

## Digital Fiber Sensor

FX-500 SERIES

## Sensing Characteristics Data Sheet

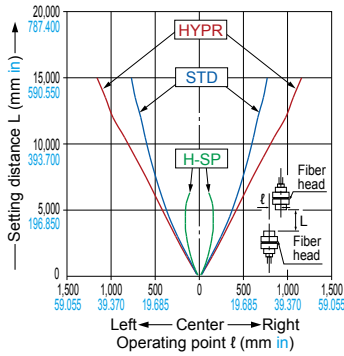
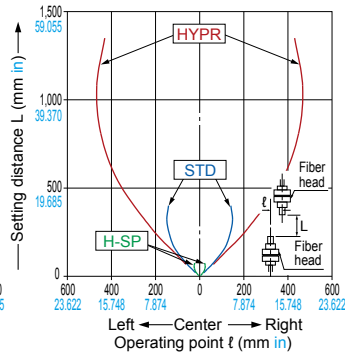
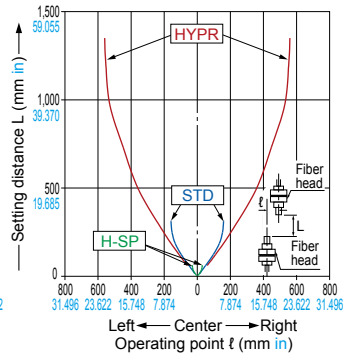
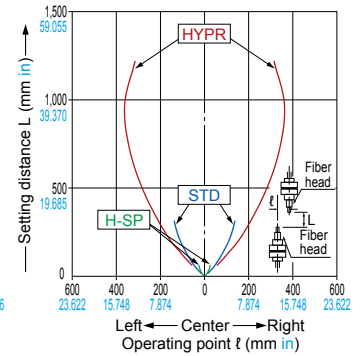
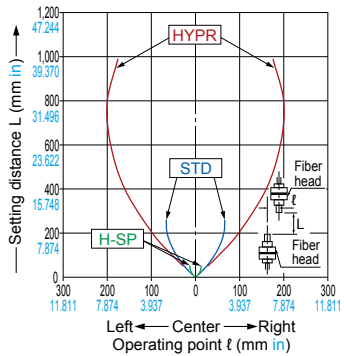
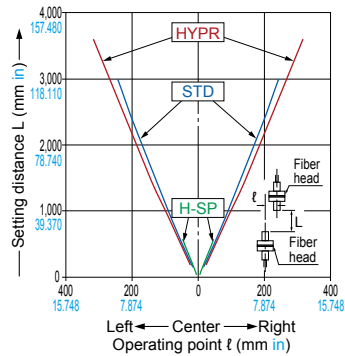
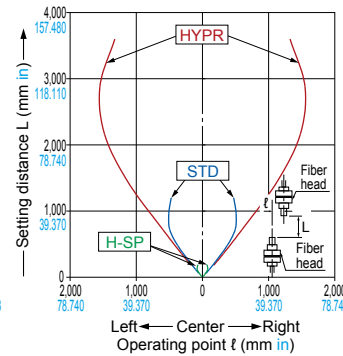
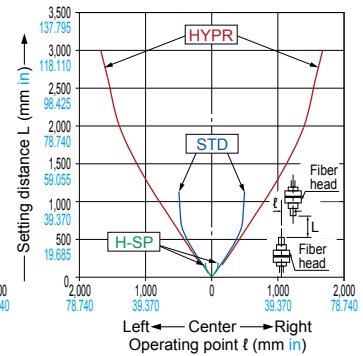
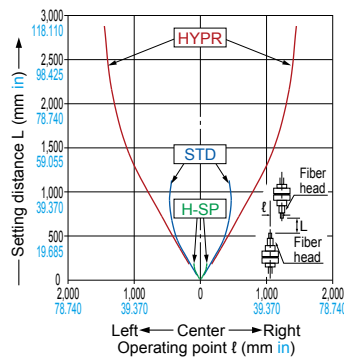
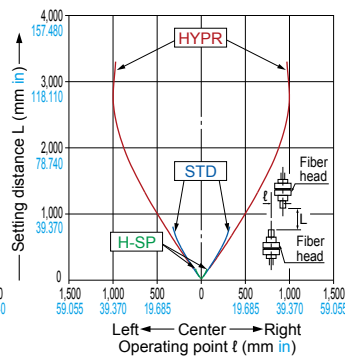
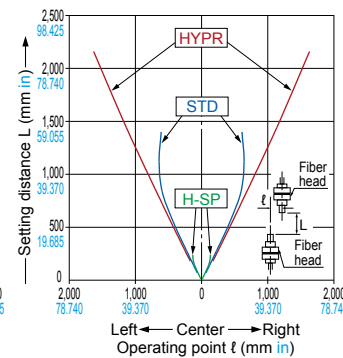
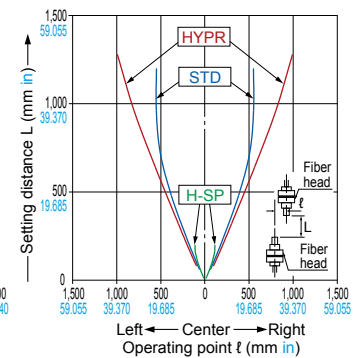
Ver.2



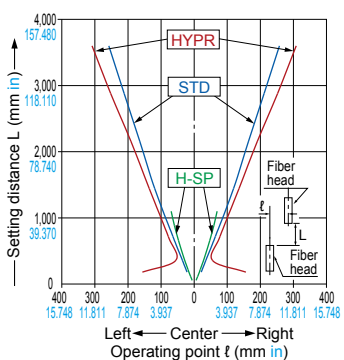
\* Cover opened state is shown.

**SENSING CHARACTERISTICS (TYPICAL)**

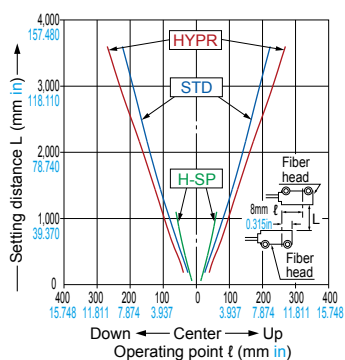
**Thru-beam type Parallel deviation** Sensing characteristics are listed in the alphabetic order of Model No.

**FT-140** Thru-beam type**FT-30** Thru-beam type**FT-31** Thru-beam type**FT-31S** Thru-beam type**FT-31W** Thru-beam type**FT-32** Thru-beam type**FT-40** Thru-beam type**FT-42** Thru-beam type**FT-42S** Thru-beam type**FT-42W** Thru-beam type**FT-43** Thru-beam type**FT-45X** Thru-beam type**FT-A11** Thru-beam type

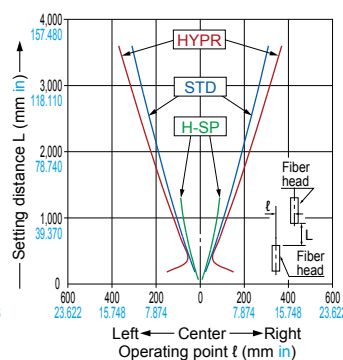
Horizontal direction



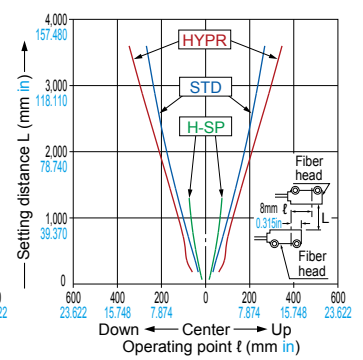
Vertical direction

**FT-A11W** Thru-beam type

Horizontal direction



Vertical direction



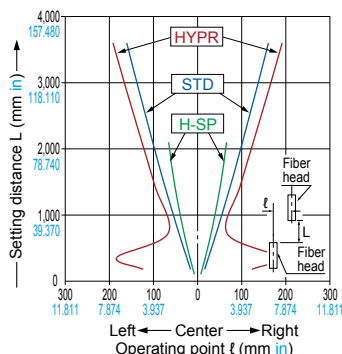
**SENSING CHARACTERISTICS (TYPICAL)**

**Thru-beam type Parallel deviation** Sensing characteristics are listed in the alphabetic order of Model No. (Models with same sensing characteristics are grouped together.)

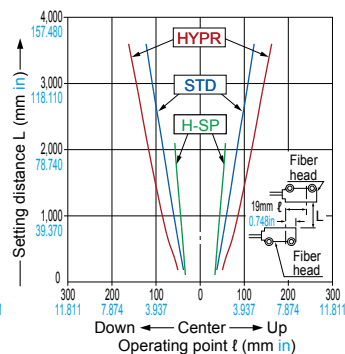
**FT-A32**

Thru-beam type

Horizontal direction

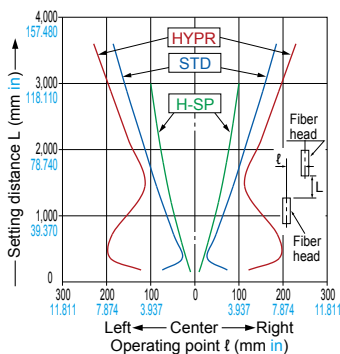


Vertical direction

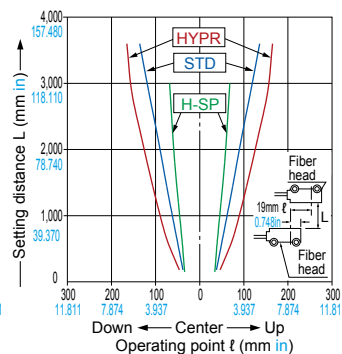
**FT-A32W**

Thru-beam type

Horizontal direction

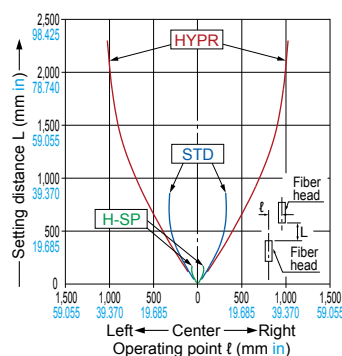


Vertical direction

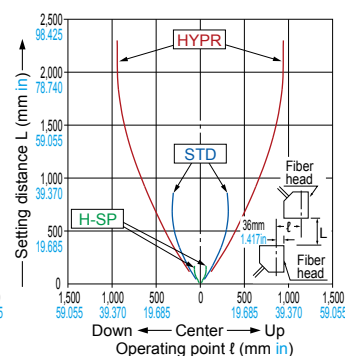
**FT-AL05**

Thru-beam type

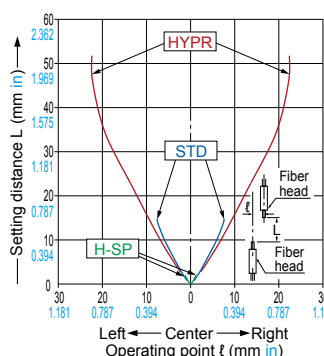
Horizontal direction



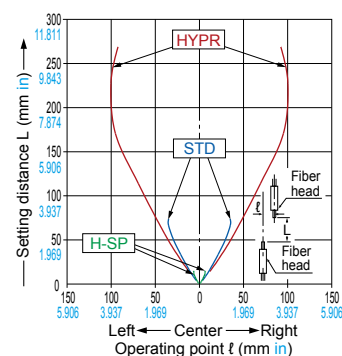
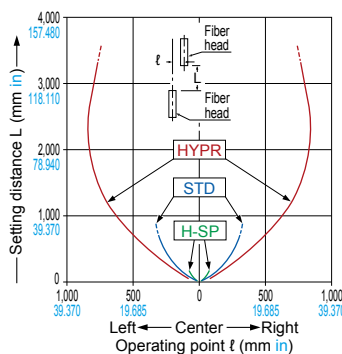
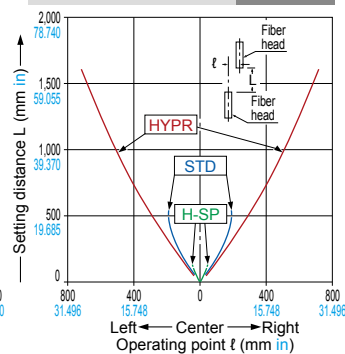
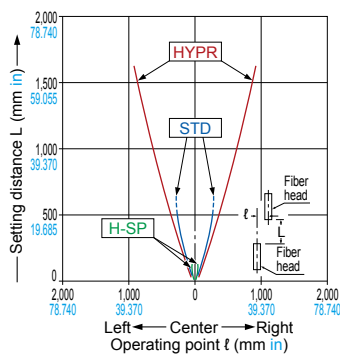
Vertical direction

