

HPF-D028 SERIES Limited Diffuse Scan Fiber Units

3 types of limited diffuse scan sensor

Scanning distance

7.4mm



Scanning distance

5.2mm

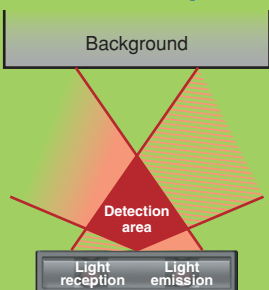


Scanning distance

2.5mm

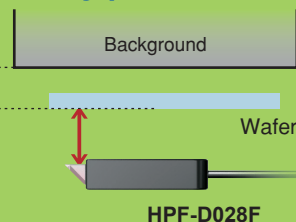


Detection principle



Since detection can take place only in the limited area where emitting and receiving zones overlap, detection at a specified distance is possible. Factors like the background and target object color have little effect.

Key points for adjustment



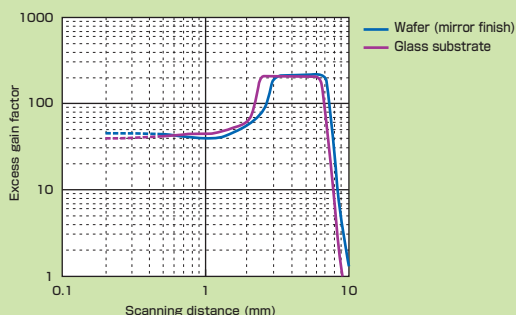
For reliable detection, it is important to ensure plenty of difference between the level of light reflected from the background and from a wafer. In the graph below, with an LO (light ON) output mode and set value of 5000, wafers will be detected within approx. a 3 to 7 mm range (No. 1). Even if the reflection rate of the background is the same as that of the wafer, if the background is approx. 10 mm from the sensor (No. 2), almost none of its reflected light will reach the sensor, ensuring reliable detection. For limited diffuse scan sensors, it is important not only to tune at the set value, but also to make sure that the installation is appropriate for the detection characteristics.

Note: Effects from the background differ depending on the properties of its surface.

Excess gain

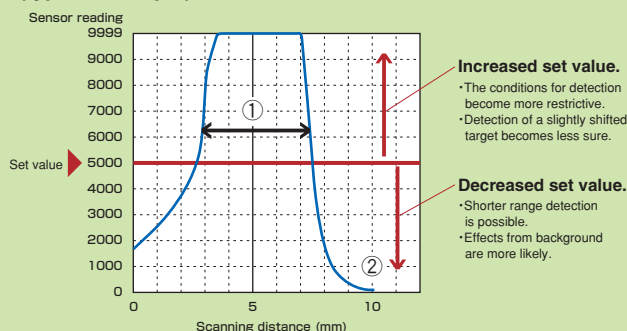
HPF-D028F

Amplifier: HPX-AG series, nL3



Incoming light level characteristics (typical example)

Amplifier: HPX-AG series, nL3



Catalog listing

Type	Appearance (Unit: mm)	Scanning distance (mm) when used with HPX-AG	Features	Bend radius (mm)	Catalog listing
Limited diffuse scan		HP3 mode 2.5±0.5	Limited diffuse scan Free cut 2m	R15	HPF-D028
		HP3 mode 7.4±1.6			HPF-D028T
		HP3 mode 5.2±1.6			HPF-D028F

External dimensions (Unit: mm)

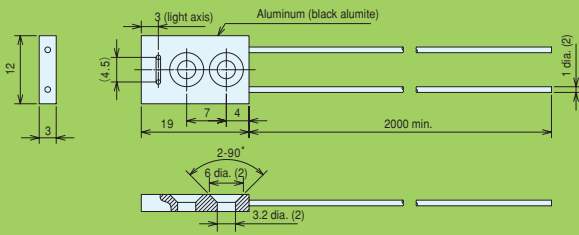
HPF-D028

R15

-30 to +70°C

2.5±0.5mm

Free cut



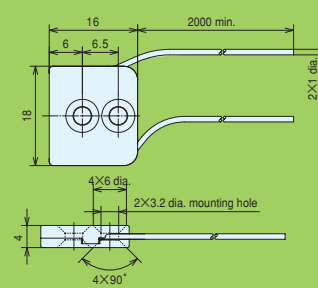
HPF-D028T

R15

-30 to +70°C

7.4±1.6mm

Free cut



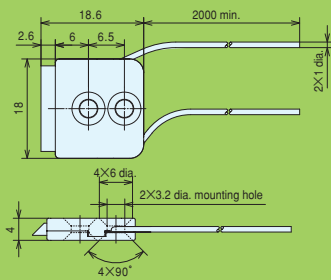
HPF-D028F

R15

-30 to +70°C

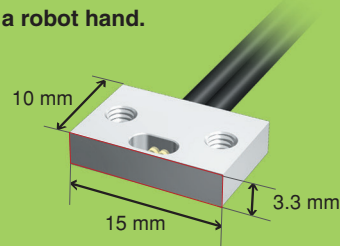
5.2±1.6mm

Free cut



Related products

● A thin fiber unit which can be used for wafer detection in locations with limited mounting space, such as a robot hand.

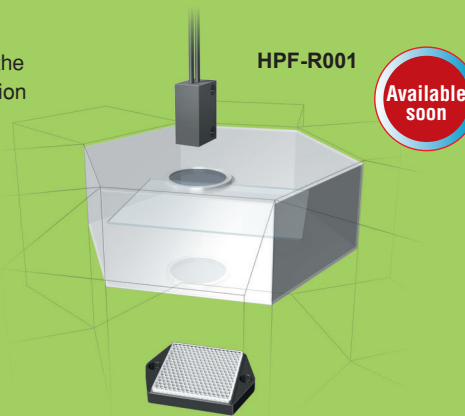


HPF-D045LF

● **Detection of glass substrate through a view port**

By using a polarized retroreflective diffuse scan fiber unit for the detection of glass substrate through a view port, direct reflection of light from the view port or workpiece can be prevented. In addition, since light passes through the glass substrate twice, there is sufficient difference in light quantity to ensure reliable detection.

Note: View ports made of resin may disrupt the polarization of light, making reliable detection difficult.



HPF-R001

Available soon

Please read the "Terms and Conditions" from the following URL before ordering or use:

<http://www.azbil.com/products/bi/order.html>

Other product names, model numbers and company names may be trademarks of the respective company.

[Notice] Specifications are subject to change without notice. No part of this publication may be reproduced or duplicated without the prior written permission of Azbil Corporation.

Azbil Corporation
Advanced Automation Company

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

1-12-2 Kawana, Fujisawa
Kanagawa 251-8522 Japan

URL: <http://www.azbil.com>

1st Edition : Issued in Nov. 2007-ST
2nd Edition : Issued in Mar. 2013-AZ