

# Волоконно-оптические датчики PD, PT

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## Diffuse reflection



|                 |                                   |                                   |                               |                                     |                               |
|-----------------|-----------------------------------|-----------------------------------|-------------------------------|-------------------------------------|-------------------------------|
| Basic Features  | Working Principle                 | Fiber optic components            |                               |                                     |                               |
|                 | Optical Working Principle         | Diffuse reflection                |                               |                                     |                               |
|                 | Housing Style                     | —                                 | Right-angle type              | Right-angle type                    | —                             |
|                 | Fiber Head Type                   | Without drum                      |                               |                                     |                               |
|                 | Sensing Distance                  | with PG1:80mm/with PE1:110mm      | with PG1:110mm/with PE1:160mm | with PG1:150mm/with PE1:240mm       | with PG1:200mm/with PE1:250mm |
|                 | Fiber Length                      | 2000mm                            |                               |                                     |                               |
|                 | Fiber Diameter                    | Ø0.25mm                           |                               |                                     |                               |
|                 | Fiber Arrangement                 | Grating                           |                               |                                     |                               |
|                 | Core Construction                 | Transmitter end:9, Receiver end:9 |                               | Transmitter end:16, Receiver end:16 |                               |
|                 | Integrated Lens                   | No lens                           |                               |                                     |                               |
|                 | Minimum Object Diameter           | Ø0.05mm                           |                               |                                     |                               |
| Mechanical Data | Bending Radius                    | 15mm                              |                               | 5mm                                 |                               |
|                 | Material                          | Aluminum + polyethylene           |                               |                                     |                               |
|                 | Fiber Can Be Cut                  | Can be cut with fiber cutter      |                               |                                     |                               |
|                 | Operating Environment Temperature | —                                 |                               |                                     |                               |
|                 | Accessories                       | No installation parts             |                               |                                     |                               |
|                 | Model                             | PD-10ML                           | PD-15ML-D                     | PD-20ML-S                           | PD-20ML                       |

Note: The detection distance is for reference only and is also related to factors such as the power level adjustment of the amplifier and the detection environment.

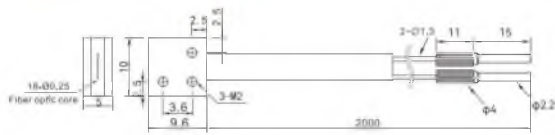


|                 |                                   |                                     |                                  |                                  |                                  |                                  |
|-----------------|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Basic Features  | Working Principle                 | Fiber optic components              |                                  |                                  |                                  |                                  |
|                 | Optical Working Principle         | Diffuse reflection                  |                                  |                                  |                                  |                                  |
|                 | Housing Style                     | Right-angle type                    |                                  |                                  |                                  | —                                |
|                 | Fiber Head Type                   | Without drum                        |                                  |                                  |                                  |                                  |
|                 | Sensing Distance                  | with PG1:120mm<br>with PE1:190mm    | with PG1:180mm<br>with PE1:210mm | with PG1:180mm<br>with PE1:210mm | with PG1:160mm<br>with PE1:200mm | with PG1:110mm<br>with PE1:170mm |
|                 | Fiber Length                      | 2000mm                              |                                  |                                  |                                  |                                  |
|                 | Fiber Diameter                    | Ø0.25mm                             |                                  |                                  |                                  |                                  |
|                 | Fiber Arrangement                 | Grating                             |                                  |                                  |                                  |                                  |
|                 | Core Construction                 | Transmitter end:16, Receiver end:16 |                                  |                                  |                                  | —                                |
|                 | Integrated Lens                   | No lens                             |                                  |                                  |                                  |                                  |
|                 | Minimum Object Diameter           | Ø2mm                                | Ø4mm                             | Ø6mm                             | Ø10mm                            | Ø0.05mm                          |
| Mechanical Data | Bending Radius                    | 5mm                                 |                                  |                                  |                                  | 25mm                             |
|                 | Material                          | Aluminum + polyethylene             |                                  |                                  |                                  | Aluminum                         |
|                 | Fiber Can Be Cut                  | Can be cut with fiber cutter        |                                  |                                  |                                  |                                  |
|                 | Operating Environment Temperature | —                                   |                                  |                                  |                                  |                                  |
|                 | Accessories                       | No installation parts               |                                  |                                  |                                  |                                  |
|                 | Model                             | PD-25ML                             | PD-30ML                          | PD-35ML                          | PD-50ML                          | PD-A10                           |