**FT-E13**

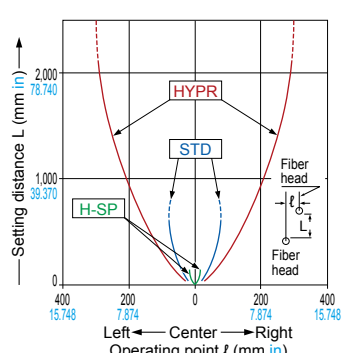
Thru-beam type

**FT-E23**

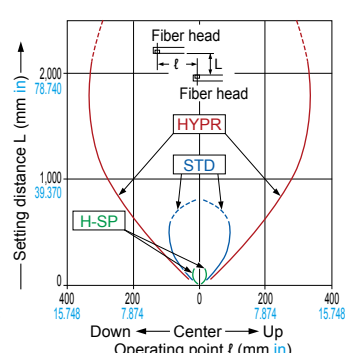
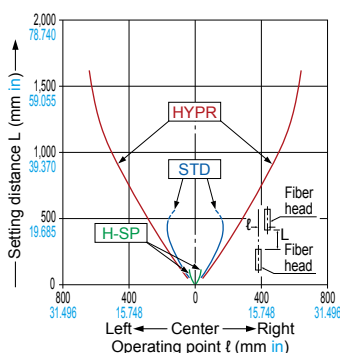
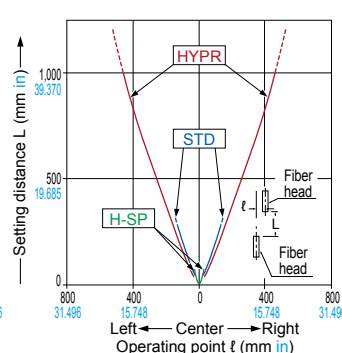
Thru-beam type

**FT-H13-FM2** Thru-beam type**FT-H20-J20-S FT-H20-J30-S FT-H20-J50-S** Thru-beam type**FT-H20-M1** Thru-beam type**FT-H20-VJ50-S FT-H20-VJ80-S** Thru-beam type

Horizontal direction

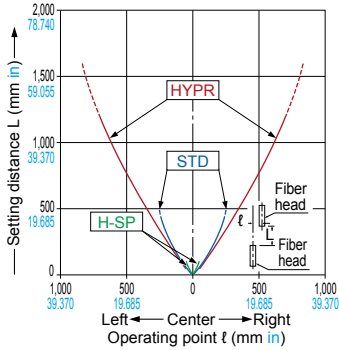
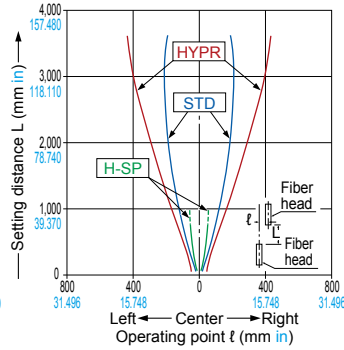
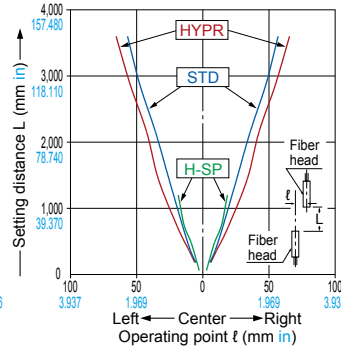
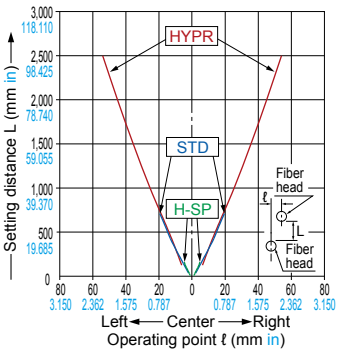
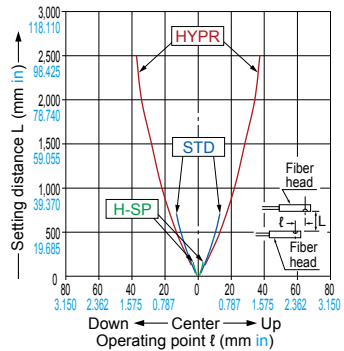
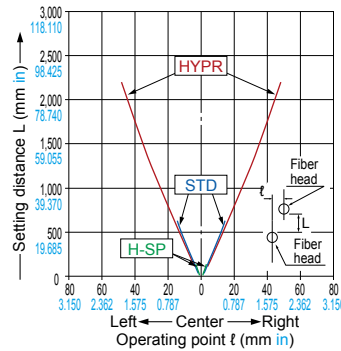
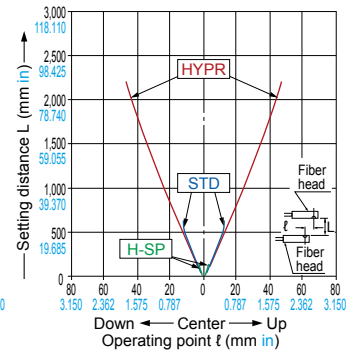
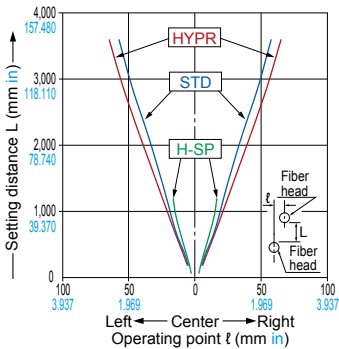
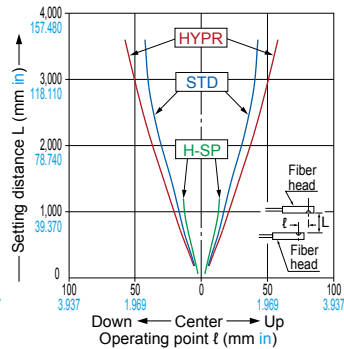
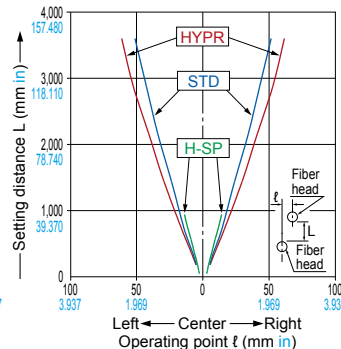
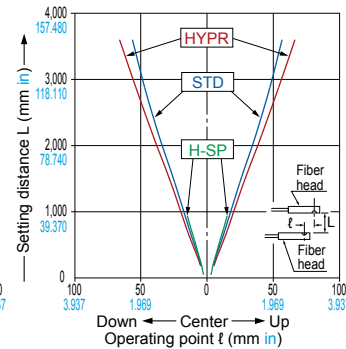
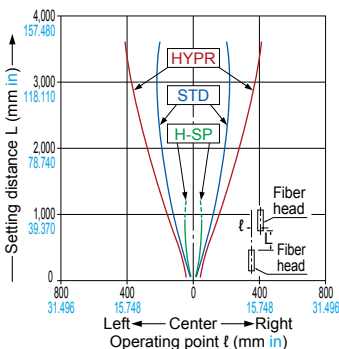
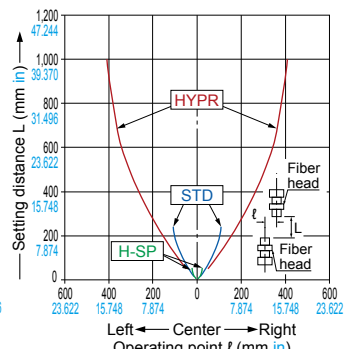
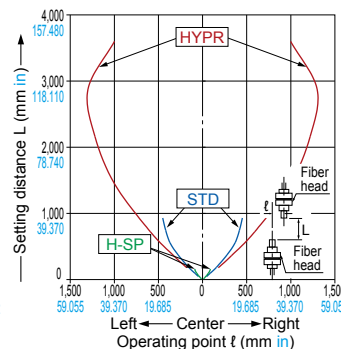


Vertical direction

**FT-H20W-M1** Thru-beam type**FT-H30-M1V-S** Thru-beam type

**SENSING CHARACTERISTICS (TYPICAL)****Thru-beam type Parallel deviation**

Sensing characteristics are listed in the alphabetic order of Model No. (Models with same sensing characteristics are grouped together.)

**FT-H35-M2**  
**FT-H35-M2S6** Thru-beam type**FT-HL80Y** Thru-beam type**FT-KS40** Thru-beam type**FT-KV26** Thru-beam type**Horizontal direction****Vertical direction****FT-KV26H1** Thru-beam type**Horizontal direction****Vertical direction****FT-KV40** Thru-beam type**Horizontal direction****Vertical direction****FT-KV40W** Thru-beam type**Horizontal direction****Vertical direction****FT-L80Y** Thru-beam type**FT-R31** Thru-beam type**FT-R40** Thru-beam type



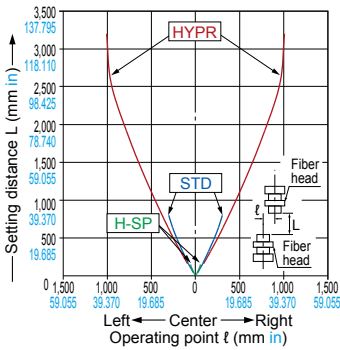
## SENSING CHARACTERISTICS (TYPICAL)

