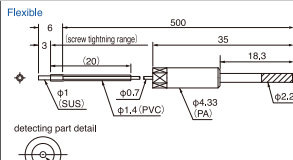
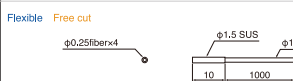
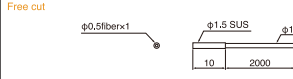

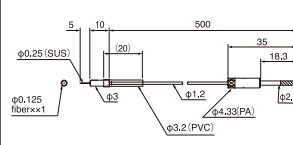
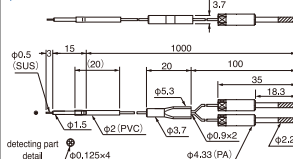


Specifications (Thru-beam/Diffuse)

Sensing head		Sensing distance (unit:mm)			Operation temperature (℃~℃)	Radius (mm)	Part Number		
		D3RF	D2RF	BRF					
Thru-beam	φ1		7-EL 54 6-UL 50 5-PL 44 4-LG 38 3-ST 25 2-FS 15 1-HS 5	Long 30 Std 18 Fast 8	10	-40~60	R=4	NF-TR04	
	φ1.5		7-EL 850 6-UL 550 5-PL 450 4-LG 400	3-ST 275 2-FS 150 1-HS 50	Long 350 Std 200 Fast 90	110	-40~70	R=4	NF-TR03
	φ1.5		7-EL 900 6-UL 550 5-PL 400 4-LG 350	3-ST 250 2-FS 140 1-HS 45	Long 350 Std 200 Fast 90	120	-40~70	R=15	NF-TM03
	φ3		7-EL 170 6-UL 110 5-PL 80 4-LG 70	3-ST 50 2-FS 140 1-HS 45	Long 80 Std 40 Fast 20	30	-40~70	R=15	NF-TT01
	φ3		7-EL 27 6-UL 25 5-PL 21 4-LG 18 3-ST 12 2-FS 7 1-HS 2	Long 6 Std 3.5 Fast 2	1	-40~70	R=5	NF-TP01	
Diffuse	φ1.5		7-EL 28 6-UL 26 5-PL 23 4-LG 20 3-ST 13 2-FS 3 1-HS 1	Long 18 Std 5 Fast N.A.	3	-40~60	R=10	NF-DP01	

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

SCREEN BEAM ARRAY



NF-TS40 series

40 x 3.5mm Beam Array type with SUS (stainless steel) mounting metal.

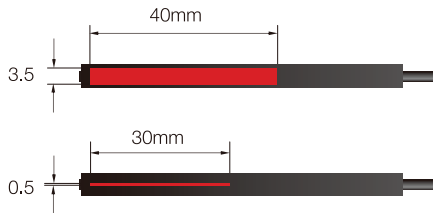
SUS (stainless steel) mounting

A rugged Stainless Steel mounting enables tough tightening of mounting position without breaking the mounting hole.



Adjustable line beam

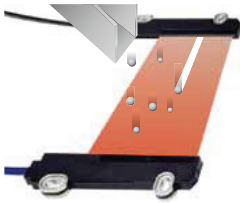
40 x 3.5mm area of Beam Array is possible to change by using optional slit that limits the array into 30 x 0.5mm



Fine sensing of 0.4mm diameter

The Clear optical system of the NF-TS40 ensures 0.4mm diameter detection at a 3500mm sensing distance (with D3RF amplifier)

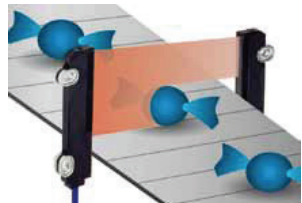
Applications



Control of dropping pills

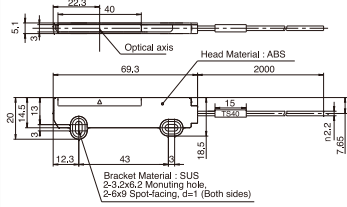


Control of meandering sheet



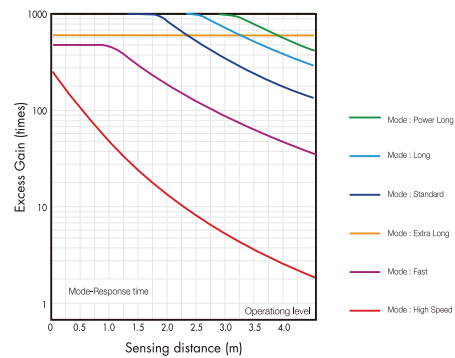
Counting on a conveyor

Specifications (Thru-beam/Diffuse)

