

## HEAT RESISTANT(200°C~300°C)



Wide selection of rugged fiber cables for reliable detection in high temperature areas

## Thru-beam, Diffuse, Limited diffuse type

We have 3 thru-beam types, 3 diffuse types and 3 limited diffuse type.

Limited diffuse



### Specifications (Thru-beam)

Operating humidity is 35~85%RH. Please use in 0~40°C when it's 85%RH.

Specifications (Diffuse)

| Sensing head                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Sensing distance (unit:mm)<br>Value in parenthesis is the Minimum detectable object size, (copper wire)  |                                         |     | Operation temperature<br>(℃~℃) | Radius<br>(mm)                  | Part Number |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------|-----|--------------------------------|---------------------------------|-------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | D3RF                                                                                                     | D2RF                                    | BRF |                                |                                 |             |
| <p><b>Coaxial</b></p> <p>Heat/Cold resistant ordinary temperature side</p> <p>detecting part detail<br/>receiver:<br/>inner diameterφ1.8<br/>outer diameterφ2.2<br/>fiberx1</p> <p>joint (brass-nickelplating)</p> <p>2000</p> <p>16.7 18.3</p> <p>φ4 (SUS)</p> <p>M6x0.75 (SUS)</p> <p>emitter: φ1.3 fiberx1</p> <p>φ5 (SUS)</p> <p>φ3.8 (silicone)</p> <p>φ5 (SUS)</p> <p>mounting bracket (brass-nickelplating)</p> <p>width across flats 10 thickness2 (SUS)</p> <p>mounting plug (PA)</p> <p>tooth lock washerφ11 (SUS)</p> | 7-EL<br>940<br>6-UL<br>890<br>5-PL<br>770<br>4-LG<br>670<br>3-ST<br>440<br>2-FB<br>190<br>1-HS<br>50     | Long<br>650<br>Std<br>250<br>Fast<br>80 | 150 | -30~350<br>or<br>-60~200       | R=25                            | NF-DH03     |
| <p><b>φ2.1 Sleeve90mm</b></p> <p>bend tolerant</p> <p>detecting part detail<br/>receiver:<br/>φ50μm×380</p> <p>φ2.1 (SUS)</p> <p>φ3</p> <p>tooth lock washer φ8.5 (SUS)</p> <p>width across flats 7 thickness2.4 (SUS)</p> <p>M4x0.7</p> <p>φ3.1</p> <p>liner+blade tube (SUS)</p> <p>joint</p>                                                                                                                                                                                                                                  | 7-EL<br>1,110<br>6-UL<br>1,050<br>5-PL<br>910<br>4-LG<br>800<br>3-ST<br>520<br>2-FB<br>190<br>1-HS<br>50 | Long<br>750<br>Std<br>250<br>Fast<br>80 | 200 | -30~350<br>or<br>-60~200       | Fiber<br>R=25<br>Sleeve<br>R=10 | NF-DH05     |
| <p><b>φ2.8 Sleeve60mm</b></p> <p>detecting part detail</p> <p>Heat/Cold resistant ordinary temperature side</p> <p>joint (brass-nickelplating)</p> <p>2000</p> <p>16.7 18.3</p> <p>φ4 (SUS)</p> <p>M6x0.75 (SUS)</p> <p>emitter+ receiver divided half</p> <p>φ2.8 (SUS)</p> <p>φ5 (SUS)</p> <p>φ3 (silicone)</p> <p>φ5 (SUS)</p> <p>mounting bracket (brass-nickelplating)</p> <p>width across flats 10 thickness2 (SUS)</p> <p>mounting plug (PA)</p> <p>tooth lock washerφ11 (SUS)</p>                                        | 7-EL<br>950<br>6-UL<br>900<br>5-PL<br>780<br>4-LG<br>680<br>3-ST<br>450<br>2-FB<br>200<br>1-HS<br>59     | Long<br>650<br>Std<br>250<br>Fast<br>80 | 300 | -30~350<br>or<br>-60~200       | Fiber<br>R=25<br>Sleeve<br>R=10 | NF-DH04     |

Operating humidity is 35~85%RH. Please use in 0~40℃ when it's 85%RH.  
Sensing distance of diffuse type is for 500 x 500mm white paper.