**Thru-beam type Parallel deviation** Sensing characteristics are listed in the alphabetic order of Model No.

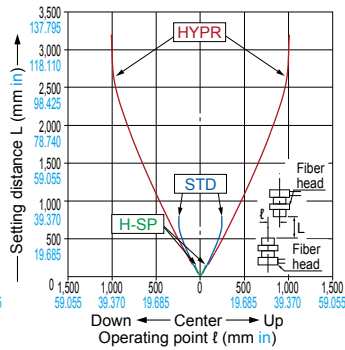
**FT-R41W**

Thru-beam type

Horizontal direction

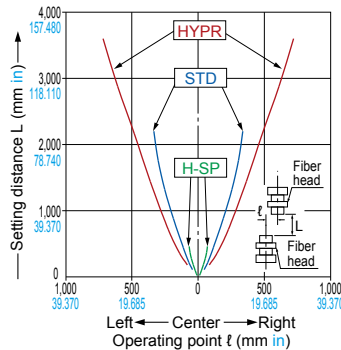


Vertical direction

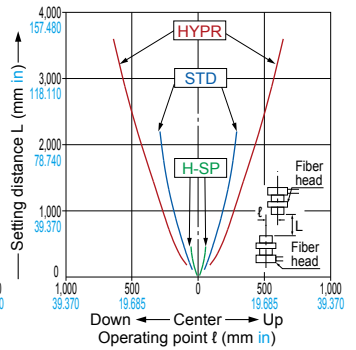
**FT-R42W**

Thru-beam type

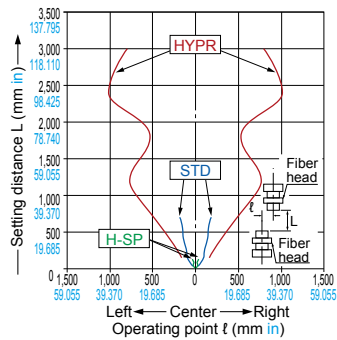
Horizontal direction



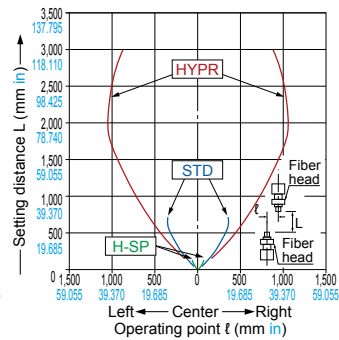
Vertical direction

**FT-R43**

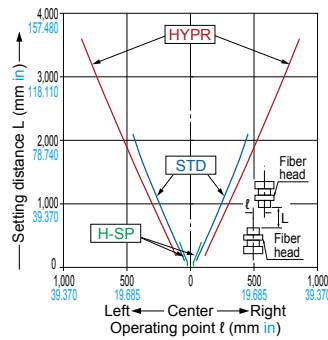
Thru-beam type

**FT-R44Y**

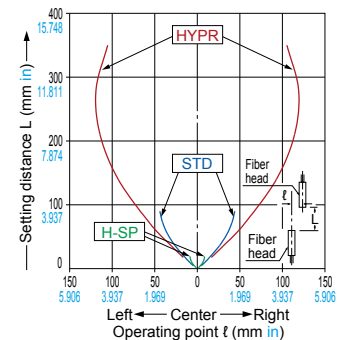
Thru-beam type

**FT-R60Y**

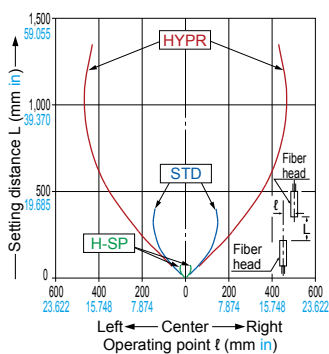
Thru-beam type

**FT-S11**

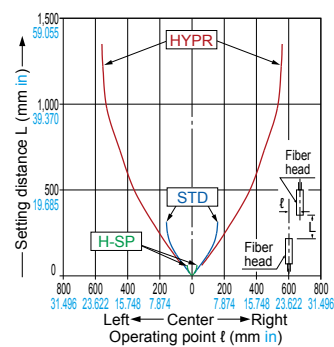
Thru-beam type

**FT-S20**

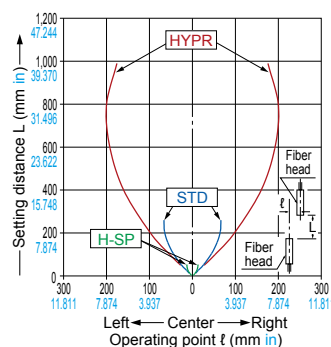
Thru-beam type

**FT-S21**

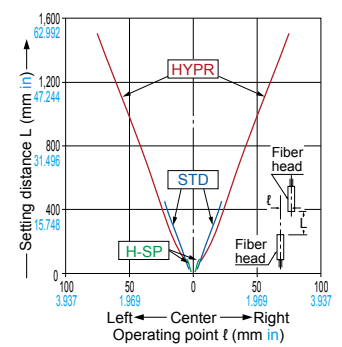
Thru-beam type

**FT-S21W**

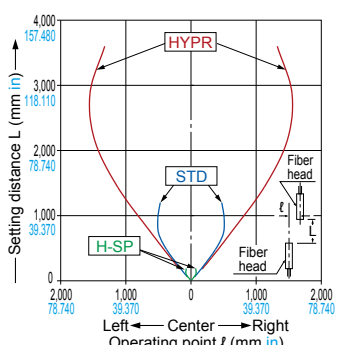
Thru-beam type

**FT-S22**

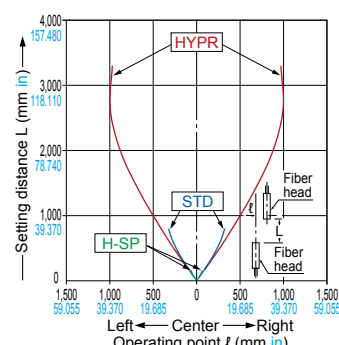
Thru-beam type

**FT-S30**

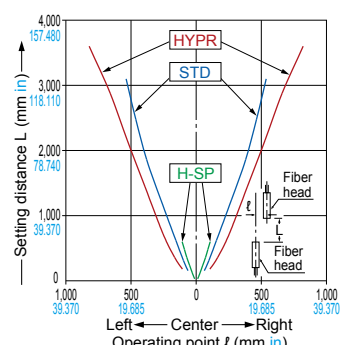
Thru-beam type

**FT-S31W**

Thru-beam type

**FT-S32**

Thru-beam type



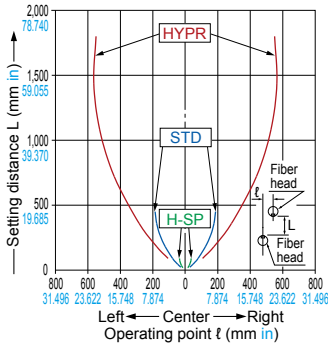
**SENSING CHARACTERISTICS (TYPICAL)**

**Thru-beam type Parallel deviation** Sensing characteristics are listed in the alphabetic order of Model No.

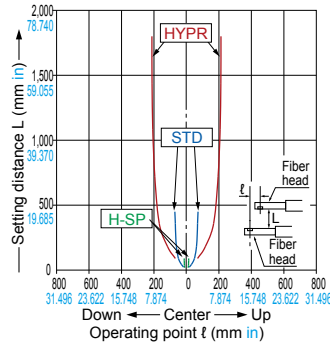
**FT-V23**

Thru-beam type

Horizontal direction

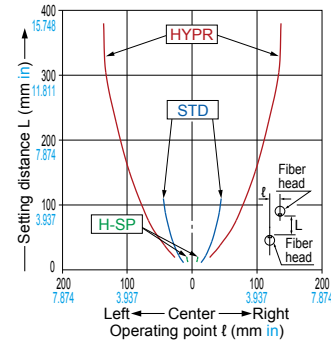


Vertical direction

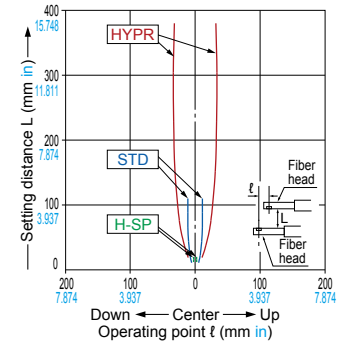
**FT-V24W**

Thru-beam type

Horizontal direction



Vertical direction



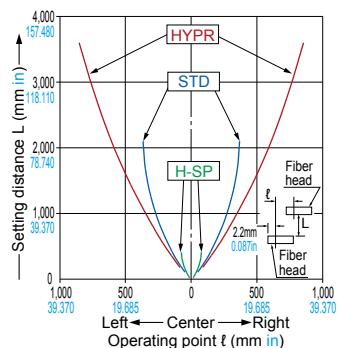
## SENSING CHARACTERISTICS (TYPICAL)