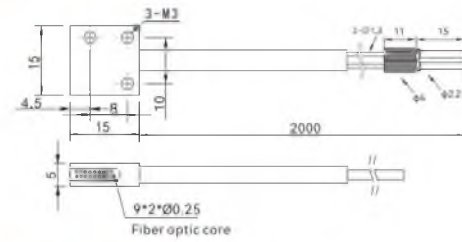
Unit: mm

## Dimensions

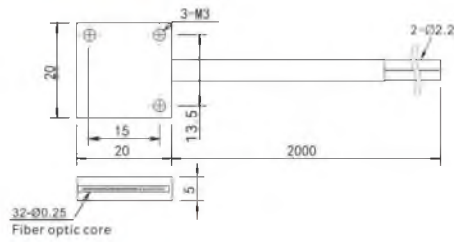
## PD-10ML



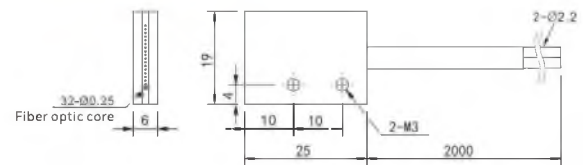
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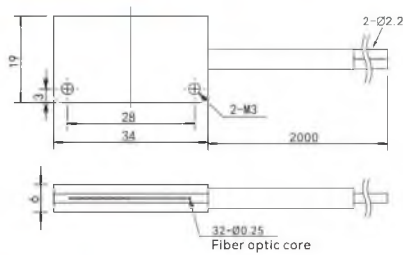
## PD-20ML-S



