Semiconductors

High-power detection through processing bath

# Detection of wafers remaining in the cleaning bath



**Product name** 

Discrete sensors

Chemical-resistant fiber-optic sensors

Model No.

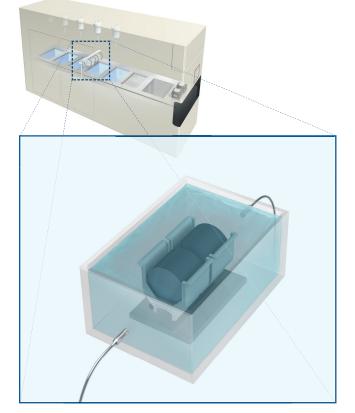
**HPF-T029** 

Process and equipment name

Front-end processes, batch cleaning system

# **Current Situation**

- Problems are caused by wafers remaining in the processing bath.
- Chemicals sometimes splash out of the processing bath.
- Optical fiber is cut according to the distance from the unit to the amplifier.



# **Current Issues**

#### **Problem 1**

Light is insufficient because it comes through the processing bath, because chemical solution is cloudy, etc.

#### Problem 2

Splashed chemicals corrode the fiber jacket, reducing the amount of light.

#### **Problem 3**

Chemical-resistant fiber-optic sensors are inconvenient because PFA tube and fiber must be cut separately.

BU No.: DIS-03-004



## **Built-in lens for high power**

HPF-T029 is a high-power model with a built-in lens. High power is equivalent to max. installation distance of 3500 mm (HPX-EG50/51 in HP mode).

# Solution 2

## PFA protection for chemical resistance

A highly chemical-resistant PFA tube is used. PFA tubes are time-proven with many different cleaning-system chemicals.

# Solution 3

### Significant reduction in installation work

For chemical-resistant transparent fiber, the O.D. of the PFA tube is the same as the diameter of the insertion hole in the amplifier (2.2 mm), so the fiber can be cut while in the PFA tube and inserted as is into the amplifier.

#### Lineup of chemical-resistant fiber-optic sensors

Method	Through-beam			Diffuse reflection
Model No.	HPF-T029	HPF-T029E	HPF-T035	HPF-D014
Shape	-30-+70°C	-30 - +70 °C	-30 - +70 °C	-30 - +70 °C
Direction of light	Top-view sensor	Top-view sensor	Side-view sensor	Top-view sensor
Built-in lens	0	_	_	_
Outer diameter of PFA tube	φ2.2	φ2.2	φ2.2	φ5

#### Installation man-hours greatly reduced

Simply cut PFA-jacketed cable and insert into amp.



#### Space-saving

Small 2.2 mm O.D. tube saves considerable space compared with previous models, and bend radius is also greatly improved.



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# Azbil Corporation

Advanced Automation Company

Yamatake Corporation changed its name to Azbil Corporation on April 1, 2012.

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