**Thru-beam type Parallel deviation** Sensing characteristics are listed in the alphabetic order of Model No.

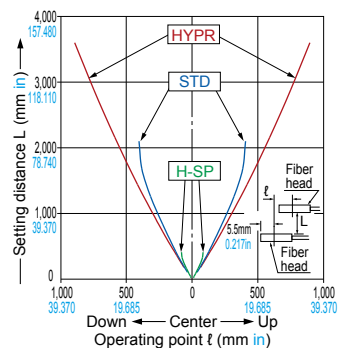
**FT-Z30**

Thru-beam type

Horizontal direction

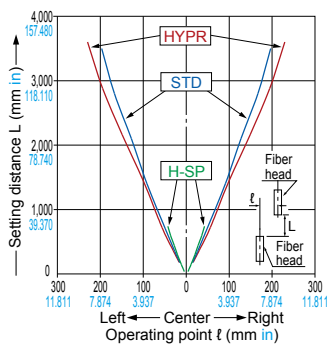


Vertical direction

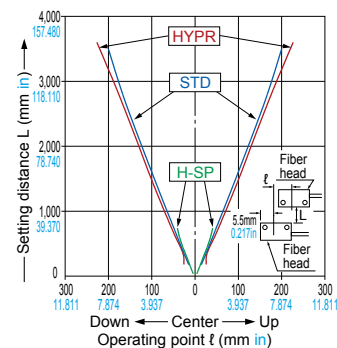
**FT-Z30E**

Thru-beam type

Horizontal direction

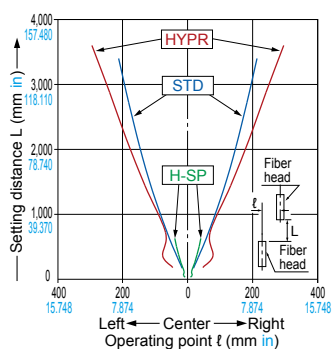


Vertical direction

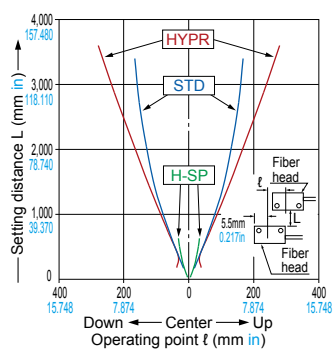
**FT-Z30EW**

Thru-beam type

Horizontal direction

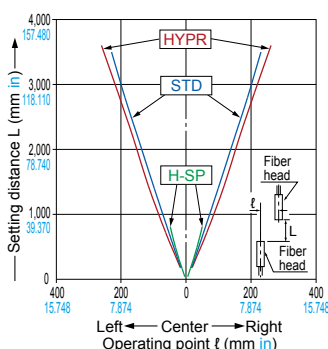


Vertical direction

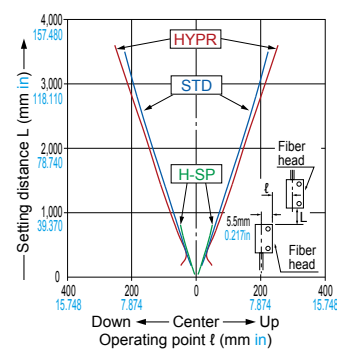
**FT-Z30H**

Thru-beam type

Horizontal direction

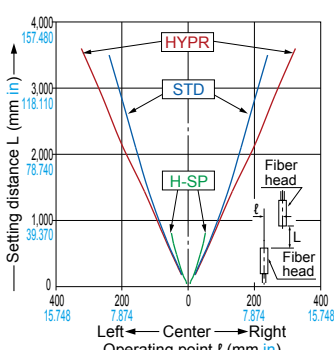


Vertical direction

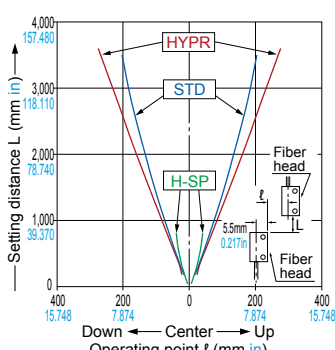
**FT-Z30HW**

Thru-beam type

Horizontal direction

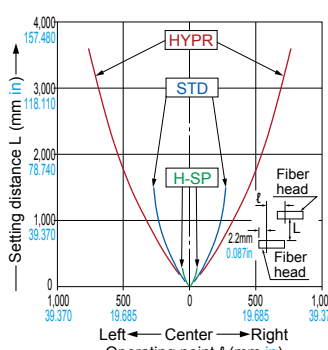


Vertical direction

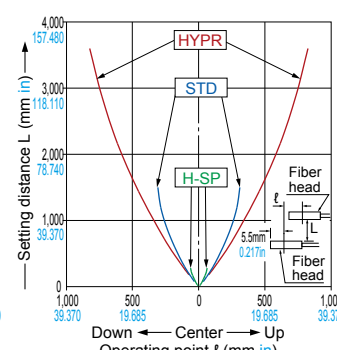
**FT-Z30W**

Thru-beam type

Horizontal direction

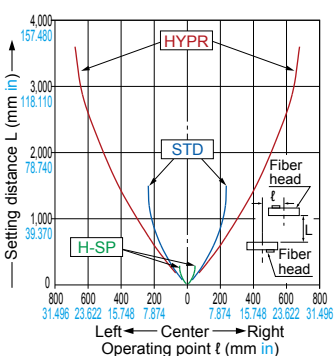


Vertical direction

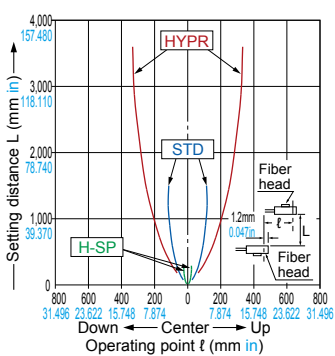
**FT-Z40W**

Thru-beam type

Horizontal direction

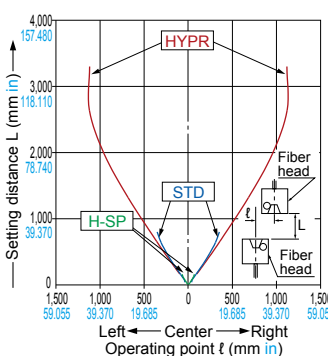


Vertical direction

**FT-Z40HBW**

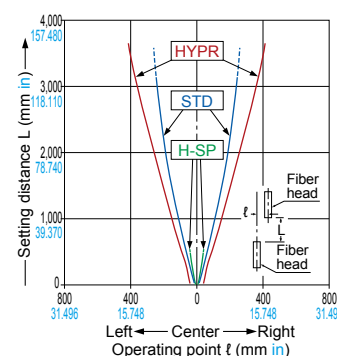
Thru-beam type

Horizontal direction

**FT-Z802Y**

Thru-beam type

Horizontal direction



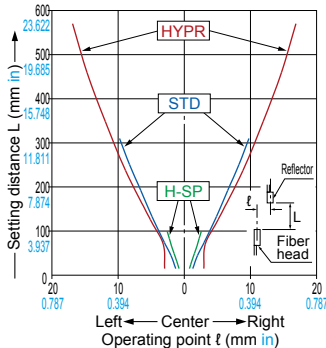
## SENSING CHARACTERISTICS (TYPICAL)

**Retroreflective type Parallel deviation** Sensing characteristics are listed in the alphabetic order of the Model No.

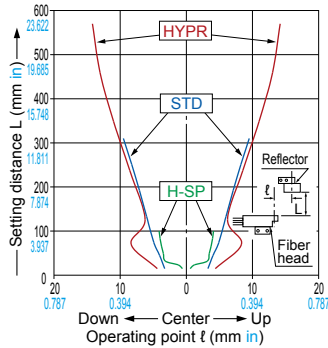
### FR-KZ22E

Retroreflective type

Horizontal direction



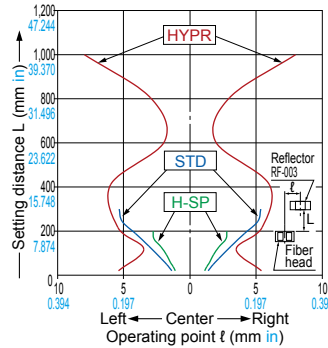
Vertical direction



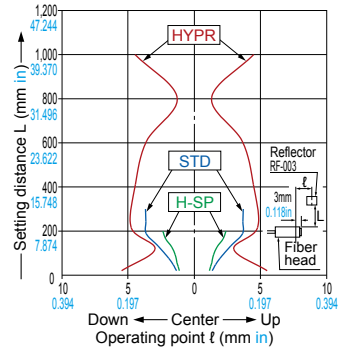
### FR-KZ50E

Retroreflective type

Horizontal direction



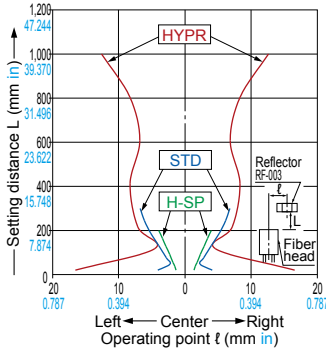
Vertical direction



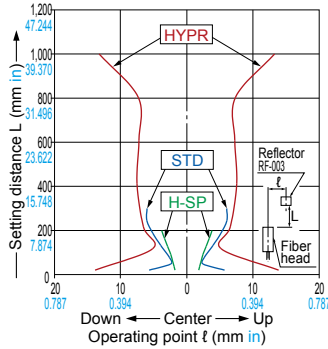
### FR-KZ50H

Retroreflective type

Horizontal direction



Vertical direction

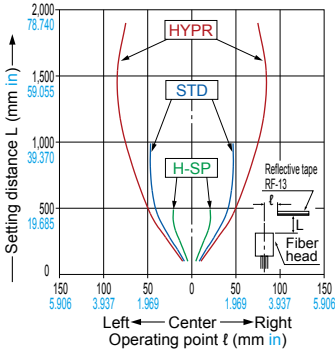


### FR-Z50HW

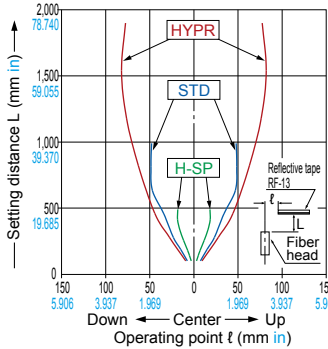
Retroreflective type

With reflective tape **RF-13** (attached)

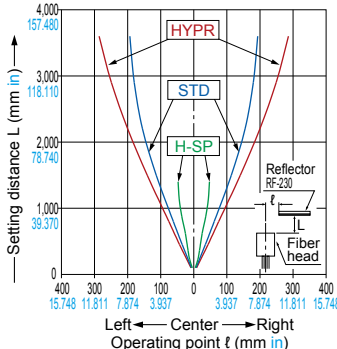
Horizontal direction



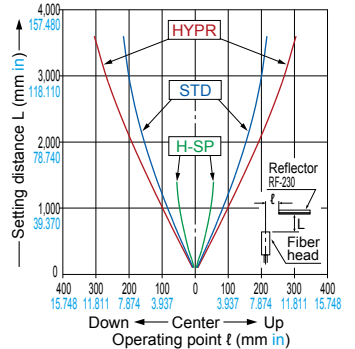
Vertical direction

With reflector **RF-230** (optional)

Horizontal direction



Vertical direction

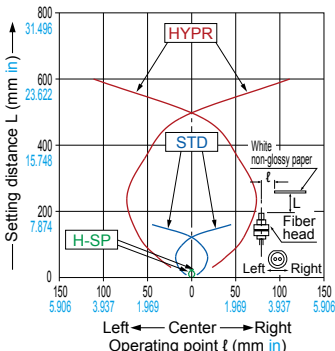


**Reflective type Sensing field** Sensing characteristics are listed in the alphabetic order of the Model No.

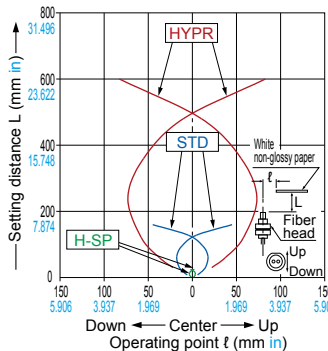
### FD-30

Reflective type

Horizontal direction



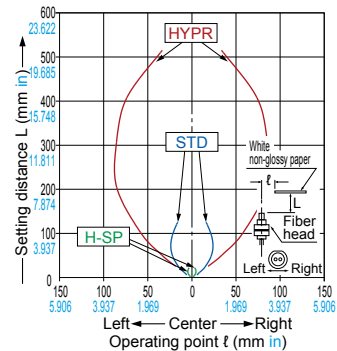
Vertical direction



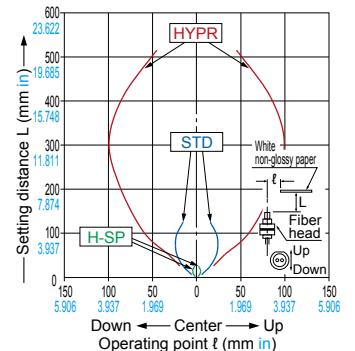
### FD-31

Reflective type

Horizontal direction



Vertical direction



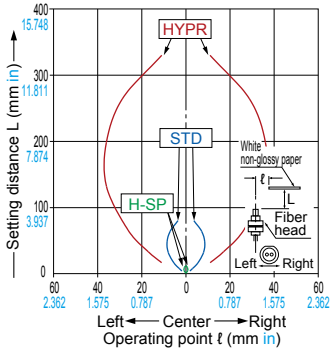
## SENSING CHARACTERISTICS (TYPICAL)

**Reflective type Sensing field** Sensing characteristics are listed in the alphabetic order of the Model No. (Models with same sensing characteristics are grouped together.)