Specifications (Limited Diffuse)

| Sensing head                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Sensing distance (unit:mm)<br>Value in parenthesis is the Minimum detectable object size, (copper wire)      |                                             |      | Operation temperature<br>(℃~℃)        | Radius<br>(mm) | Part Number |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------|------|---------------------------------------|----------------|-------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | D3RF                                                                                                         | D2RF                                        | BRF  |                                       |                |             |
| <p><b>300℃</b></p> <p><b>Detect glass</b></p> <p>10.75 20 16.7 2000 6.5 16.7 18.3</p> <p>φ2.9</p> <p>φ5</p> <p>φ2.2x2</p> <p>mounting plug (PA)</p> <p>mounting bracket (brass-nickelplating)</p> <p>tip bracket (SUS)</p> <p>2-M3x0.5</p> <p>head (SUS)</p> <p>holder (SUS)</p> <p>φ4.6</p>                                                                                                                                                                                                                                                                                                         | 7-EL<br>0~40<br>6-UL<br>0~34<br>5-PL<br>0~22<br>4-LG<br>0~18<br>3-ST<br>0~17<br>2-FB<br>0~9<br>1-HS<br>0~4   | Long<br>0~15<br>Std<br>0~10<br>Fast<br>0~8  | 6    | -30~300<br>or<br>-60~200              | R=25           | NF-DH06     |
| <p><b>Limited diffuse</b></p> <p><b>250℃</b></p> <p><b>Glass plate alignment Flat ON</b></p> <p>33.2 3000 6.5 35 18.3 16.7 18.3</p> <p>2-M3 1/8 turn hole</p> <p>Heat/Cold resistant ordinary temperature side</p> <p>φ2.1</p> <p>φ3</p> <p>hexagon caulking</p> <p>casing tube (SUS304)</p> <p>fiber bundle1.2 (multi component glass)</p> <p>casing tube (SUS304)</p> <p>fiber bundle1.5 (multi component glass)</p> <p>fiber holder (PPS)</p> <p>case (PPS)</p> <p>prism (BK7)</p> <p>plastic plug (PA)</p> <p>fixed metal (C3604 Nickel plating)</p> <p>optical axis</p> <p>φ5</p> <p>(39.7)</p> | 7-EL<br>2~28<br>6-UL<br>2~24<br>5-PL<br>2~23<br>4-LG<br>3~23<br>3-ST<br>3~20<br>2-FB<br>3~18<br>1-HS<br>4~11 | Long<br>4~20<br>Std<br>4~20<br>Fast<br>4~15 | 4~17 | -20~250<br>(ordinary temp.<br>-20~70) | R=25           | NF-DH10     |
| <p><b>250℃</b></p> <p><b>Glass plate alignment Flat ON</b></p> <p>34.5 3000 6.5 35 18.3 16.7 18.3</p> <p>2-M3 1/8 turn hole</p> <p>Heat/Cold resistant ordinary temperature side</p> <p>φ2.1</p> <p>φ3</p> <p>hexagon caulking</p> <p>casing tube (SUS304)</p> <p>fiber bundle1.2 (multi component glass)</p> <p>casing tube (SUS304)</p> <p>fiber bundle1.5 (multi component glass)</p> <p>fiber holder (PPS)</p> <p>case (PPS)</p> <p>prism (BK7)</p> <p>plastic plug (PA)</p> <p>fixed metal (C3604 Nickel plating)</p> <p>optical axis</p> <p>φ5</p> <p>(39.7)</p>                               | 7-EL<br>2~45<br>6-UL<br>3~40<br>5-PL<br>3~39<br>4-LG<br>3~38<br>3-ST<br>4~35<br>2-FB<br>6~28<br>1-HS<br>8~19 | Long<br>6~38<br>Std<br>7~30<br>Fast<br>8~25 | 8~25 | -20~250<br>(ordinary temp.<br>-20~70) | R=25           | NF-DH11     |

Operating humidity is 35~85%RH. Please use in 0~40℃ when it's 85%RH.