











# NEW PRODUCTS






# HOKUYO

## OPTICAL FIBER UNIT FOR PK7, PK8 AND PX7 SERIES

### Specifications

Kinds	Through-beam type				
	Basic fiber(M4)	Basic fiber(M3)	Basic fiber(Dia. 3mm cylinder)	Fine fiber(M4)	Fine fiber(M3)
Model No.	EP1-321	EP2-321	EP2-321A	EP3-321	EP4-321
Features					
Detectable distance	300mm(120mm)	300mm(120mm)	300mm(120mm)	75mm(35mm)	75mm(35mm)
Detectable objects	Opaque object with 1mm in dia. or more			Opaque object with 0.5mm in dia. or more	
Fiber dia.	1mm	1mm	1mm	0.5mm	0.5mm
Remarks	General purpose	General purpose	General purpose	Minute object detection	Minute object detection
Fiber length	2m long(free-cut)				

Kinds	Through-beam type				
	Fine fiber(Dia. 1.5mm cylinder)	Fine fiber(M3)	Extreme fine fiber(M3)	Fiber for long distance (M4)	Fine fiber for Long distance (M4)
Model No.	EP4-321A	EP3-324	EP5-321	EQ1-321	EQ3-321
Features					
Detectable distance	75mm(35mm)	75mm(35mm)	20mm(15mm)	550mm(400mm)	165mm(100mm)
Detectable objects	Opaque object with 0.5mm in dia. or more		Opaque object with 0.25mm in dia. or more	Opaque object with 1.5mm in dia. or more	Opaque object with 0.9mm in dia. or more
Fiber dia.	0.5mm	0.5mm	0.25mm	1mm	0.5mm
Remarks	Minute object detection	Repeat moving detection	Extreme minute object detection	Long distance detection	Long distance/ Minute object detection
Fiber length	2m long(free-cut)				

Kinds	Through-beam type				
	Basic fiber with sleeve(M4)	Fine fiber with sleeve(M3)	Extreme fine fiber with sleeve(M3)	Side-view fiber with sleeve(M4)	U-shape fiber
Model No.	ES1-321	ES2-321	ES5-321	ESS2-321	FP3-A31
Features	 Sleeve 80mm	 Sleeve 80mm	 Sleeve 15mm	 Sleeve 80mm	
Detectable distance	300mm(120mm)	75mm(35mm)	20mm(15mm)	185mm(75mm)	18mm(18mm) (Fixed)
Detectable objects	Opaque object with 1mm in dia. or more	Opaque object with 0.5mm in dia. or more	Opaque object with 0.25mm in dia. or more	Opaque object with 0.75mm in dia. or more	Marking with 1.5mm in dia. or more
Fiber dia.	1mm	0.5mm	0.25mm	0.75mm	1mm(2 pcs)
Remarks	General purpose	Minute object detection	Extreme minute object detection	Side view detection	Registered mark detection
Fiber length	2m long(free-cut)				





Note) Distance in parenthesis is applied to PX7.

Kinds	Reflection type				
	Basic fiber(M6)	Fine fiber(M4)	Fine fiber(Dia. 3mm cylinder)	Fine fiber with protector	Extreme fine fiber(M3)
Model No.	EP6-321	EP8-321	EP8-321A	EP8-324	EP9-321
Features					
Detectable distance	110mm(50mm)	25mm(15mm)	25mm(15mm)	25mm(15mm)	5mm(3mm)
Min. detectable object	0.03mm in dia.	0.015mm in dia.			
Fiber dia.	1mm(2 pcs)	0.5mm(2 pcs)	0.5mm(2 pcs)	0.5mm(2 pcs)	0.25mm(2 pcs)
Remarks	General purpose	Minute object detection	Minute object detection	Repeat moving detection	Extreme minute object detection
Fiber length	2m long(free-cut)				