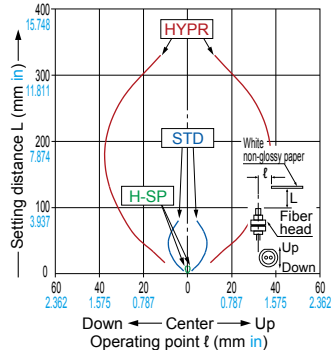
**FD-31W**

Reflective type

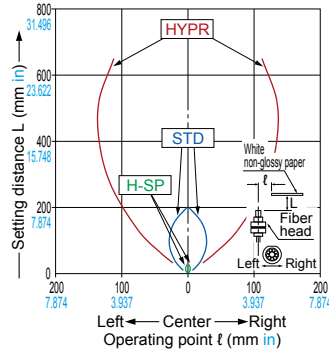
Horizontal direction



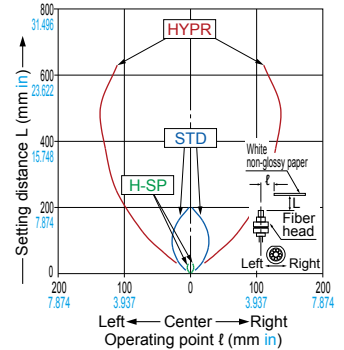
Vertical direction

**FD-32G**

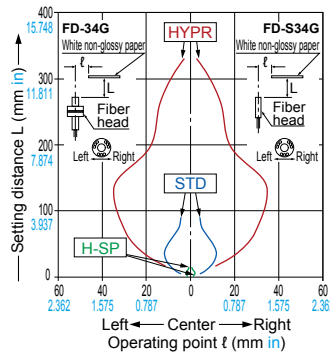
Reflective type

**FD-32GX**

Reflective type

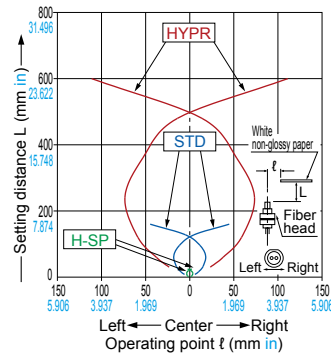
**FD-34G FD-S34G**

Reflective type

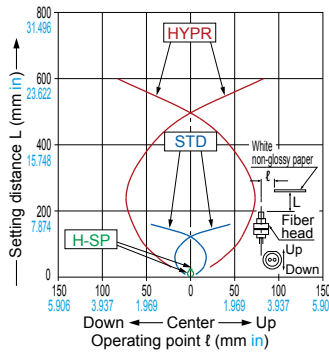
**FD-40**

Reflective type

Horizontal direction

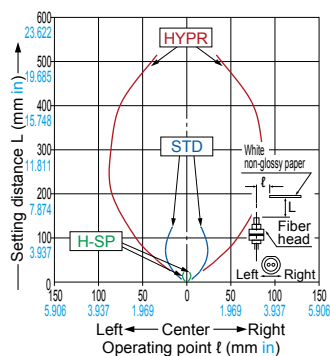


Vertical direction

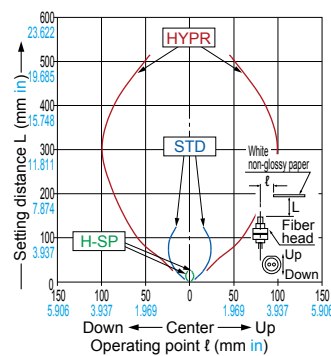
**FD-41**

Reflective type

Horizontal direction

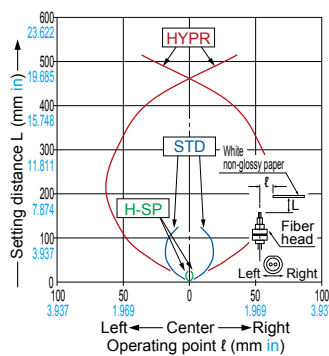


Vertical direction

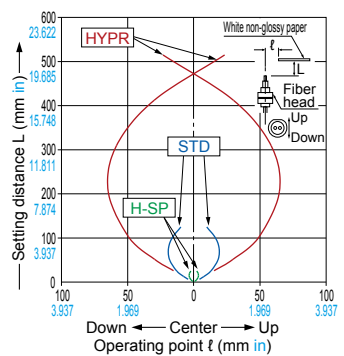
**FD-41S**

Reflective type

Horizontal direction

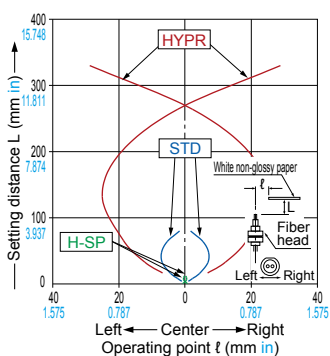


Vertical direction

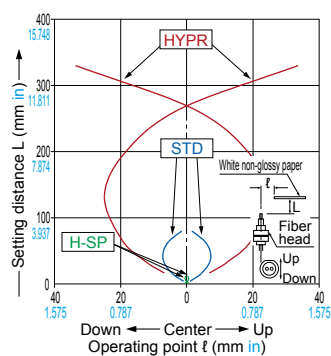
**FD-41SW**

Reflective type

Horizontal direction

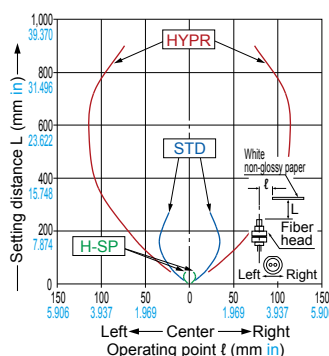


Vertical direction

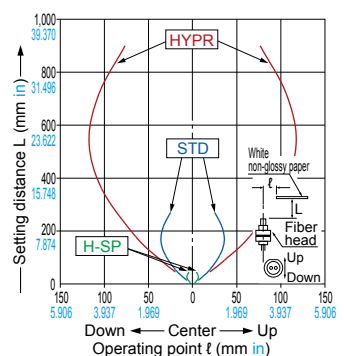
**FD-41W**

Reflective type

Horizontal direction

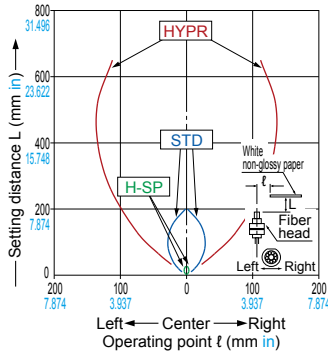
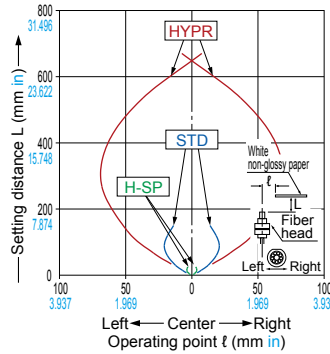


Vertical direction



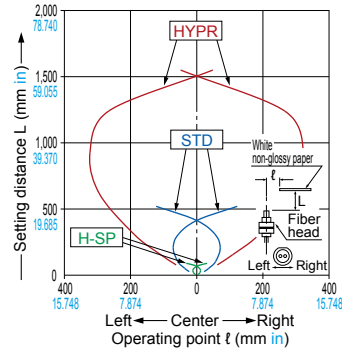
**SENSING CHARACTERISTICS (TYPICAL)**

**Reflective type Sensing field** Sensing characteristics are listed in the alphabetic order of the Model No.

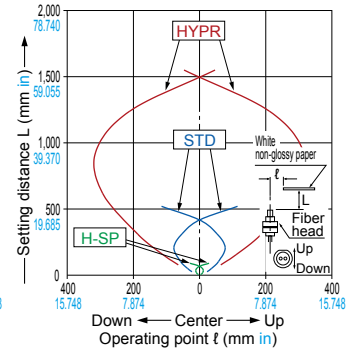
**FD-42G** Reflective type**FD-42GW** Reflective type**FD-60**