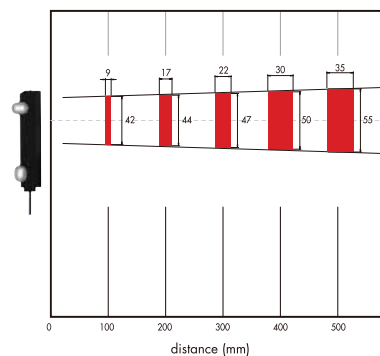
Sensing head	Sensing distance (unit:mm)			Operation temperature (°C ~ °C)	Radius (mm)	Part Number
	D3RF	D2RF	BRF			
	7-EL 3,500	Long 3,600 Std 3,600 Fast 3,600	300	-40~70	R=2	NF-TS40
	6-UL 3,500					
	5-PL 3,500					
	4-LG 3,500					
	3-ST 3,500					
	2-FS 3,000					
	1-SS 2,500					

Model	NF-TS40
Sensing Range (D3RF amplifier)	0 - 4mm
Spot Size	φ4mm @ 4mm
Bending Radius	R10
Fiber Length	2000mm Free cut
Ambient Temp	-40~+60°C
Storage Temp	-40~+70°C
Dimensions (W x D x H)	12 x 18 x 4.3 mm
Material	Base, Cover: PC Fiber: PMMA
Torque	3kgfcm max.
Weight	7g

Excess Gain Curves (Typical Value)



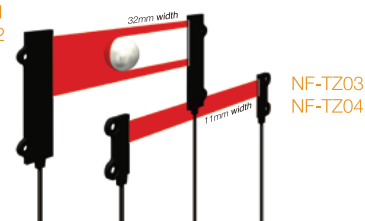
Spot size



Screen array

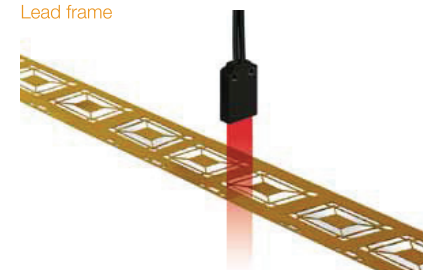
It can detect object going through an area utilizing beam screen. It's effective when the position of the object goes through is not stable. We have 11mm width and 32mm width types.

NF-TZ01
NF-TZ02



NF-DZ01 is head ON type screen array, 2×15mm, fiber unit that can detect object with holes.

Lead frame



Slit masks can be used to shorten detection distance and for very small object detection.

The screen array beam is very collimated which helps prevent cross talk between sensors.

Beam array

Beam array fibers that have core fibers aligned are also available.

Thru-beam type

NF-TZ05 Head ON



NF-TZ06 Side ON



Diffuse type

NF-DZ02 Head ON



NF-DZ03 Side ON



NF-TS10 Head ON



NF-TS14 Head ON



FD-ML02



Specifications (Thru-beam)

Sensing head		Sensing distance (unit:mm) Value in parentheses is the Minimum detectable object size. (copper wire)			Operation temperature (°C ~ °C)	Radius (mm)	Part Number
		D3RF	D2RF	BRF			
Thru-beam		7-EL 3,700 6-UL 3,000 5-PL 3,000 4-LG 2,200 3-ST 2,500 2-FS 2,000 1-HS 1,500	Long 3,500 Std 2,500 Fast 1,800	2,500	-40~70	R=2	NF-TZ10
		7-EL 3,700 6-UL 3,000 5-PL 3,000 Std 3,000 3-ST 2,500 2-FS 2,000 1-HS 1,000	Long 3,000 Std 2,500 Fast 1,200	2,000	-40~55	R=1	NF-TZ09
		7-EL 3,700 6-UL 3,700 5-PL 3,700 4-LG 3,700 3-ST 3,700 2-FS 3,000 1-HS 2,500	Long 3,700 Std 3,000 Fast 2,500	2,500	-40~60	R=2	NF-TZ08
		7-EL 3,700 6-UL 3,700 5-PL 3,700 4-LG 3,700 3-ST 3,700 2-FS 3,000 1-HS 2,500	Long 3,700 Std 3,000 Fast 2,500	2,500	-40~55	R=1	NF-TZ07
	5.25mm Screen beam array Head ON Free cut 	7-EL 1,350 6-UL 1,260 5-PL 1,170 4-LG 990 3-ST 660 2-FS 400 1-HS 130	Long 650 Std 400 Fast 250	300	-40~70	R=25	NF-TZ05
	5.25mm Screen beam array Side ON Free cut 	7-EL 1,440 6-UL 1,350 5-PL 1,170 4-LG 1,080 3-ST 710 2-FS 430 1-HS 130	Long 650 Std 400 Fast 250	300	-40~70	R=25	NF-TZ06
	5.25mm Screen beam array Head ON Free cut 	7-EL 4,000 6-UL 1,600 5-PL 1,000 4-LG 900	3-ST 650 2-FS 330 1-HS 100	330	-40~70	R=25	NF-TS10
	10.5mm Screen beam array HeadON Free cut 	7-EL 4,000 6-UL 1,600 5-PL 1,000 4-LG 900	3-ST 650 2-FS 330 1-HS 100	330	-40~70	R=25	NF-TS14

[illegible]