

Specifications (Thru-beam/Diffuse)

	Sensinghead	Sensingdistance(unit=mm) Value in parenthesis is the Minimum detectable object size. (copper wire)			Operation temperature (°C / °C)	Radius (mm)	PartNumber	
		D3RF	D2RF	BRF				
Thru-beam	Flexible 	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	
	Flexible Free cut 	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
	Free cut 	7-EL 900 6-UL 550 5-PL 400 350	3-ST 250 2-FS 140 1-HS 45	Long 350 Std 200 Fast 90	120	-40~70	R=15	NF-TM03
	φ0.5 Sleeve:5mm Free cut 	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
	φ0.25 Super-slim Sleeve:5mm 	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	φ0.5 Sleeve:3mm 	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 □□□	□	-40~60	R=10	NF-DP01	

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

SCREEN BEAM ARRAY



NF-TS40 series

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

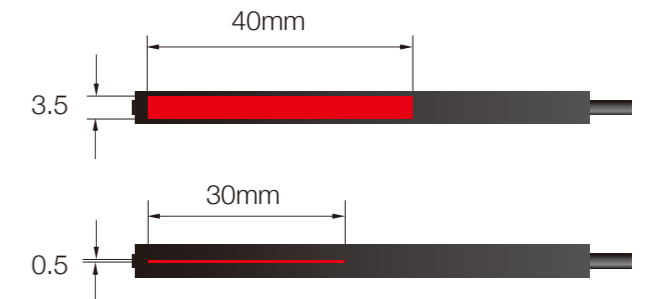
SUS (stainless steel) mounting

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)

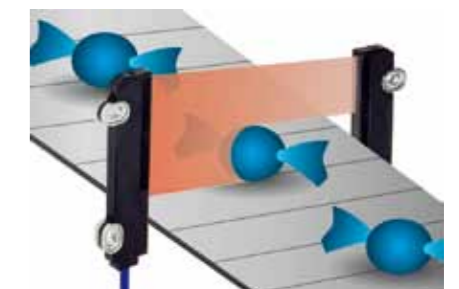
Applications



Control of dropping pills

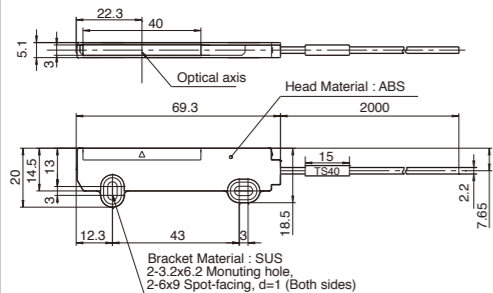


Control of meandering sheet



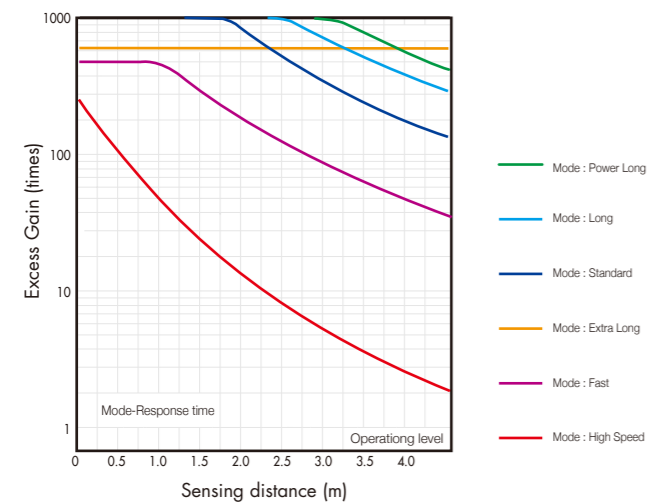
Counting on a conveyor

Specifications (Thru-beam/Diffuse)

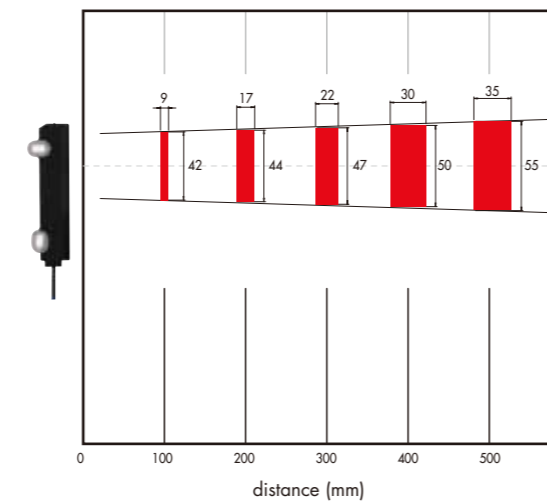
Sensinghead	Sensingdistance(unit=mm) Value in parenthesis is the Minimum detectable object size. (copper wire)			Operation temperature (°C / °C)	Radius (mm)	PartNumber
	D3RF	D2RF	BRF			
	7-EL 3,500	Long 3,600 Std 3,600 Fast 3,600	300	-40~70	R=2	NF-TS40
	6-UL 3,500					
	5-PL 3,500					
	4-LG 3,500					
	3-ST 3,500					
	2-FS 3,000					
	1-HS 2,500					