Kinds	Reflection type				
	Extreme fine fiber with protector	Coaxial fiber (M4, M6)	Fiber for Long distance(M4)	Fine fiber for long distance(M4)	Basic fiber with sleeve(M6)
Model No.	EP9-322	EP7-321	EQ6-321	EQ8-321	ES6-322
Features					Sleeve 80mm
Detectable distance	5mm(3mm)	110mm(50mm)	165mm(65mm)	40mm(25mm)	110mm(50mm)
Min. detectable object	0.015mm in dia.	0.1mm in dia.	0.03mm in dia.	0.015mm in dia.	0.03mm in dia.
Fiber dia.	0.25mm(2 pcs)	P:1mm(1 pce), R:0.25mm(16 pcs)	1mm(2 pcs)	0.25mm(2 pcs)	1mm(2 pcs)
Remarks	Repeat moving detection	Position detection	Long distance detection	Long distance/Minute object detection	General purpose
Fiber length	2m long(free-cut)				

Kinds	Reflection type				
	Fine fiber with sleeve(M4)	Fine fiber with sleeve and protector	Extreme fine fiber with sleeve(M3)	Extreme fine fiber with sleeve(Dia. 3mm cylinder)	Extreme fine fiber with sleeve and protector
Model No.	ES8-321	ES8-324	ES9-321	ES9-321B	ES9-322
Features	Sleeve 80mm	Sleeve 80mm	Sleeve 15mm	Sleeve 5mm	Sleeve 15mm
Detectable distance	25mm(15mm)	25mm(15mm)	5mm(3mm)	5mm(3mm)	5mm(3mm)
Min. detectable object	0.015mm in dia.				
Fiber dia.	0.5mm(2 pcs)	0.5mm(2 pcs)	0.25mm(2 pcs)	0.25mm(2 pcs)	0.25mm(2 pcs)
Remarks	Minute object detection	Repeat moving detection	Extreme minute object detection	Extreme minute object detection	Repeat moving detection
Fiber length	2m long(free-cut)				

Note) Distance in parenthesis is applied to PX7.

Kinds	Reflection type			
	Side-view fiber(M6)	Array type fiber	Limited distance reflection fiber with polarized light filter	Limited distance reflection fiber (Dia.0.2mm spot)
Model No.	ESS7-321	FP4-A03	FP3-A01	FP3-A50
Features	Sleeve 80mm 			
Detectable distance	40mm(20mm)	70mm(50mm)	6 to 10mm (6 to 10mm)	5mm(5mm)
Min. detectable object	0.03mm in dia.	-----	-----	-----
Fiber dia.	0.75mm(2 pcs)	0.25mm(32 pcs)	1mm(2 pcs)	0.25mm(1 pcs), 5mm(1 pce)
Remarks	Side-view detection	Area detection	Inside/outside distinction of chip parts	Extreme minute object detection (Spot dia.0.2mm)
Fiber length	2m long(free-cut)			

## Bending resistance fiber

Kinds	Through-beam type		Reflection type		
	Basic fiber(M4)	Fine fiber(Dia. 1.5mm cylinder)	Basic fiber(M6)	Fine fiber(Dia. 3mm cylinder)	Extreme fine fiber with sleeve(Dia. 3mm cylinder)
Model No.	EP1-327	EP4-327A	EP7-327	EP8-327A	ES9-327B
Features					Sleeve 5mm 
Detectable distance	300mm(120mm)	75mm(35mm)	110mm(50mm)	25mm(15mm)	5mm(3mm)
Detectable objects	Opaque object with 1mm in dia. or more	Opaque object with 0.5mm in dia. or more	-----	-----	-----
Min. detectable object	-----	-----	0.03mm in dia.	0.015mm in dia.	
Fiber dia.	0.25mm(16 pcs)	0.25mm(4 pcs)	0.25mm(32 pcs)	0.25mm(8 pcs)	0.25mm(2 pcs)
Remarks	Soft and difficult to break, easy to install				
Fiber length	2m long(free-cut)				

Note) Distance in parenthesis is applied to PX7.

**PHOTO SENSOR, LASER SENSOR, MICROWAVE SENSOR, COUNTER, AUTOMATIC DOOR**



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