



Sensing Bar Lighting

# OPB-S Series

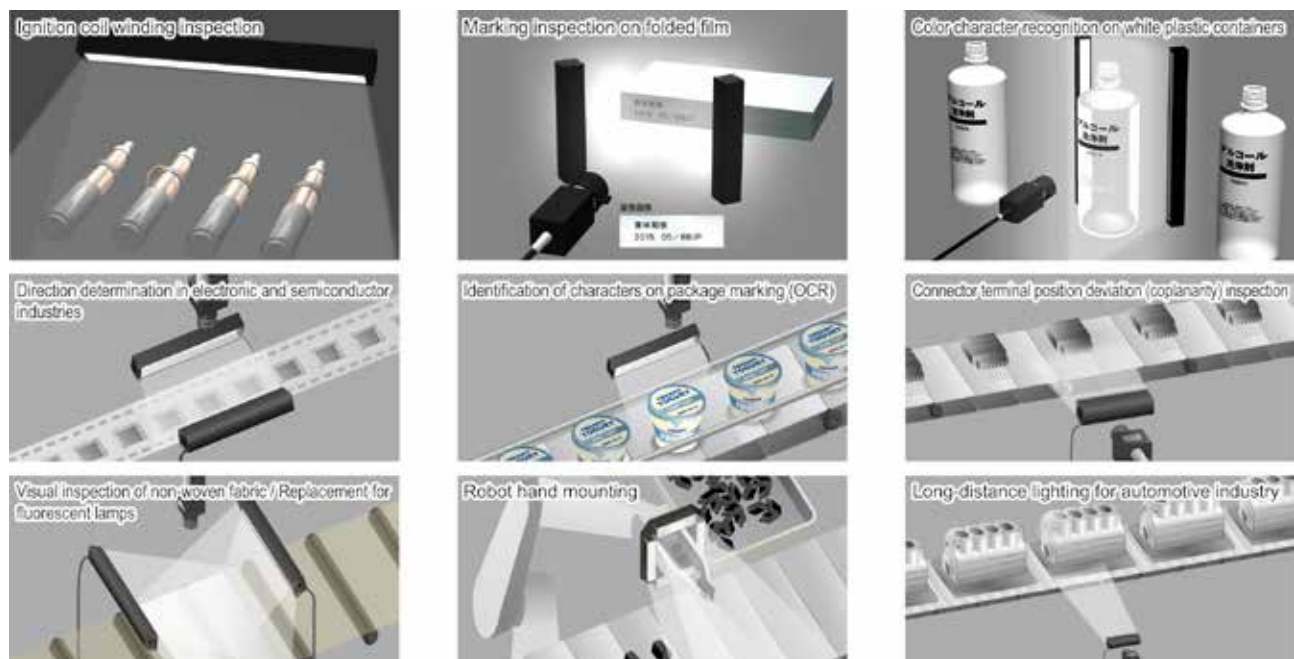
## Built-in sensor allows brightness monitoring and feedback control for long-term stability

- “FALUX sensing” enables monitoring of brightness and feedback control.
- Easily adjust multiple lighting elements at the same brightness using default brightness data and standard brightness data stored internally.

OPR	Ring
OPR-SF	Ring
OPB-S	Bar
OPF	Backlight
OPX	Coaxial
OPS-S	Spot
OPPD-15	Controllers
OPPD-30	
OPPF	
CB/RCB	Options



### Applications



### Specifications

Model	Illumination Area [mm]	Weight [g]	Power Consumption [W]	Outline Drawing
OPB-S5015W	50 × 15	60	3.1	①
OPB-S10015W	100 × 15	85	6.2	②
OPB-S15015W	150 × 15	110	9.0	③
OPB-S20015W	200 × 15	145	12.0	④
OPB-S25015W	250 × 15	175	14.7	⑤
OPB-S30015W	300 × 15	205	17.6	⑥



## Features

### ■ Built-in “FALUX sensing” technology

The built-in photodiodes make it possible to detect LED brightness. This allows for accurate measurement of LED brightness not only during continuous illumination but also with short period illumination. “FALUX sensing” also makes it possible to measure both the LED brightness of lighting and the internal temperature, and then to monitor those measurements on the controller side.