Reflective type

Horizontal direction

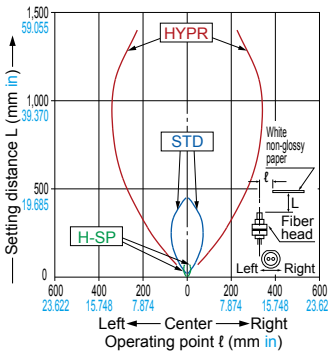


Vertical direction

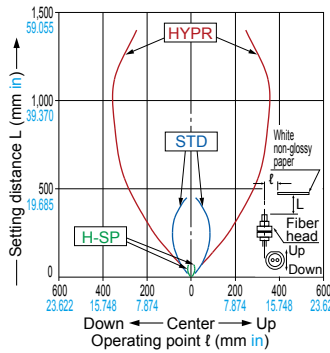
**FD-61**

Reflective type

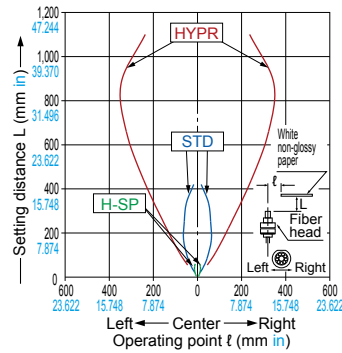
Horizontal direction



Vertical direction

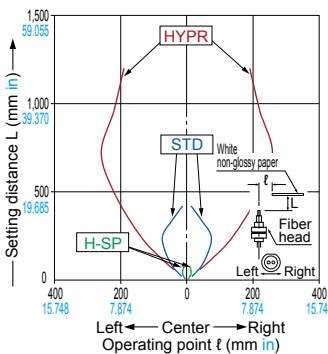
**FD-61G**

Reflective type

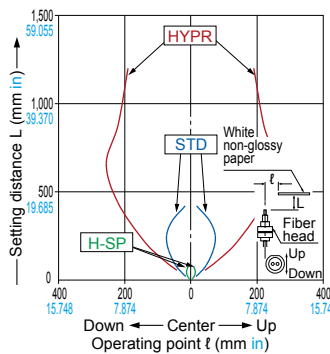
**FD-61S**

Reflective type

Horizontal direction

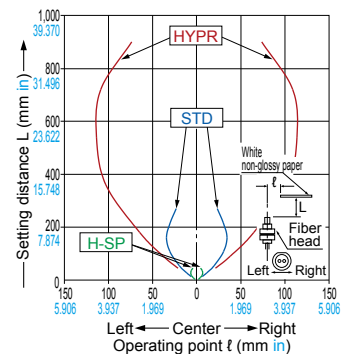


Vertical direction

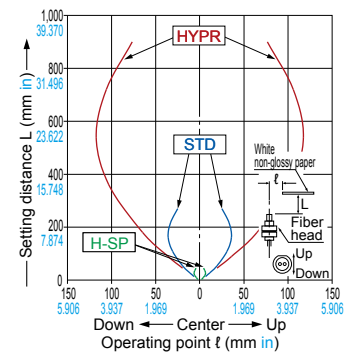
**FD-61W**

Reflective type

Horizontal direction

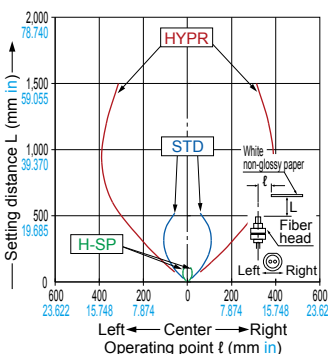


Vertical direction

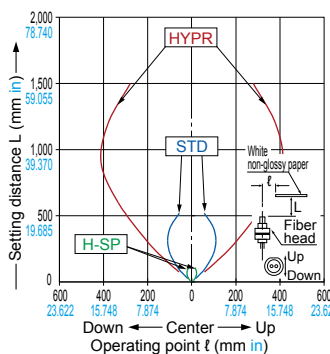
**FD-62**

Reflective type

Horizontal direction

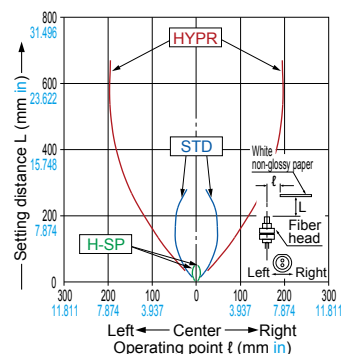


Vertical direction

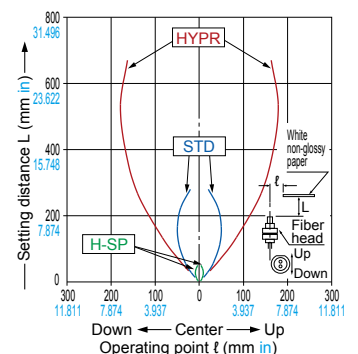
**FD-64X**

Reflective type

Horizontal direction



Vertical direction





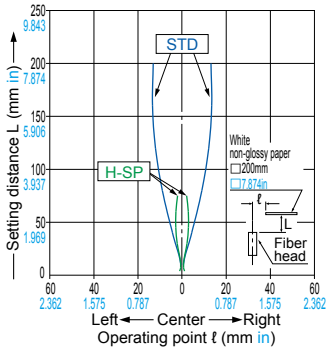
**SENSING CHARACTERISTICS (TYPICAL)**

**Reflective type Sensing field** Sensing characteristics are listed in the alphabetic order of the Model No.

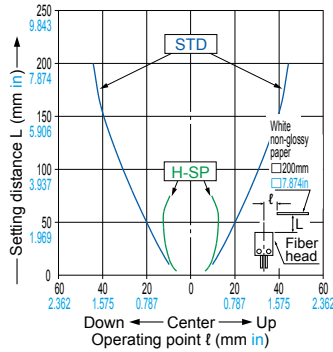
**FD-A16**

Reflective type

Horizontal direction

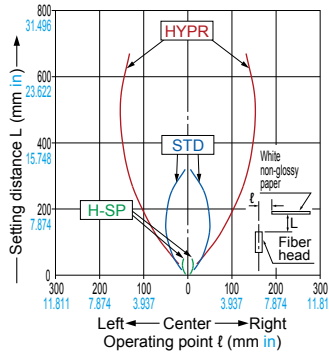


Vertical direction

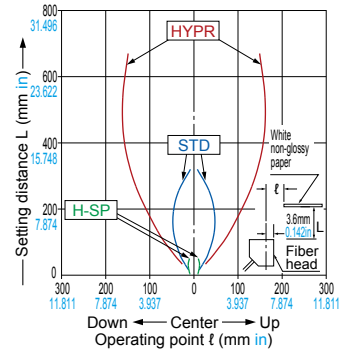
**FD-AL11**

Reflective type

Horizontal direction

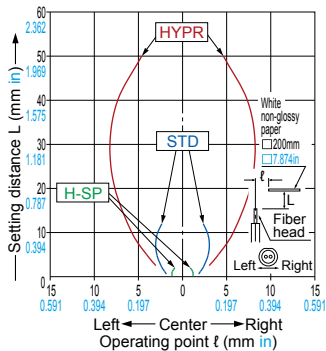


Vertical direction

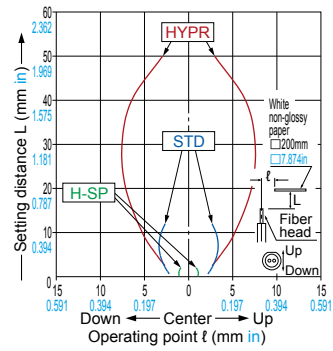
**FD-E13**

Reflective type

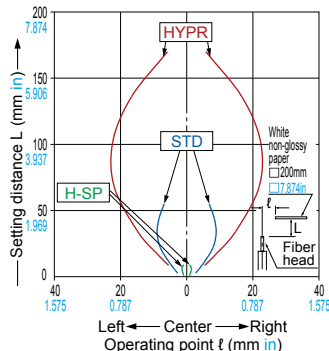
Horizontal direction



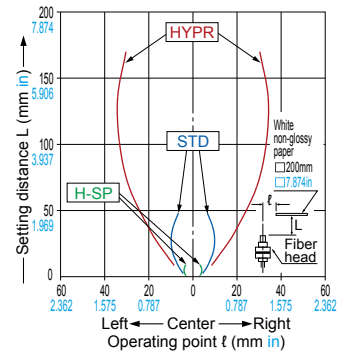
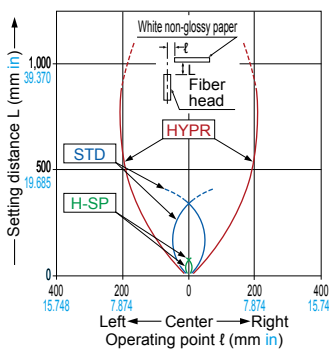
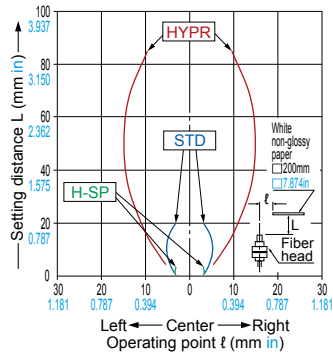
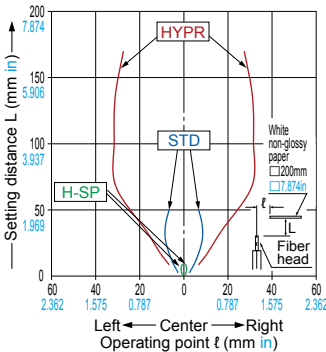
Vertical direction

**FD-E23**

Reflective type

**FD-EG30**

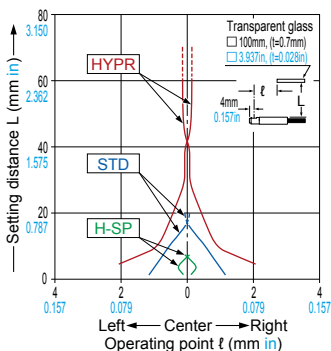
Reflective type

**FD-EG30S** Reflective type**FD-EG31** Reflective type**FD-H13-FM2** Reflective type**FD-H18-L31**

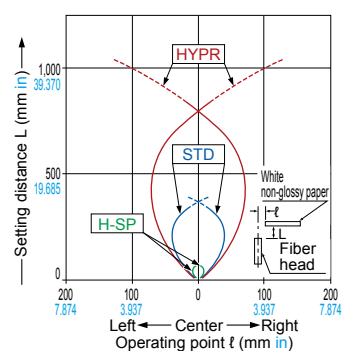
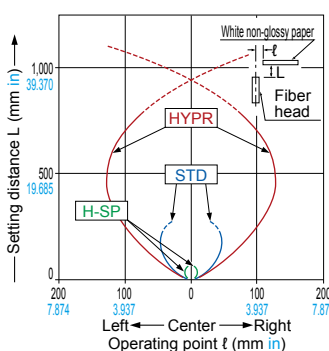
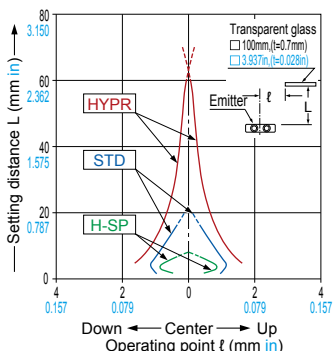
Reflective type

**FD-H20-21** Reflective type**FD-H20-M1** Reflective type

Horizontal direction



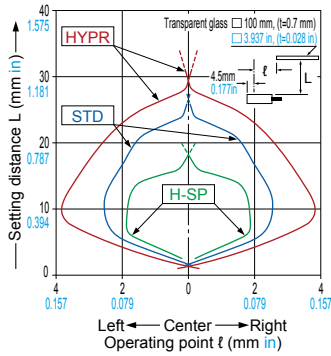
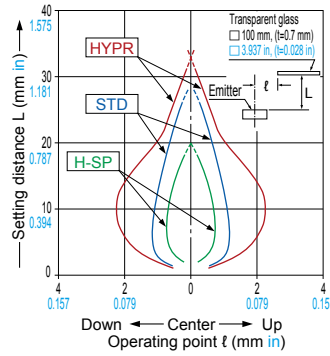
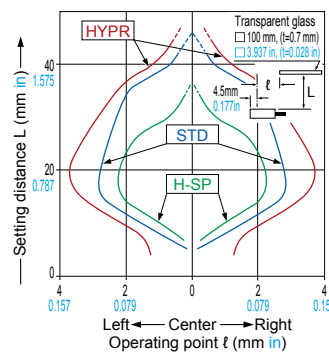
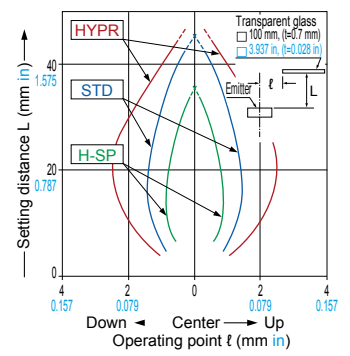
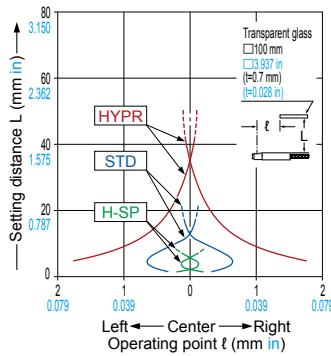
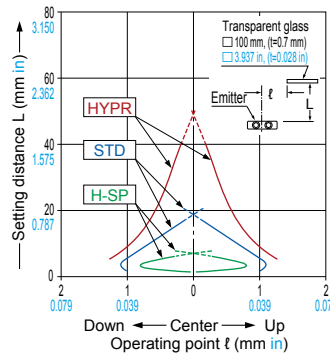
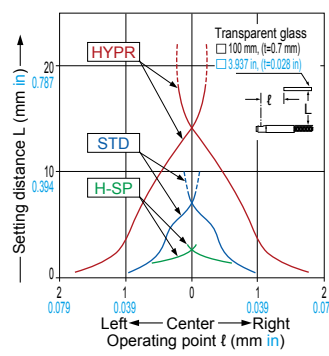
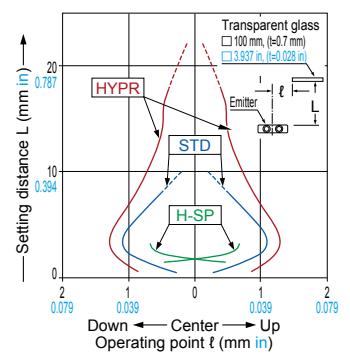
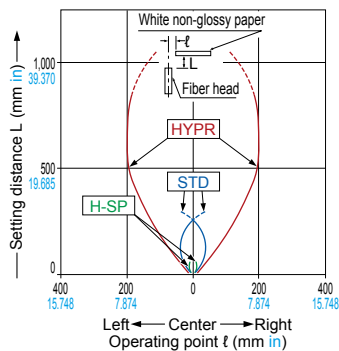
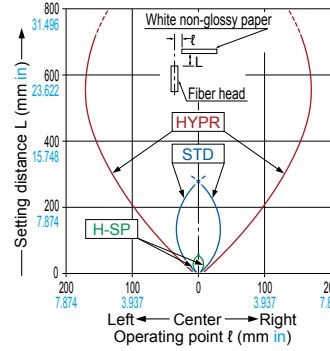
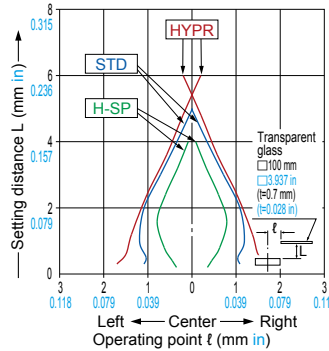
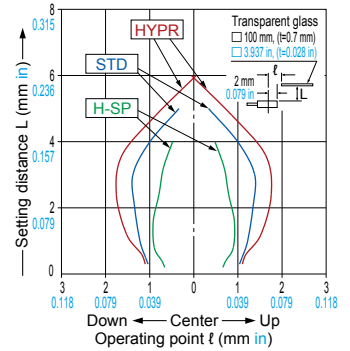
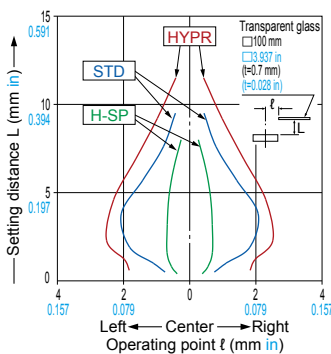
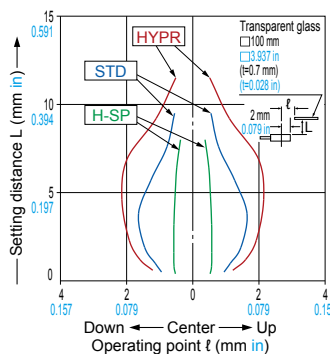
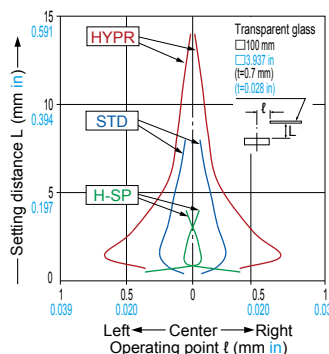
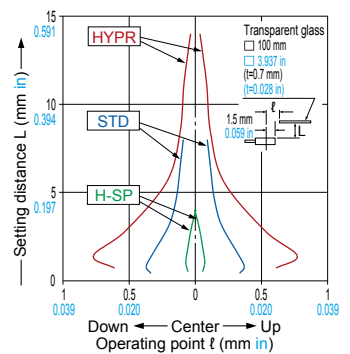
Vertical direction





**SENSING CHARACTERISTICS (TYPICAL)****Reflective type Sensing field**

Sensing characteristics are listed in the alphabetic order of the Model No. (Models with same sensing characteristics are grouped together.)