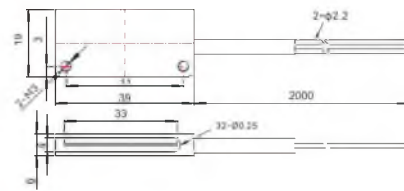
## PD-20ML



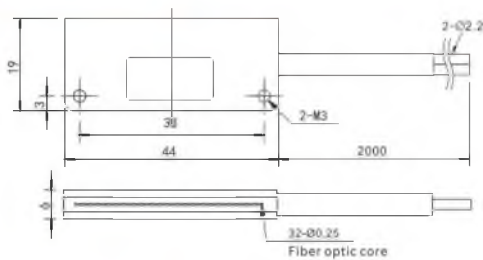
## PD-25ML



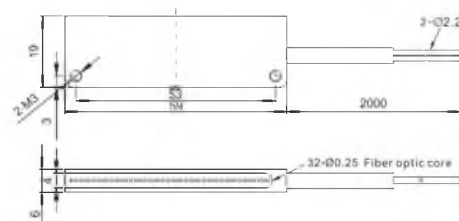
## PD-30ML



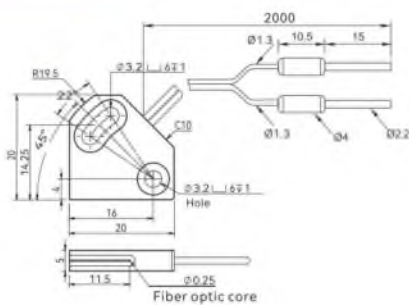
## PD-35ML



## PD-50ML



## PD-A10



## Thru-beam



|                         |                                   |                                       |                                  |                                       |                                   |                                                                                               |
|-------------------------|-----------------------------------|---------------------------------------|----------------------------------|---------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------|
| Basic Features          | Working Principle                 | Fiber optic components                |                                  |                                       |                                   |                                                                                               |
|                         | Optical Working Principle         | Thru-beam                             |                                  |                                       |                                   |                                                                                               |
|                         | Housing Style                     | -                                     | Right-angle type                 | -                                     | Right-angle type                  |                                                                                               |
|                         | Fiber Head Type                   | Without drum                          |                                  |                                       |                                   |                                                                                               |
|                         | Sensing Distance                  | with PG1:520mm<br>with PE1:760mm      | with PG1:580mm<br>with PE1:790mm | with PG1:970mm<br>with PE1:1100mm     | with PG1:920mm<br>with PE1:1170mm | with PG1:880mm<br>with PE1:1220mm                                                             |
|                         | Fiber Length                      | 2000mm                                |                                  |                                       |                                   |                                                                                               |
|                         | Fiber Diameter                    | Ø0.25mm                               |                                  |                                       | Ø0.265mm                          | Ø0.25mm                                                                                       |
|                         | Fiber Arrangement                 | Grating                               |                                  |                                       |                                   |                                                                                               |
|                         | Core Construction                 | Transmitter end: 16, Receiver end: 16 |                                  | Transmitter end: 32, Receiver end: 32 |                                   |                                                                                               |
|                         | Integrated Lens                   | No lens                               |                                  |                                       |                                   |                                                                                               |
| Minimum Object Diameter | Ø0.1mm                            | Ø0.5mm                                |                                  | Ø2mm                                  | Ø3mm                              |                                                                                               |
| Mechanical Data         | Bending Radius                    | 5mm                                   |                                  | 15mm                                  |                                   |                                                                                               |
|                         | Material                          | Aluminum + polyethylene               |                                  | Aluminum+PVC                          |                                   |                                                                                               |
|                         | Fiber Can Be Cut                  | Can be cut with fiber cutter          |                                  |                                       |                                   |                                                                                               |
|                         | Operating Environment Temperature | -                                     |                                  |                                       |                                   |                                                                                               |
|                         | Accessories                       | No installation parts                 |                                  |                                       |                                   |                                                                                               |
|                         | Model                             | PT-10ML                               | PT-15ML-D                        | PT-20ML                               | PT-25ML                           | PT-30ML  |

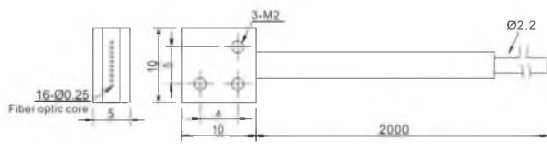
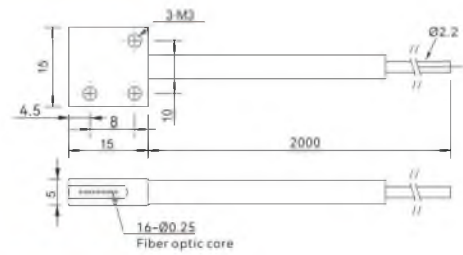
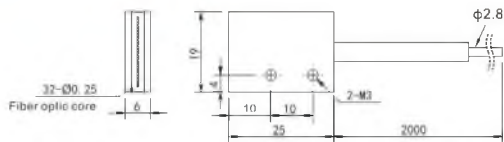
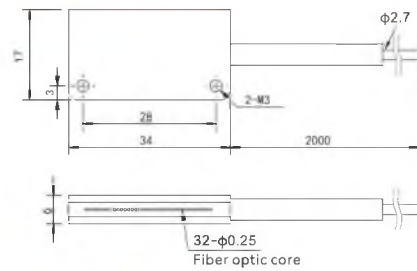
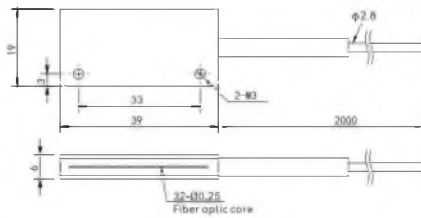
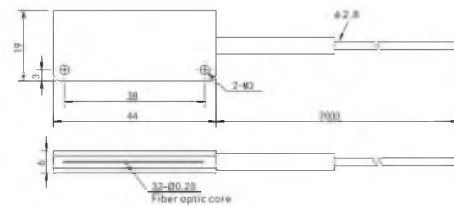
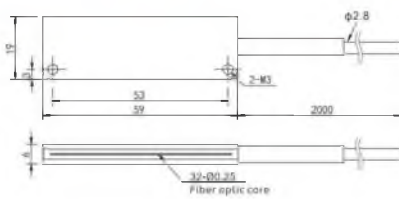
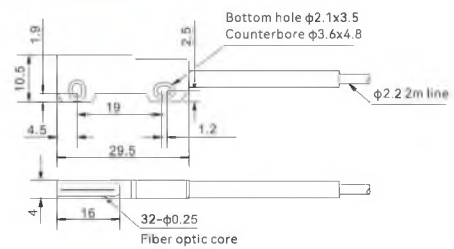
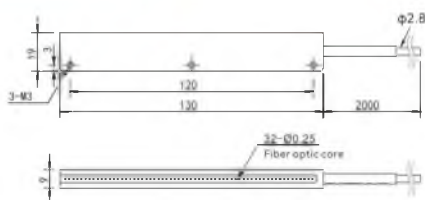
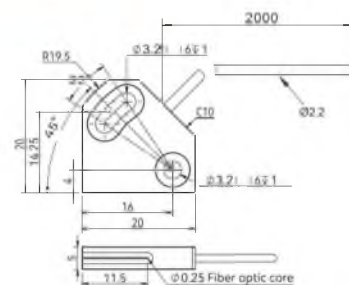
Note: The detection distance is for reference only and is also related to factors such as the power level adjustment of the amplifier and the detection environment.