Based on the monitored values, feedback control can also be performed from the OPPF Series controller.



### ■ Absolute brightness for simple instrumental error adjustment of multiple lighting elements

The factory default brightness and model-specific absolute brightness is stored in the internal memory and can be referenced from OPPF Series products.



This not only allows monitoring of changes in brightness but also enables easy instrumental error adjustment of multiple lighting elements by comparing the absolute brightness.

### ■ Wide variety of options

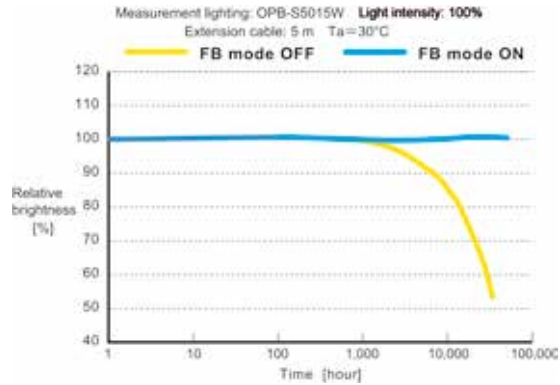
In addition to diffusion plates, transparent covers, and polarizing plates, the lineup also includes brackets for convenient mounting. Lighting angles can also be adjusted between 0 and 90°.

Square brackets for mounting 1 to 4 devices are also available.

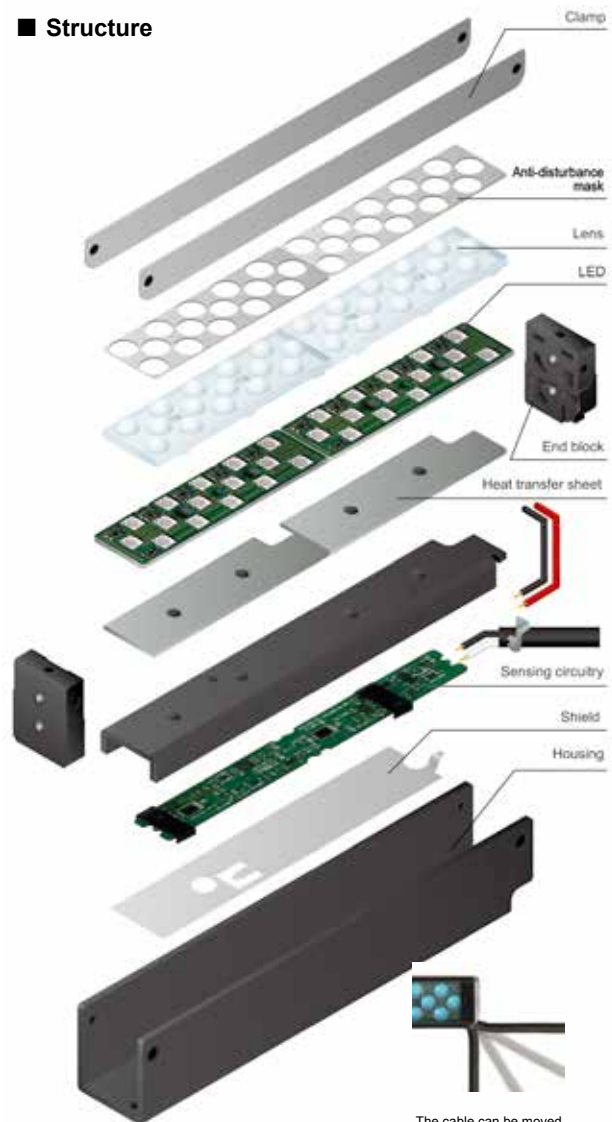


The angle scale on the bracket makes adjustment simple.