**FD-H25-L43****Reflective type****Horizontal direction****Vertical direction****FD-H25-L45****Reflective type****Horizontal direction****Vertical direction****FD-H30-L32****Reflective type****Horizontal direction****Vertical direction****FD-H30-L32V-S****Reflective type****Horizontal direction****Vertical direction****FD-H35-20S** **Reflective type****FD-H35-M2**  
**FD-H35-M2S6** **Reflective type****FD-L10****Reflective type****Horizontal direction****Vertical direction****FD-L11****Reflective type****Horizontal direction****Vertical direction****FD-L12W****Reflective type****Horizontal direction****Vertical direction**

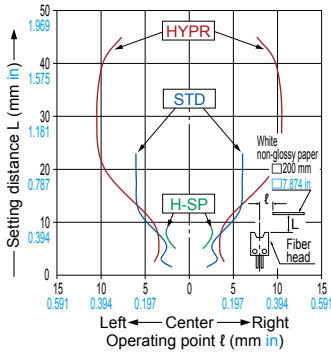
## SENSING CHARACTERISTICS (TYPICAL)

**Reflective type Sensing field** Sensing characteristics are listed in the alphabetic order of the Model No.

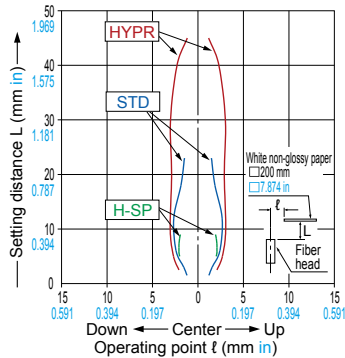
**FD-L20H**

Reflective type

Horizontal direction

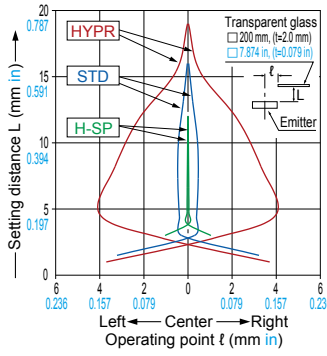


Vertical direction

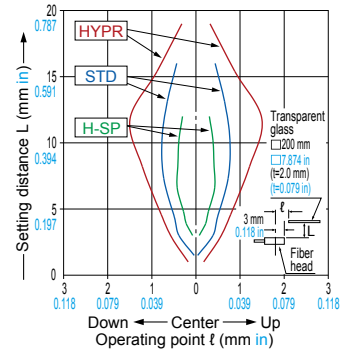
**FD-L21**

Reflective type

Horizontal direction

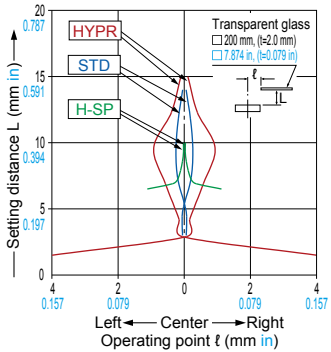


Vertical direction

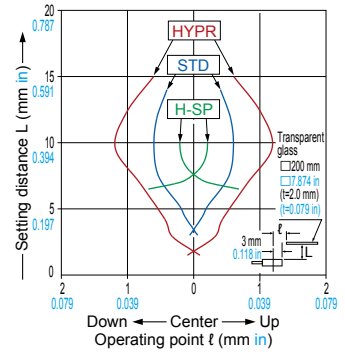
**FD-L21W**

Reflective type

Horizontal direction

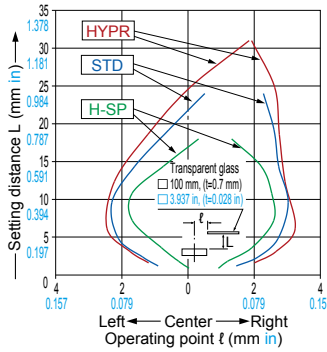


Vertical direction

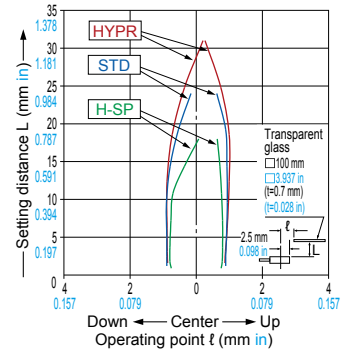
**FD-L22A**

Reflective type

Horizontal direction

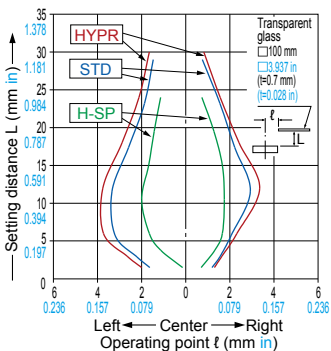


Vertical direction

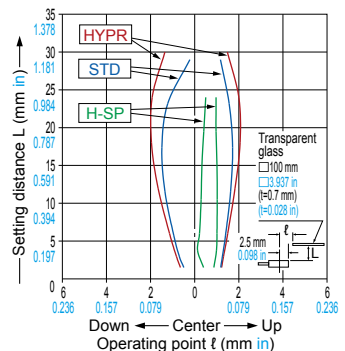
**FD-L23**

Reflective type

Horizontal direction

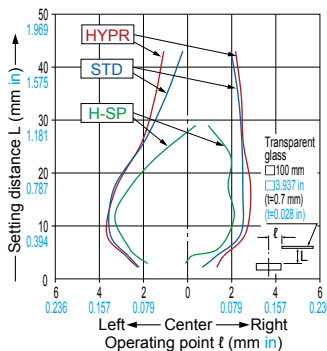


Vertical direction

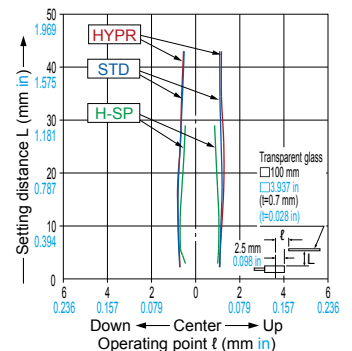
**FD-L30A**

Reflective type

Horizontal direction

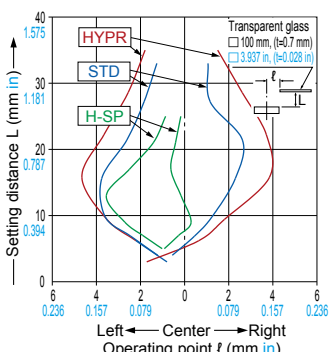


Vertical direction

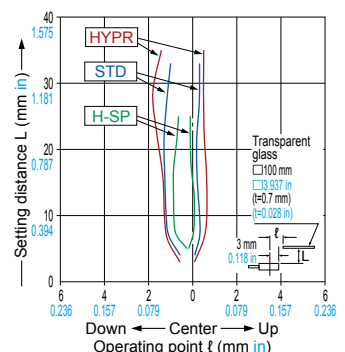
**FD-L31A**

Reflective type

Horizontal direction

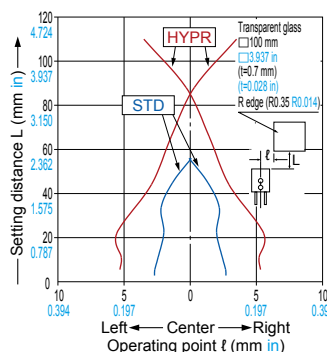


Vertical direction

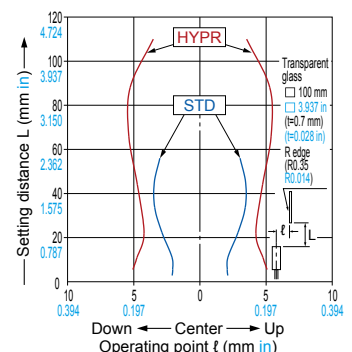
**FD-L32H**

Reflective type

Horizontal direction

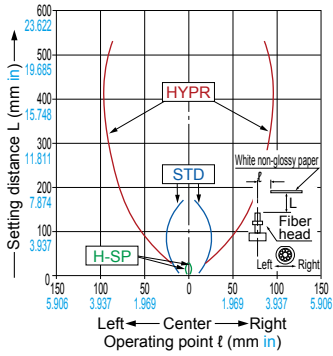
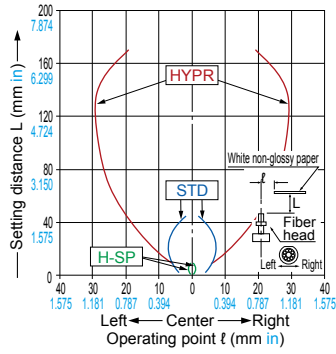
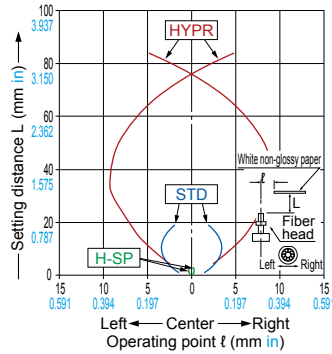
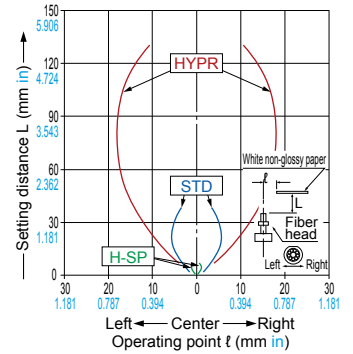


Vertical direction

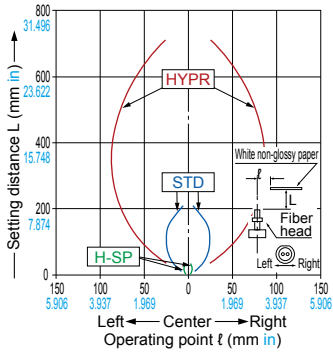


**SENSING CHARACTERISTICS (TYPICAL)**

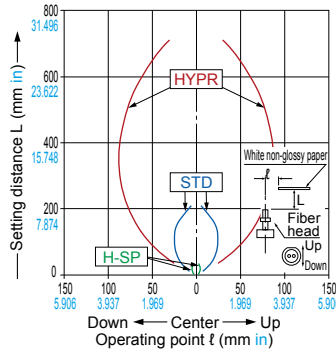
**Reflective type Sensing field** Sensing characteristics are listed in the alphabetic order of the Model No.

**FD-R31G** Reflective type**FD-R32EG** Reflective type**FD-R33EG** Reflective type**FD-R34EG** Reflective type**FD-R41** Reflective type

