌ Reddish Orange
TW45	45	Yellowish Orange ⇌ Light Yellowish Red
TW50	50	Yellow ⇌ Yellowish Orange
TW55	55	Yellowish Red ⇌ Dark Brown Purple
TW60	60	Light Yellowish ⇌ Red Dark Brown Purple
TW65	65	Red ⇌ Brown Purple
TW70	70	Red ⇌ Brown Purple

AK5-7 Two temperature indications type

Non-passed
a RoHS



Model	Glow Temp (°C)	Low Temp ⇌ Color High Temp
AK5-7	50	Yellow ⇌ Yellowish Orange
AK5-7	70	Red ⇌ Brown Purple

Characteristic

- It is possible to monitor the temperature record of both of current
- In reversible type, there are hysteretic more than 15 degrees Celsius.

Safekeeping method

Please keep it in the cool and dark space where around 20°C are lower than indication temperature of the irreversible part.

Note

All of the temperature monitoring label which have the reversible part of page 5 and 6 are going to stop production by December 31, 2010

Humidity indicator (reversible)

Accuracy
Precision is
 $\pm 5\%RH$ at $25^{\circ}C$

Passed
RoHS

A humidity indicator expressing a state of the humidity by the color change is most suitable for the transportation and the safekeeping such as a semiconductor, parts, materials or the precision instrument needing humidity management.

Characteristic

- Precision is $\pm 5\%RH$ at $25^{\circ}C$
- Cobalt chloride nonuse
- Indicator made from paper

Safekeeping method

Please seal up as much as possible after put a humidity indicator with desiccating agent in container.
Please avoid from moisture and ammonia-gas, and keep it in dry, cool and dark place.

PHI Three humidity indications • six humidity indications card type

PHI6V/10-60Br

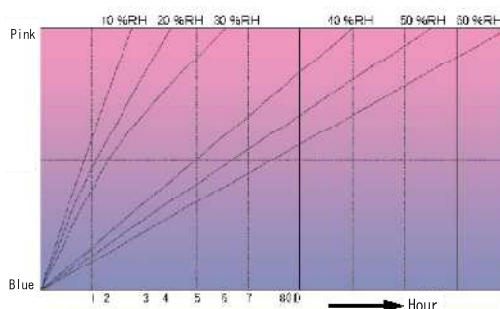
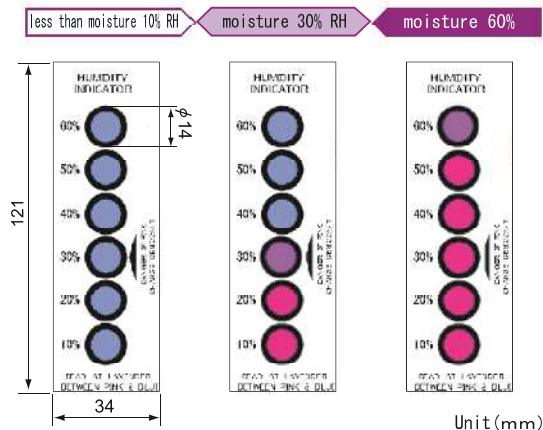


Figure 1. progress of color change (10~60%RH)

Model	Displays	reaction humidity (%RH)	Glow Colours
PHI3V/10-30Br	3点	10・20・30	Figure 1
PHI3V/20-40Br	3点	20・30・40	
PHI3V/30-50Br	3点	30・40・50	
PHI6V/10-60Br	6点	10・20・30・40・50・60	

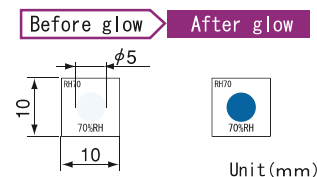
Humidity indicator (irreversible)

Accuracy
Precision is
 $\pm 5\%RH$ at $25^{\circ}C$

Passed
RoHS

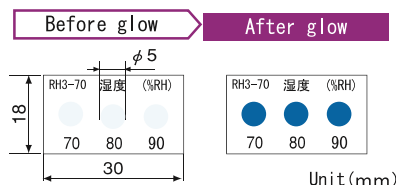
This indicator changes color to blue when being in a humidity condition more than 24 hours. Because it maintain the color after color developed once, you can confirm the highest relative humidity that reached to it.

RH One humidity indication label type



Model	color development humidity (%RH)	Glow Colours
RH70	70	White → Blue
RH80	80	
RH90	90	

RH3 Three humidity indications label type



Model	color development humidity (%RH)	Glow Colours
RH3-70	70・80・90	White → Blue

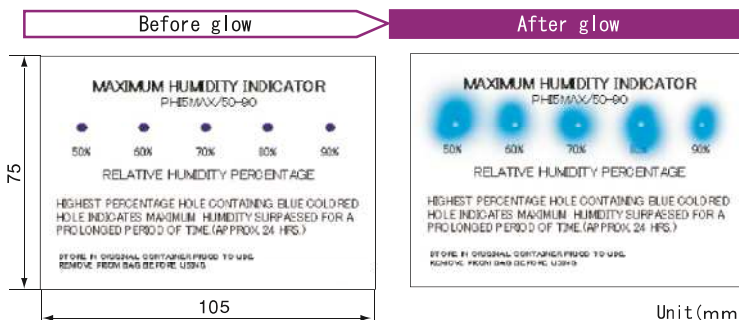
Characteristic

- Precision is $\pm 5\%RH$ at $25^{\circ}C$
- Validity is about a half year (Please use it as soon as possible after airtight container opening)

Safekeeping method

After opening container, please put the unused share in an airtight container with a desiccating agent, and keep it in the cool and dark space, and use it early.