### Comparison of relative brightness with and without feedback control (estimated values)



### ■ Structure



The cable can be moved in any direction.

Ring	OPR
	OPR-SF
Bar	OPB-S
Backlight	OPF
Coaxial	OPX
Spot	OPS-S
Controllers	OPPD-15
	OPPD-30
	OPPF
Options	CB/RCB



## Specifications

<b>Illumination color</b>	White
<b>Color temperature</b>	7,000 K
<b>Input voltage</b>	12 VDC
<b>Degradation of LED</b>	The brightness will drop by 10% (typical value) for accumulated time of 10,000 hours. Conditions: Light intensity setting = 100%, ambient environment = 30°C
<b>Classification (IEC62471: 2006)</b>	Risk Group 1 (Low-Risk)
<b>Regulations/standards</b>	Conforms to EMC (2014/30/EU), RoHS (2011/65/EU, MIIT Order No.32) / EN 61326-1:2013
<b>Protection rating</b>	IP40 (IEC 60529: 1989 / A1: 1999 + A2: 2013)
<b>Ambient temperature/humidity</b>	0 to 40°C, 35 to 85% RH (no condensation)
<b>Storage temperature/humidity</b>	-20 to 70°C, 35 to 95% RH (no condensation)
<b>Vibration resistance</b>	10 to 55 Hz; amplitude 1.5 mm; 2 hours in each of the X, Y, and Z directions
<b>Shock resistance</b>	Approximately 10 G, 3 times in each of the X, Y, and Z directions
<b>Material</b>	Housing: Aluminum and PBT, Lens: PC (UV-resistant)
<b>Options</b>	Diffusion plate (60% or 80%), transparent cover, polarizing plate, bracket

• See p. 69 for spectrum distribution diagrams.

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OPR-SF	
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OPPD-15	Controllers
OPPD-30	
OPPF	
CB/RCB	Options



## Options/Accessories

## Diffusion plate (transmittance: 60%) [For backlight]

Model	Applicable Lighting	Weight [g]	
DF-OPB-5015	OPB-S5015W	5	
DF-OPB-10015	OPB-S10015W	10	
DF-OPB-15015	OPB-S15015W	15	
DF-OPB-20015	OPB-S20015W	20	
DF-OPB-25015	OPB-S25015W	25	
DF-OPB-30015	OPB-S30015W	30	

## Diffusion plate (transmittance: 80%) [For wide-area illumination]

Model	Applicable Lighting	Weight [g]	
DF80-OPB-5015	OPB-S5015W	5	
DF80-OPB-10015	OPB-S10015W	10	
DF80-OPB-15015	OPB-S15015W	15	
DF80-OPB-20015	OPB-S20015W	20	
DF80-OPB-25015	OPB-S25015W	25	
DF80-OPB-30015	OPB-S30015W	30	

## Transparent cover

Model	Applicable Lighting	Weight [g]	
TC-OPB-5015	OPB-S5015W	5	
TC-OPB-10015	OPB-S10015W	10	
TC-OPB-15015	OPB-S15015W	15	
TC-OPB-20015	OPB-S20015W	20	
TC-OPB-25015	OPB-S25015W	25	
TC-OPB-30015	OPB-S30015W	30	

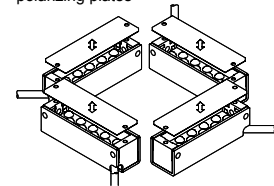
## Polarizing plate

Model	Applicable Lighting	Weight [g]	
PL-OPB-5015	OPB-S5015W	5	
PL-OPB-10015	OPB-S10015W	10	
PL-OPB-15015	OPB-S15015W	15	
PL-OPB-20015	OPB-S20015W	20	
PL-OPB-25015	OPB-S25015W	25	
PL-OPB-30015	OPB-S30015W	30	

## Remarks

The direction of polarization is parallel to the notches on the corners.  
When using multiple lighting units, refer to the figure to the right and mount the polarizing plates so that the notches are all parallel.  
Attach the included transparent covers so that they overlap on the polarizing plates during use.

