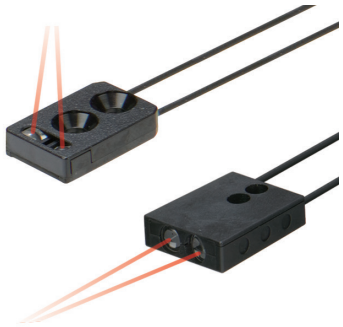
12 Limited diffuse reflective type

Related products
Fiber amplifier D3RF P.110
Fiber amplifier BRF P.130

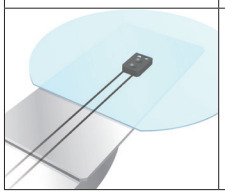
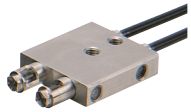


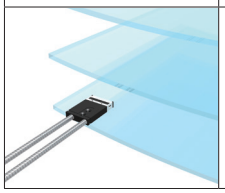
Detection at a limited distance for mapping and alignment

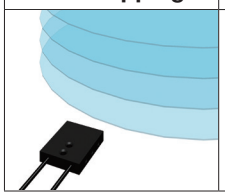
Most number of models in the industry with 14 total models

Detects glass substrate

Five types for detecting existence, five types for alignment, and one for mapping are available, making for a total of 11. Selection is possible between flexible types, heat resistant types, and vacuum resistant types.

Existence detection	NF-DC38	NF-DC07	NF-DH08	NF-DH06
	Low cost 	Standard 	Heat resistant to 180°C 	Heat resistant to 300°C 

Alignment	NF-DC05	NF-DC06	NF-DC04	NF-DH10	NF-DH11
	Standard  Also supports PCB deflection	Flexible  Also supports PCB deflection	Flexible  For long range alignment	Heat resistant to 250°C  Also supports PCB deflection	Long range, heat resistant to 250°C  Also supports PCB deflection

Wafer mapping	NF-DC03
	Standard  Also detects glass substrate of 0.5 mm in thickness

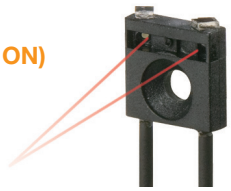
For mapping with through-beam type and retro-reflective type fibers→P.74

General-purpose use

Three general-purpose models are available

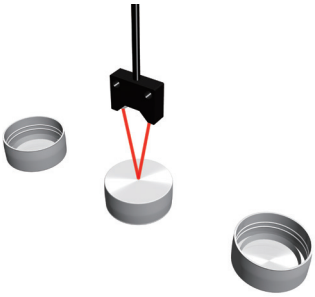
NF-DC09 (Head ON)

NF-DC08 (Small Flat ON)

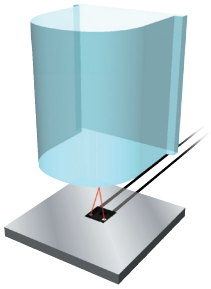


NF-DC39 (Flat ON)

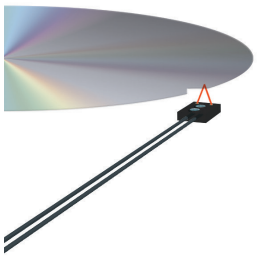
Cap orientation detection



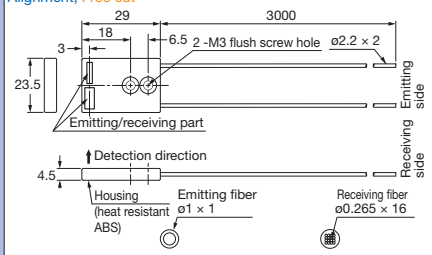
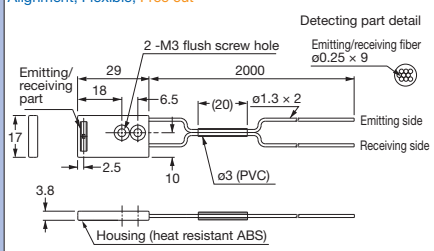
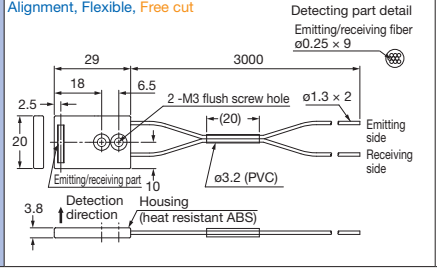
Hoop existence detection