|                         |                                   |                                     |                                   |                                  |                                        |                                  |
|-------------------------|-----------------------------------|-------------------------------------|-----------------------------------|----------------------------------|----------------------------------------|----------------------------------|
| Basic Features          | Working Principle                 | Fiber optic components              |                                   |                                  |                                        |                                  |
|                         | Optical Working Principle         | Thru-beam                           |                                   |                                  |                                        |                                  |
|                         | Housing Style                     | Right-angle type                    |                                   |                                  |                                        | -                                |
|                         | Fiber Head Type                   | Without drum                        |                                   |                                  |                                        |                                  |
|                         | Sensing Distance                  | with PG1:930mm<br>with PE1:1280mm   | with PG1:880mm<br>with PE1:1170mm | with PG1:420mm<br>with PE1:640mm | with PG1:950mm<br>with PE1:1140mm      | with PG1:520mm<br>with PE1:800mm |
|                         | Fiber Length                      | 2000mm                              |                                   |                                  |                                        |                                  |
|                         | Fiber Diameter                    | Ø0.250mm                            |                                   | -                                | Ø0.250mm                               |                                  |
|                         | Fiber Arrangement                 | Grating                             |                                   |                                  |                                        |                                  |
|                         | Core Construction                 | Transmitter end:32, Receiver end:32 |                                   | -                                | Transmitter end:32,<br>Receiver end:32 | -                                |
|                         | Integrated Lens                   | No lens                             |                                   |                                  |                                        |                                  |
| Minimum Object Diameter | Ø4mm                              | Ø5mm                                | Ø1mm                              | Ø30mm                            | Ø0.05mm                                |                                  |
| Mechanical Data         | Bending Radius                    | 15mm                                |                                   | 25mm                             | 15mm                                   | 25mm                             |
|                         | Material                          | Aluminum+PVC                        |                                   | Aluminum                         | Aluminum+PVC                           | -                                |
|                         | Fiber Can Be Cut                  | Can be cut with fiber cutter        |                                   |                                  |                                        |                                  |
|                         | Operating Environment Temperature | -                                   |                                   |                                  |                                        |                                  |
|                         | Accessories                       | No installation parts               |                                   |                                  |                                        |                                  |
|                         | Model                             | PT-35ML                             | PT-50ML                           | PT-E11M (HOT)                    | PT-120ML                               | PT-A10                           |

Unit: mm

Dimensions

**PT-10ML****PT-15ML-D****PT-20ML****PT-25ML****PT-30ML****PT-35ML****PT-50ML****PT-E11M****PT-120ML****PT-A10**



## Diffuse reflection



|                 |                                   |                                    |                               |
|-----------------|-----------------------------------|------------------------------------|-------------------------------|
| Basic Features  | Working Principle                 | Fiber optic components             |                               |
|                 | Optical Working Principle         | Diffuse reflection                 |                               |
|                 | Housing Style                     | Right-angle type, Long convex tube |                               |
|                 | Fiber Head Type                   | Ø3.0mm                             |                               |
|                 | Sensing Distance                  | with PG1:40mm/with PE1:120mm       | with PG1:110mm/with PE1:130mm |
|                 | Fiber Length                      | 2000mm                             |                               |
|                 | Fiber Diameter                    | Ø0.5mm                             |                               |
|                 | Fiber Arrangement                 | Standard                           |                               |
|                 | Core Construction                 | Transmitter end:1, Receiver end:1  |                               |
|                 | Integrated Lens                   | No lens                            |                               |
|                 | Minimum Object Diameter           | -                                  |                               |
| Mechanical Data | Bending Radius                    | 25mm                               | 10mm                          |
|                 | Material                          | Stainless steel                    |                               |
|                 | Fiber Can Be Cut                  | Can be cut with fiber cutter       |                               |
|                 | Operating Environment Temperature | -                                  |                               |
|                 | Accessories                       | No installation parts              |                               |
|                 | Model                             | PD-32-DQ                           | PD-32-SQ                      |