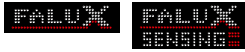
Reference diagram for mounting polarizing plates



## Bracket

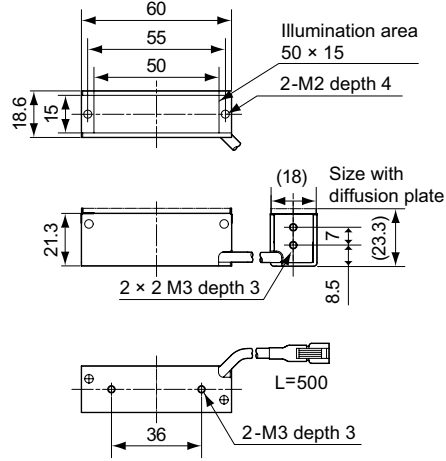
Model	Applicable Lighting	Shape	Weight [g]	Outline Drawing	Remarks
BKT-OPB-L	All OPB-S Series models	L-shaped	20		Lighting angles can also be adjusted between 0 and 90°. Mounting bolts are included.
BKT-OPB-C50	OPB-S5015W	C-shaped	20		
BKT-OPB-C100	OPB-S10015W	C-shaped	30		
BKT-OPB-C150	OPB-S15015W	C-shaped	40		
BKT-OPB-C200	OPB-S20015W	C-shaped	50		
BKT-OPB-Q50	OPB-S5015W	Square	180		
BKT-OPB-Q100	OPB-S10015W	Square	220		

Ring	OPR
	OPR-SF
Bar	OPB-S
Backlight	OPF
Coaxial	OPX
Spot	OPS-S
Controllers	OPPD-15
	OPPD-30
	OPPF
Options	CB/RCB