PHIMAX Five humidity indications label type



Note) A crystal of the blue of the center begins to dissolve to surroundings after having passed more than 24 hours.

Model	color development humidity (%RH)	Glow Colours
PHIMAX/50-90	50・60・70・80・90	Blue



Low temperature indicator (irreversible)

Accuracy
All temperature $\pm 2^{\circ}\text{C}$

Passed
RoHS

You can confirm temperature at various points as the low temperature indicator. The safekeeping of the indicator became easy by having sealed WAX into a capsule. Because it does not return to original after it changed color, you can confirm the record that reached to the setting temperature. Low temperature indicator uses wax which is authorized as food additives.

Characteristic

- The safekeeping and transportation at room temperature are possible and push it to start.

Safekeeping method

Please keep it in one normal temperature atmospheric pressure and dark place. Please avoid the use in and around the water.

RF The safekeeping and transportation at room temperature are possible. Push type



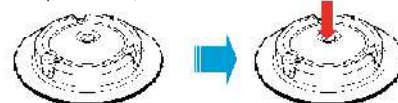
Note) Because the reverse side is the adhesion material, affixing is possible.

Model	Glow Temp ($^{\circ}\text{C}$)	Glow Colours
RF-10	-10	White → Red
RF00	0	
RF05	5	
RF10	10	
RF20	20	
RF25	25	

How to use

Keep it in lower than set temperature.

Push the middle to start.



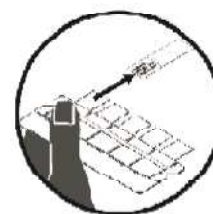
non-standard products example

Pull type



How to use

After safekeeping lower than set temperature, pull up a label and use it.



Submergence label (irreversible)

Passed
RoHS

The red ink which is printed when water appears begins to dissolve to surroundings. Because it does not return to original when getting wet, it is most suitable for the history confirmation of the water wet.

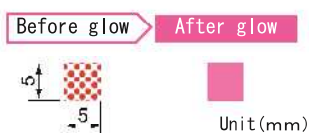
Characteristic

- The record confirmation of the water wet are possible.

Safekeeping method

Please keep in the dark place that avoided a sunbeam and moisture.

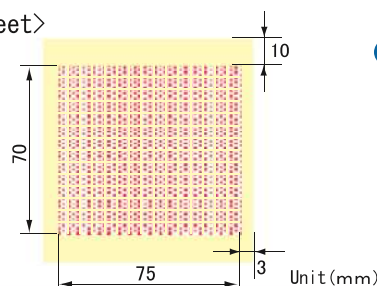
MZ-R To water wet prohibition place !!



Note) 210/1sheet

Model	Glow Colours
MZ-R	Red dot → Pink

<1sheet>



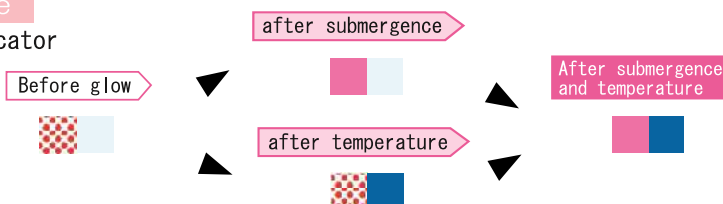
A use place

Water wet prohibition place of portable electronics, precision instruments, industrial materials / raw material and others.

non-standard products example

a Submergence and temperature indicator

You can monitor a record of the temperature and submergence at the same time after the product shipment.



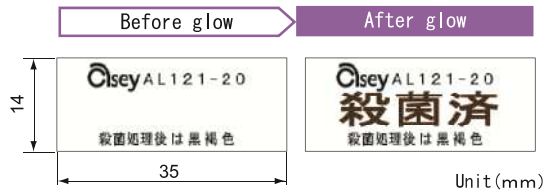


Sterilization label (irreversible)

Passed RoHS

This is most suitable for process management such as the retort sterilization or the boiling sterilization because you can easily know the processing and non-processing product.

AL For process management of the sterilization processing label type (covered by laminate film)



Characteristic

- Confirmation of processing and non-processing of sterilization is easy.

Safekeeping method

Please keep in the dark place that avoided moisture.

Model	Condition of sterilization	Glow Colours
AL90-5	90°C - 5 minutes	Dark Red → Light Blue
AL121-20	121°C - 20 minutes	White → Blackish brown

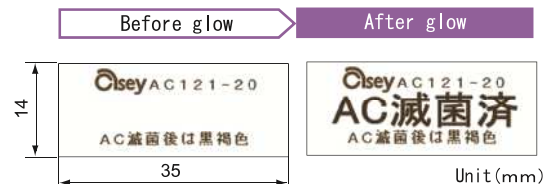


AC Sterilization label (irreversible)

Passed RoHS

Because a color changes when it arrives at the sterilization condition, you realize that the processing finished in sterilization processing. When sterilization is completed, a letter of "finished AC sterilization" stands out.