Model	NF-TS40
SensingRange(D3RFamplifier)	0 - 4mm
SpotSize	φ4mm @ 4mm
BendingRadius	R10
FiberLengthth	2000mm Free cut
AmbientTemp	-40 ~ +60°C
StorageTemp	-40 ~ +70°C
Demensions(WxDxH)	12 □ 18 □ 4.3 mm
Material	Base , Cover : PC Fiber : PMMA
Torque	3kgfcm max.
Weight	7g

Excess Gain Curves (Typical Value)



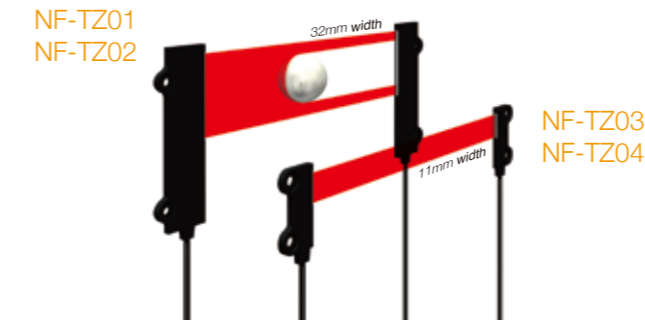
Spot size



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-DZ01 is head ON type screen array, 2x15mm, fiber unit that can detect object with holes.



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.



Specifications (Thru-beam)

	Sensinghead	Sensingdistance(unit=mm) Value in parenthesis is the Minimum detectable object size. (copper wire)			Operation temperature (°C)	Radius (mm)	PartNumber	
		D3RF	D2RF	BRF				
Thru-beam	11mm Screen beam array:Side ONI Free cut 	7-EL 3,600 6-UL 3,600 5-PL 3,600 4-LG 3,240 3-ST 2,100 2-FS 2,100 1-HS 900	Long 3,500 Std 3,000 Fast 1,500	2,900	-40~70	R=10	NF-TZ04	
	11mm Screen beam array:Flexible:Side ONI Free cut 	7-EL 3,600 6-UL 3,600 5-PL 3,600 4-LG 3,240 3-ST 2,100 2-FS 2,100 1-HS 1,400	Long 3,500 Std 3,500 Fast 3,500	1,900	-40~55	R=1	NF-TZ03	
	32mm Screen beam array:Side ONI Free cut 	7-EL 3,600 6-UL 3,600 5-PL 3,600 4-LG 3,240 3-ST 2,100 2-FS 2,100 1-HS 1,400	Long 3,500 Std 3,500 Fast 3,500	3,500	-40~60	R=10	NF-TZ02	
	32mm Screen beam array:Flexible:Side ONI Free cut 	7-EL 3,600 6-UL 3,600 5-PL 3,600 4-LG 3,240 3-ST 2,100 2-FS 2,100 1-HS 1,400	Long 3,500 Std 3,500 Fast 3,500	3,500	-40~55	R=1	NF-TZ01	
	5.25mm Screen beam array:Head ONI 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 ONI 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 ONI 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	Long 800 Std 500 Fast 250	330	-40~70	R=25	NF-TS10
	10.5mm Screen beam array:Head ONI 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	Long 800 Std 500 Fast 250	330	-40~70	R=25	NF-TS14

Specifications (Thru-beam/Diffuse)

	Sensinghead	Sensingdistance(unit=mm) Value in parenthesis is the Minimum detectable object size. (copper wire)			Operation temperature (°C)	Radius (mm)	PartNumber
		D3RF	D2RF	BRF			
Thru-beam	13mm Screen beam array Head ONI Free cut 	7-EL 4,000 6-UL 1,500 5-PL 1,400 4-LG 1,200 3-ST 800 2-FS 400 1-HS 100	Long 850 Std 500 Fast 250	350	-40~70	R=25	NF-TS28
	Screen beam array:Head ONI Free cut 	7-EL 620 6-UL 580 5-PL 500 4-LG 440 3-ST 280 2-FS 210 1-HS 59	Long 350 Std 250 Fast 100		-40~60	R=25	NF-DZ01
Diffuse	Screen beam array:Head ONI Free cut 	7-EL 560 6-UL 490 5-PL 430 4-LG 270 3-ST 170 2-FS 170 1-HS 51	Long 320 Std 170 Fast 85	130	-40~70	R=25	NF-DZ02
	Screen beam array:Side ONI Free cut 	7-EL 530 6-UL 500 5-PL 440 4-LG 370 3-ST 250 2-FS 140 1-HS 45	Long 320 Std 170 Fast 85	100	-40~70	R=25	NF-DZ03
	Screen beam array:Head ONI Free cut 	7-EL 950 6-UL 500 5-PL 450 4-LG 400 3-ST 250 2-FS 100 1-HS 40	Long 300 Std 180 Fast 80	35	-40~70	R=25	FD-ML02

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