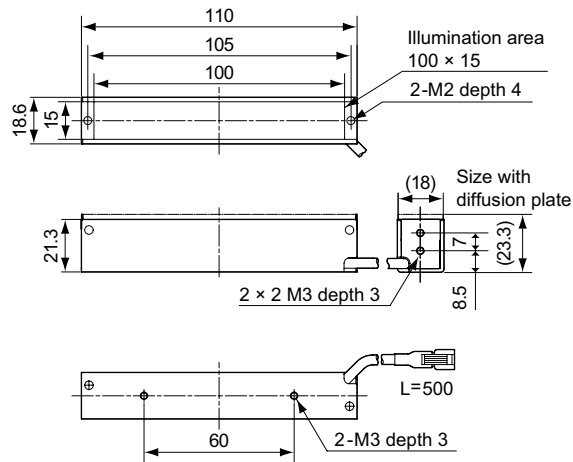


Dimensions

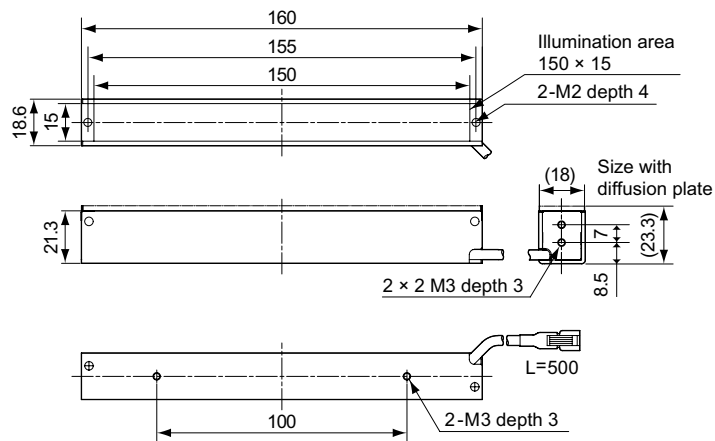
1 OPB-S5015W



2 OPB-S10015W



3 OPB-S15015W

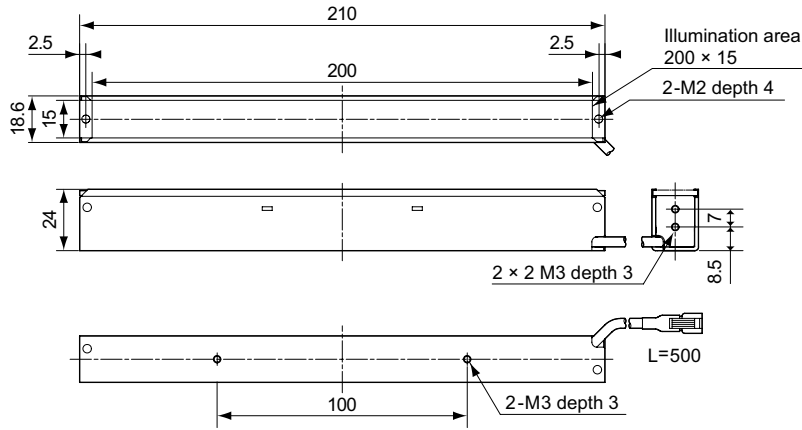


OPR	Ring
OPR-SF	Ring
OPB-S	Bar
OPF	Backlight
OPX	Coaxial
OPS-S	Spot
OPPD-15	Controllers
OPPD-30	
OPPF	
CB/RCB	Options

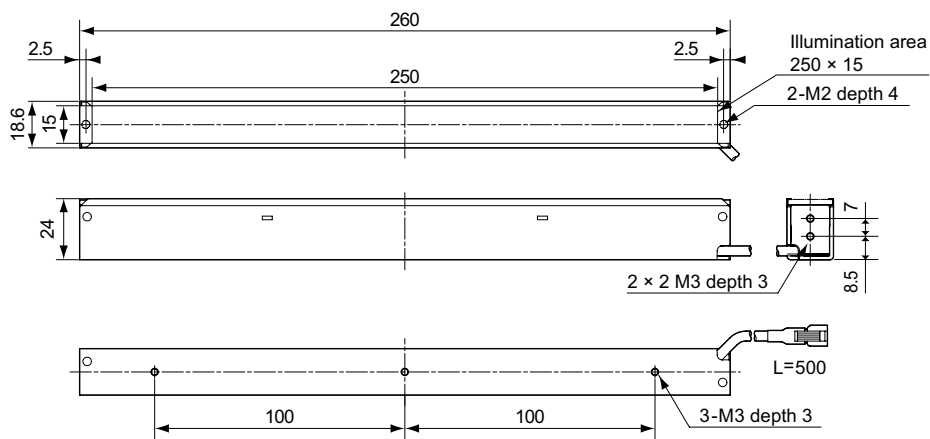


(unit: mm)