Note: The detection distance is for reference only and is also related to factors such as the power level adjustment of the amplifier and the detection environment.

## Thru-beam

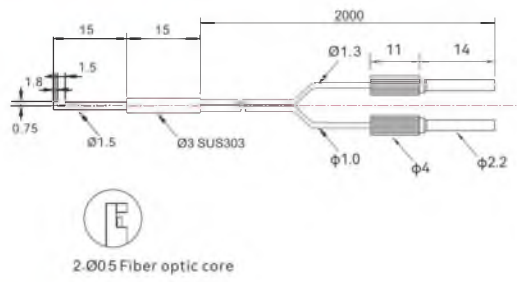


|                 |                                   |                                    |                              |
|-----------------|-----------------------------------|------------------------------------|------------------------------|
| Basic Features  | Working Principle                 | Fiber optic components             |                              |
|                 | Optical Working Principle         | Thru-beam                          |                              |
|                 | Housing Style                     | Right-angle type, long convex tube |                              |
|                 | Fiber Head Type                   | Ø3.0mm                             | Ø2.5mm                       |
|                 | Sensing Distance                  | with PG1:300mm/with PE1:440mm      | with PG1:80mm/with PE1:140mm |
|                 | Fiber Length                      | 2000mm                             |                              |
|                 | Fiber Diameter                    | Ø0.5mm                             |                              |
|                 | Fiber Arrangement                 | Standard                           |                              |
|                 | Core Construction                 | Transmitter end:1, Receiver end:1  |                              |
|                 | Integrated Lens                   | No lens                            |                              |
|                 | Minimum Object Diameter           | -                                  |                              |
| Mechanical Data | Bending Radius                    | 25mm                               | 10mm                         |
|                 | Material                          | -                                  |                              |
|                 | Fiber Can Be Cut                  | Can be cut with fiber cutter       |                              |
|                 | Operating Environment Temperature | -                                  |                              |
|                 | Accessories                       | No installation parts              |                              |
|                 | Model                             | PT-32-DQ                           | PT-32-SQ                     |

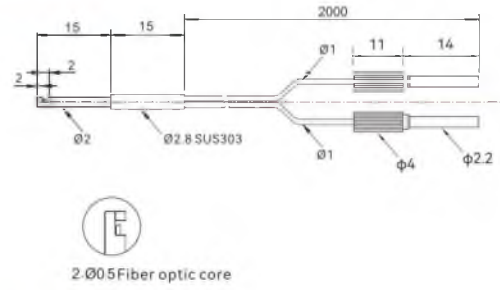
Unit: mm

Dimensions

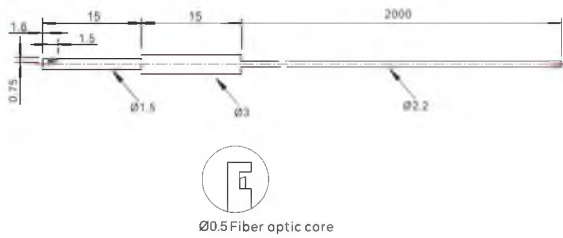
**PD-32-DQ**



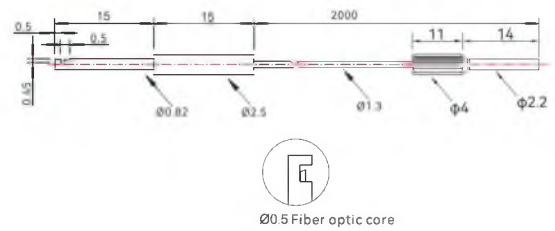
**PD-32-SQ**



**PT-32-DQ**



**PT-32-SQ**



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