AC Label type to stick on a sterilization object (covered by laminate film)



Characteristic

- The confirmation that passed a sterilization process is easy.

Safekeeping method

Please keep in the dark place that avoided moisture.

Model	Condition of sterilization	Glow Colours
AC121-20	High temperature vapor pressure 121°C - 20 minutes	White → Blackish brown

AC-BF The card type that can pack together with a sterilization object (Both sides indication - covered by laminate film)



Characteristic

- Blackish brown letters are displayed clearly when it arrives at the sterilization condition, and light color is displayed unless it arrives.
- For a duplex printing, can use it without minding the front or back side.
- Because the surface is laminated processing, do not worry about color shift.

Safekeeping method

Please keep in the dark place that avoided moisture.

Model	Condition of sterilization	Glow Colours
AC-BF5	High temperature vapor pressure 121°C - 20分	White → Blackish brown



EOG Sterilization label (irreversible)

Passed RoHS

Because a color changes when it arrives at the sterilization condition, you realize that the processing finished in sterilization processing.

EOG-4 Label type to stick on a sterilization object (covered by laminate film)



Characteristic

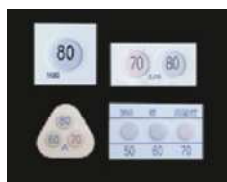
- The confirmation that passed a sterilization process is easy.

Safekeeping method

Please keep in the dark place that avoided moisture.

Model	Condition of sterilization	Glow Colours
EOG-4	temperature 55°C - humidity 50%- 4 hour	Pink → Blue

PRODUCTS – Indicator business –



Temperature monitoring label (irreversible)



Temperature monitoring ink with wax



Other indicator

Characteristic

- The wax which is used for our original temperature monitoring label (irreversible) does not include substances affecting environment like lead, mercury and chrome.
- Because it is petroleum system nature wax which is authorized as food additives. Also, it is very stable chemically due to the saturation hydrocarbon.
- By our original production and sale system, we realized low price.

Production



Production control



ATCS production line



ATCS production line 1



ATCS production line 2



Automatic blanking Machine



Laser printer

Quality



Weather meter tester



Heat tester



Constant temperature air chamber



DSC Measure (WAX Analyzer)



Constant temperature tank

PRODUCTS – WTE business –



Temperature actuator



Temperature control parts for Thermo shower



Our product use example

Characteristic

- WTE(Wax Thermo Element) is the actuator which utilized thermal expansion of wax.
- Our company original Wax Thermo Element is characterized by minuscule hysteresis.

Production



Process for mixing wax



Process for filling wax



Process for staking sub-Assy



Inspection process

Quality



Response tester



Valve performance tester



Other test equipment



Precise measurement instrument



Heat cycle endurance tester

Asey profile

Corporate Identity

Our principle is to meet the customer's desire precisely, not to persuade customers to understand about the product which we think to be good. To think always in the direction that we can achieve being proud of making something.



Outline

Company Name	Asey Industry Co., Ltd.
Address	〒243-0201 4280-1, kamogino, Atsugi-shi, Kanagawa-ken, Japan
Established	1981
Business	Manufacturing&sales of Temperature Control and Monitor Goods
Common Stock	JP 67,000,000yen
Employees	30
Directors	President: Mr. Ken Odashiro
Main Customers	Indicator business: Japan Railroad Company Panel Board Manufacturer Electric Power Company Electrical Safety Inspection Association Electronics maker food-related company Medical care/pharmaceutical associated company etc WTE business: House Equipment Association Company etc

Company Career

1981	Asey was established
1982	Company started to develop WTE
1987	Asey original WTE was born(For steam trap)
1990	Company succeeded to develop minuscule hysteresis type WTE
1991	Asey minuscule hysteresis type WTE was used in market
1999	Company invented temperature monitor label named ATCS(Asey Thermo Colour Sensor)
2000	ATCS was started to use in Electrical Safety Inspection Association
2002	Company developed sales market for ATCS
2004	ATCS was started to use in Japan Railroad Company and Electric Power Company Company started mass production of the Temperature Monitor Sensor for semiconductor
2006	Our wax type temperature monitor ink won Chairperson encouragement prize of Japan Electrical Construction Association, Inc at an product contest of Electrical Construction Equipment and Materials Fair 2006
2008	Sterilization label and Low temperature indicator sales start
2009	The humidity indicator sales start

Origin



We do development, production and the sale of various indicators



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E-mail : info@asey.co.jp

- August 11, 2009 publication -

Temperature monitoring
label (irreversible)

Temperature monitoring
label (irreversible)

Temperature monitoring
label for Semiconductor

Liquid crystal display

Temperature monitoring
label (combination-reversible)

Humidity indicator

Low temperature
indicator

Submergence label

Sterilization label

Asey Profile