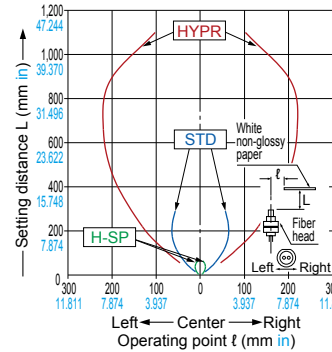
Horizontal direction



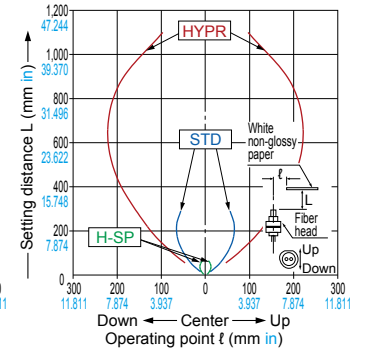
Vertical direction

**FD-R60** Reflective type

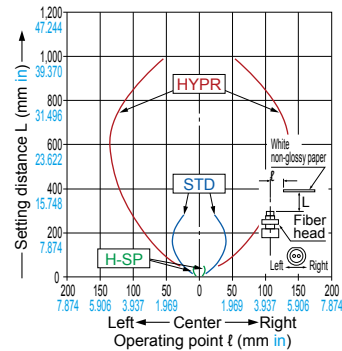
Horizontal direction



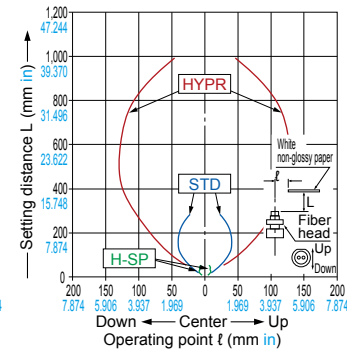
Vertical direction

**FD-R61Y** Reflective type

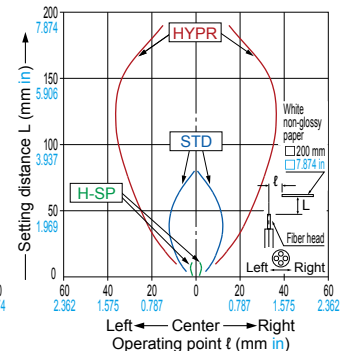
Horizontal direction



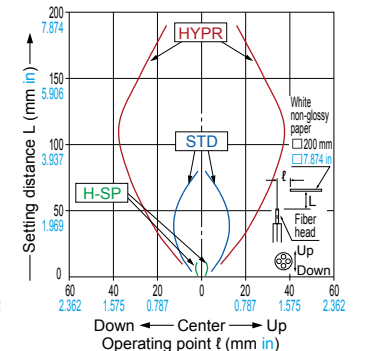
Vertical direction

**FD-S21** Reflective type

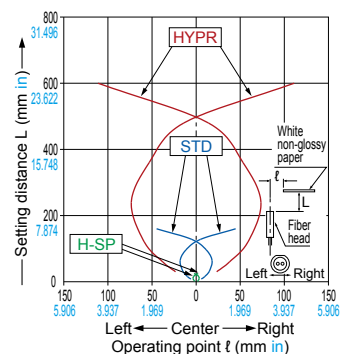
Horizontal direction



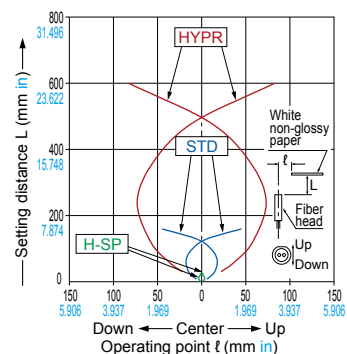
Vertical direction

**FD-S30** Reflective type

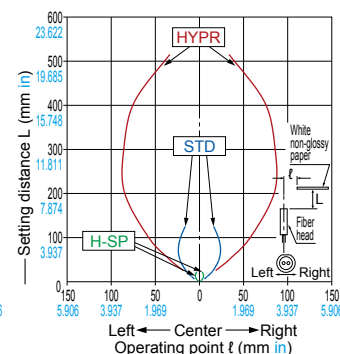
Horizontal direction



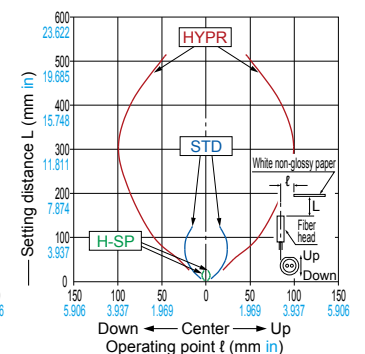
Vertical direction

**FD-S31** Reflective type

Horizontal direction



Vertical direction



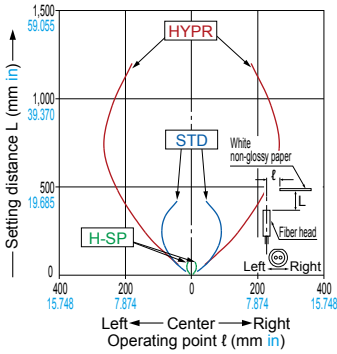
## SENSING CHARACTERISTICS (TYPICAL)

**Reflective type Sensing field** Sensing characteristics are listed in the alphabetic order of the Model No.

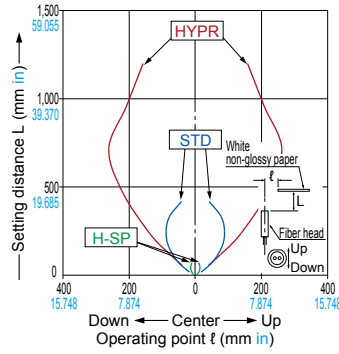
**FD-S32**

Reflective type

Horizontal direction

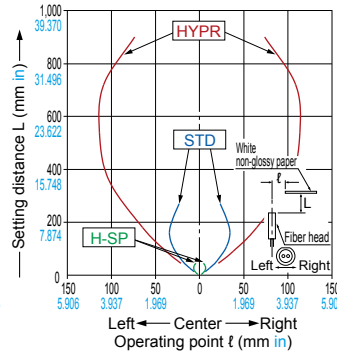


Vertical direction

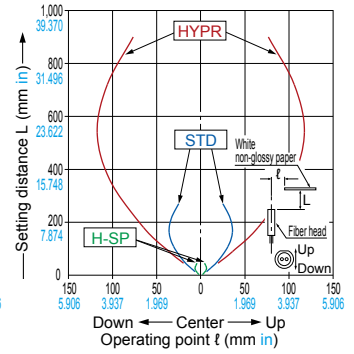
**FD-S32W**

Reflective type

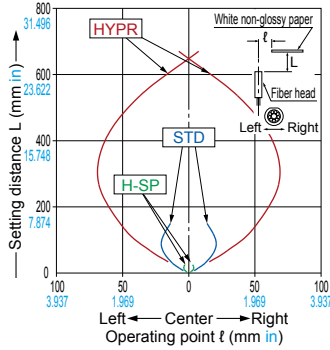
Horizontal direction



Vertical direction

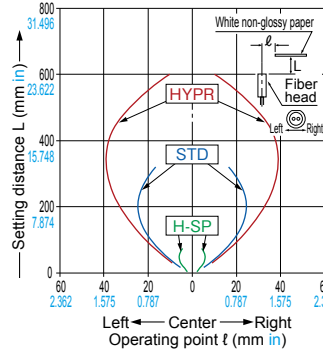
**FD-S33GW**

Reflective type

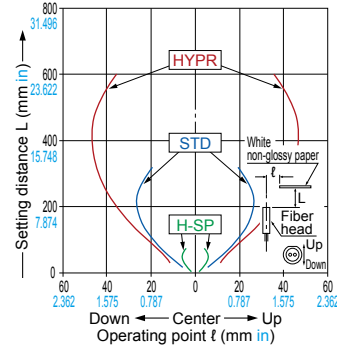
**FD-S60Y**

Reflective type

Horizontal direction

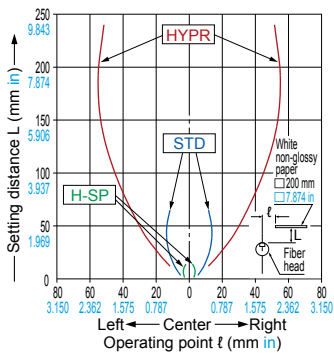


Vertical direction

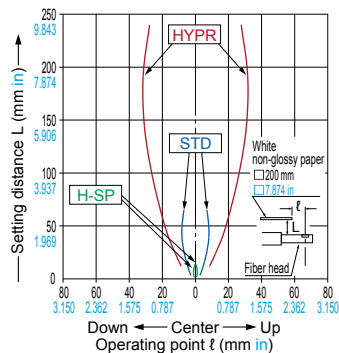
**FD-V30**

Reflective type

Horizontal direction

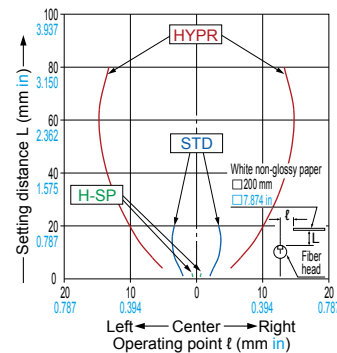


Vertical direction

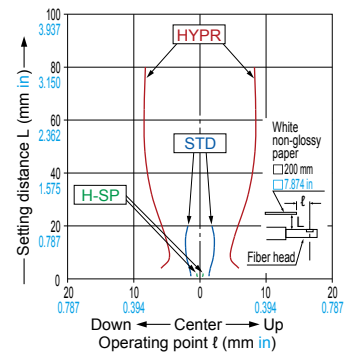
**FD-V30W**

Reflective type

Horizontal direction

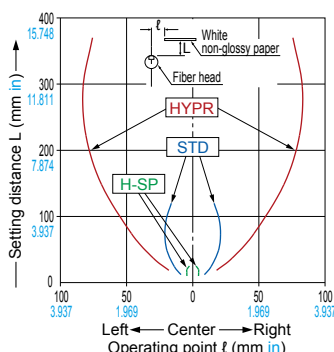


Vertical direction

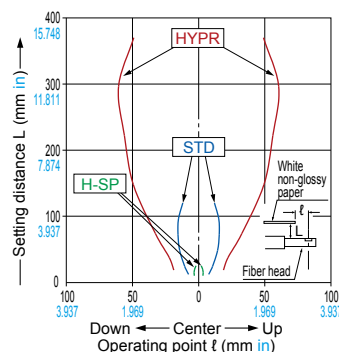
**FD-V50**

Reflective type

Horizontal direction

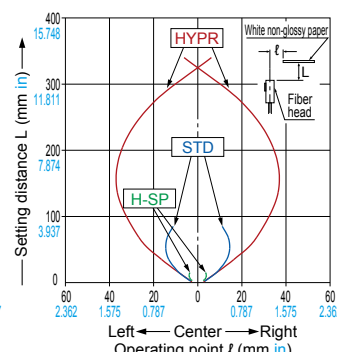


Vertical direction

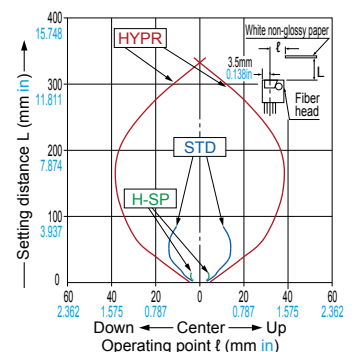
**FD-Z20HBW**

Reflective type

Horizontal direction



Vertical direction



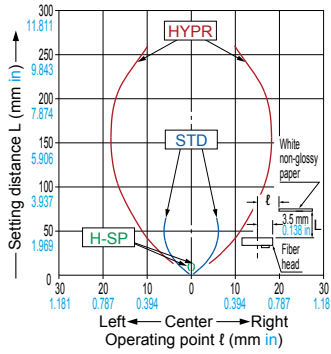
## SENSING CHARACTERISTICS (TYPICAL)

**Reflective type Sensing field** Sensing characteristics are listed in the alphabetic order of the Model No.

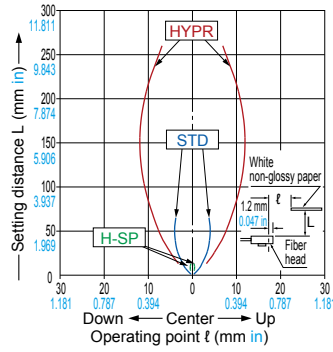
### FD-Z20W

Reflective type

Horizontal direction



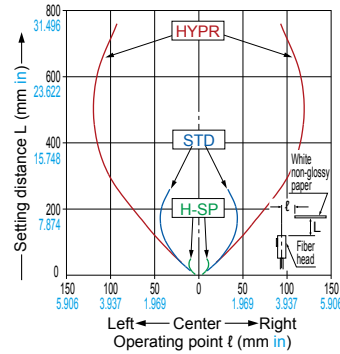
Vertical direction



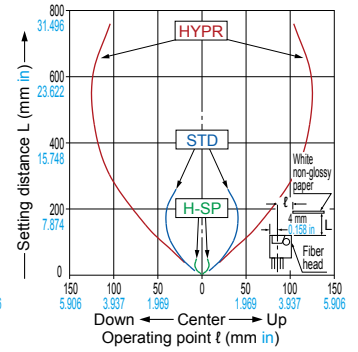
### FD-Z40HBW

Reflective type

Horizontal direction



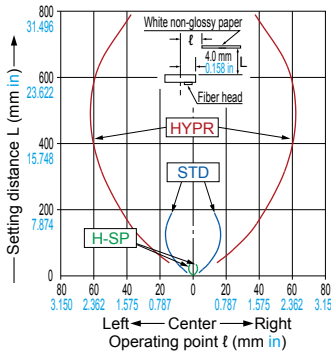
Vertical direction



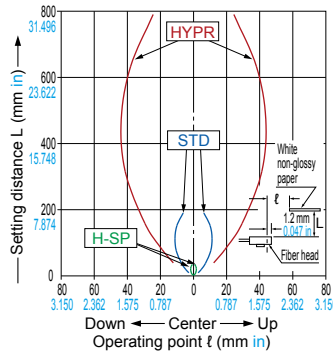
### FD-Z40W

Reflective type

Horizontal direction



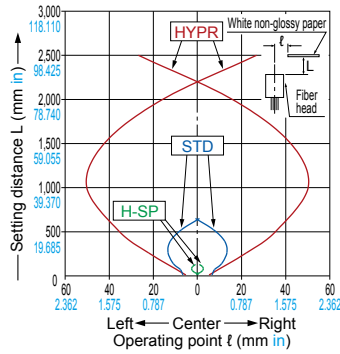
Vertical direction



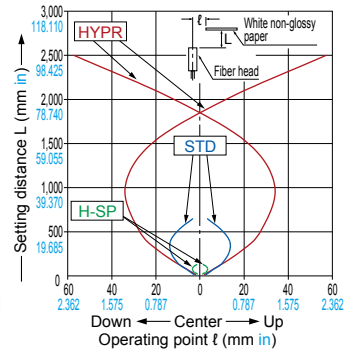
### FD-Z50HW

Reflective type

Horizontal direction



Vertical direction



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