Wafer notch detection

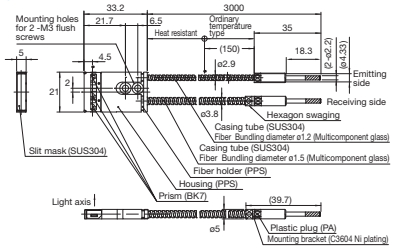
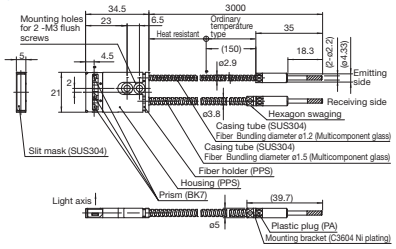
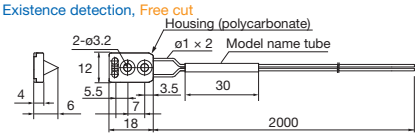
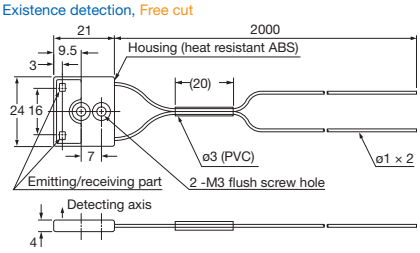
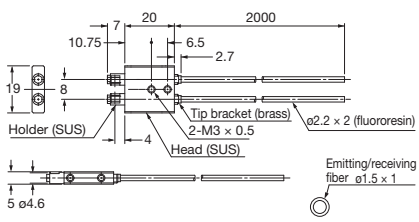
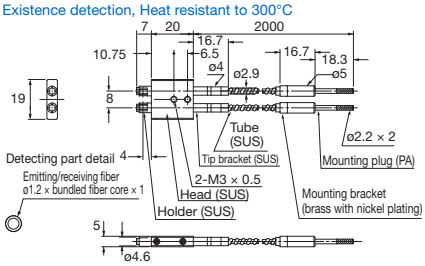


Limited diffuse reflective type fiber units (glass substrate detection)

Type		Features/dimensions (mm)	Sensing distance (mm) D3RF	Sensing distance (mm) D2RF	Sensing distance (mm) BRF	Ambient temperature	Min. bending radius (mm)	Model
Glass substrate detection	Flat ON	Alignment, Free cut 	7-EL 3 to 44 6-UL 4 to 39 5-PL 4 to 38 4-LG 4 to 37 3-ST 4 to 35 2-FS 6 to 29 1-HS 9 to 18	Long 7 to 32 Std 10 to 25 Fast 10 to 18	15	0 to +70°C	R25	NF-DC05
		Alignment, Flexible, Free cut 	7-EL 0 to 23 6-UL 0 to 23 5-PL 0 to 22 4-LG 0 to 22 3-ST 0 to 21 2-FS 0 to 20 1-HS 5 to 13	Long 0 to 23 Std 0 to 17 Fast 0 to 12	15	0 to +70°C	R4	NF-DC06
		Alignment, Flexible, Free cut 	7-EL 0 to 38 6-UL 0 to 38 5-PL 0 to 38 4-LG 0 to 38 3-ST 0 to 34 2-FS 0 to 31 1-HS 4 to 22	Long 0 to 36 Std 0 to 30 Fast 0 to 15	Unusable	0 to +70°C	R4	NF-DC04

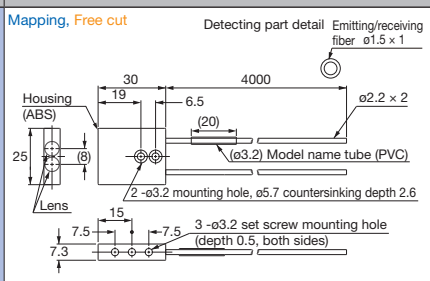
●Install with an ambient humidity between 35 and 85%. In the case of 85% RH, the ambient temperature should be between 0 and 40°C.

Limited diffuse reflective type fiber units (glass substrate detection)

Type	Features/dimensions (mm)	Sensing distance (mm) D3RF	Sensing distance (mm) D2RF	Sensing distance (mm) BRF	Ambient temperature	Min. bending radius (mm)	Model
Glass substrate detection / Flat ON	Alignment, Heat resistant to 250°C 	7-EL 2 to 28 6-UL 2 to 24 5-PL 2 to 23 4-LG 3 to 23 3-ST 3 to 20 2-FS 3 to 18 1-HS 4 to 11	Long 4 to 20 Std 4 to 20 Fast 4 to 15	4 to 17	-20 to +250°C (Normal temperature side: -20 to +70°C)	R25	NF-DH10
	Alignment, Heat resistant to 250°C 	7-EL 2 to 45 6-UL 3 to 40 5-PL 3 to 39 4-LG 3 to 38 3-ST 4 to 35 2-FS 6 to 28 1-HS 8 to 19	Long 6 to 38 Std 7 to 30 Fast 8 to 25	8 to 25	-20 to +250°C (Normal temperature side: -20 to +70°C)	R25	NF-DH11
	Existence detection, Free cut 	7-EL 0 to 12 6-UL 0.5 to 11 5-PL 1.5 to 10 4-LG 1.5 to 10 3-ST 2.5 to 8 2-FS 3.5 to 7.5 1-HS 4.5 to 6	Long 2 to 9 Std 4 to 8 Fast 5 to 6	3.5 to 7	-40 to +60°C	R10	NF-DC38 Low cost
	Existence detection, Free cut 	7-EL 3 to 16 6-UL 3 to 14 5-PL 4 to 14 4-LG 5 to 14 3-ST 5 to 13 2-FS 5 to 11 1-HS 7 to 8	Long 4 to 15 Std 5 to 12 Fast 7 to 10	7	-40 to +60°C	R10	NF-DC07
	Existence detection, Heat resistant to 180°C, Free cut 	7-EL 0 to 35 6-UL 0 to 28 5-PL 0 to 25 4-LG 0 to 22 3-ST 0 to 20 2-FS 0 to 9 1-HS 3 to 4	Long 0 to 20 Std 0 to 10 Fast 0 to 8	10	-60 to +180°C	R25	NF-DH08
	Existence detection, Heat resistant to 300°C 	7-EL 0 to 40 6-UL 0 to 34 5-PL 0 to 22 4-LG 0 to 18 3-ST 0 to 17 2-FS 0 to 9 1-HS 0 to 4	Long 0 to 15 Std 0 to 10 Fast 0 to 8	6	-30 to +300°C or -60 to +200°C	R25	NF-DH06

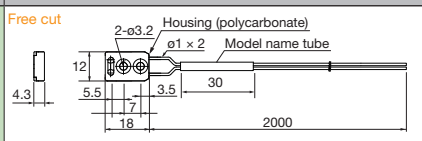
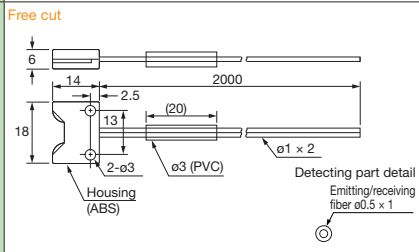
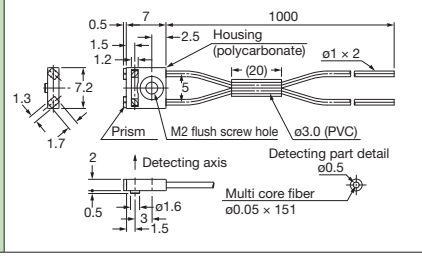
●Install with an ambient humidity between 35 and 85%. In the case of 85% RH, the ambient temperature should be between 0 and 40°C.

Limited diffuse reflective type fiber units (glass substrate detection)

Type		Features/dimensions (mm)	Sensing distance (mm) D3RF	Sensing distance (mm) D2RF	Sensing distance (mm) BRF	Ambient temperature	Min. bending radius (mm)	Model
Glass substrate detection	Head ON	Mapping, Free cut 	7-EL 2 to 310 6-UL 3 to 160 5-PL 4 to 130 4-LG 5 to 120 3-ST 5 to 110 2-FS 10 to 95 1-HS 12 to 60	Long 10 to 55 Std 10 to 45 Fast 13 to 35	55	-40 to +60°C	R25	NF-DC03

●Install with an ambient humidity between 35 and 85%. In the case of 85% RH, the ambient temperature should be between 0 and 40°C.

Limited diffuse reflective fiber units (general-purpose)

Type		Features/dimensions (mm)	Sensing distance (mm) D3RF	Sensing distance (mm) D2RF	Sensing distance (mm) BRF	Ambient temperature	Min. bending radius (mm)	Model
General-purpose	Flat ON	Free cut 	7-EL 1.5 to 4 6-UL 0 to 4 5-PL 0 to 4 4-LG 0 to 4 3-ST 0 to 4 2-FS 0 to 4 1-HS 0 to 4	Long 0 to 4 Std 0 to 4 Fast 0 to 4	0 to 4	-40 to +60°C	R10	NF-DC39 Low cost
	Head ON	Free cut 	7-EL 0 to 15 6-UL 5 to 12 5-PL 5 to 11 4-LG 6 to 11 3-ST 6 to 10 2-FS 7 to 9 1-HS 6 to 7	Long 4.5 to 11 Std 4.5 to 10 Fast 4.5 to 10	6	-40 to +70°C	R10	NF-DC09
	Flat ON	Ultra-small, Flexible, Free cut 	7-EL 0 to 9 6-UL 0 to 8 5-PL 0 to 7 4-LG 0 to 6 3-ST 2 to 5 2-FS 2 to 3 1-HS 1 to 2	Long 1 to 7 Std 1 to 5.5 Fast 1 to 3	3	-20 to +60°C	R1	NF-DC08

●The sensing distances for the diffuse type fiber units are values on 500 × 500 mm white paper.
●Install with an ambient humidity between 35 and 85%. In the case of 85% RH, the ambient temperature should be between 0 and 40°C.