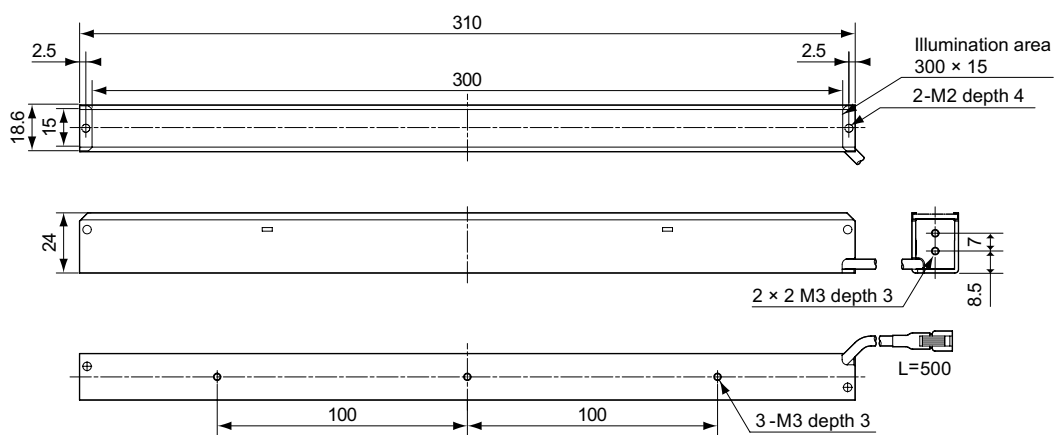
4 OPB-S20015W



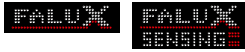
5 OPB-S25015W



6 OPB-S30015W



Ring	OPR
	OPR-SF
Bar	OPB-S
Backlight	OPF
Coaxial	OPX
Spot	OPS-S
Controllers	OPPD-15
	OPPD-30
	OPPF
Options	CB/RCB



## Dimensions

### Options (brackets)

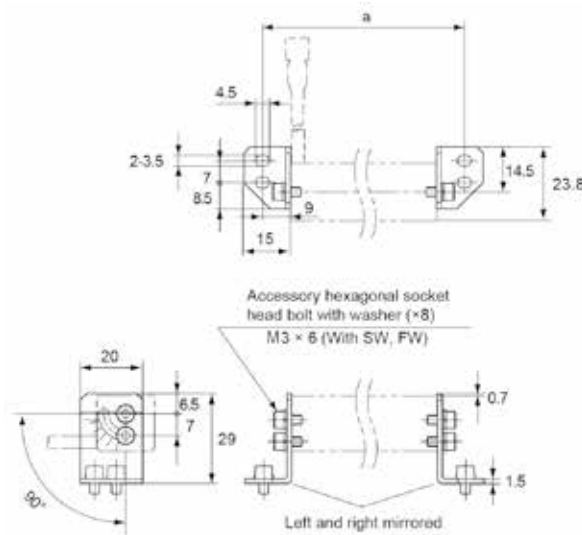
#### 7 BKT-OPB-L

L-shaped bracket common for all sizes

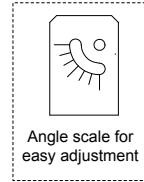
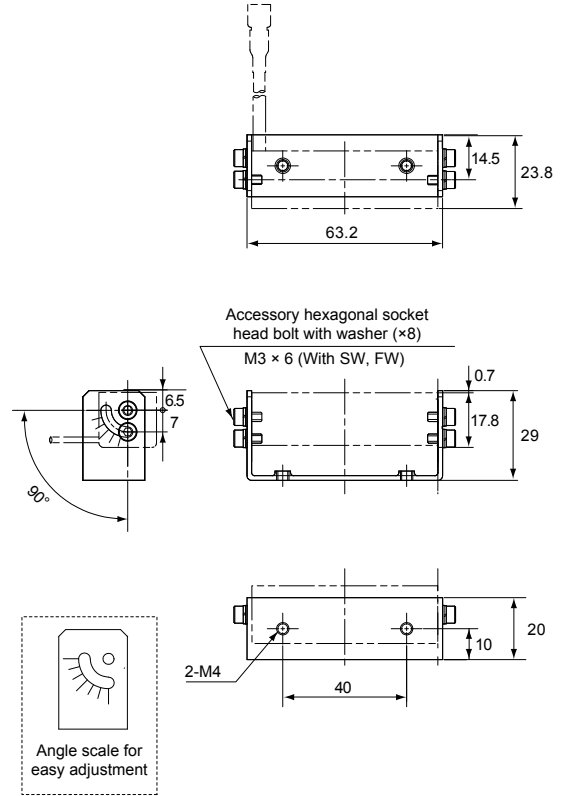
#### 8 BKT-OPB-C50

C-shaped bracket for OPB-S5015W

OPR	Ring
OPR-SF	Ring
OPB-S	Bar
OPF	Backlight
OPX	Coaxial
OPS-S	Spot
OPPD-15	Controllers
OPPD-30	
OPPF	
CB/RCB	Options

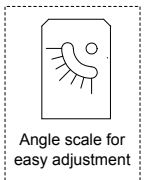
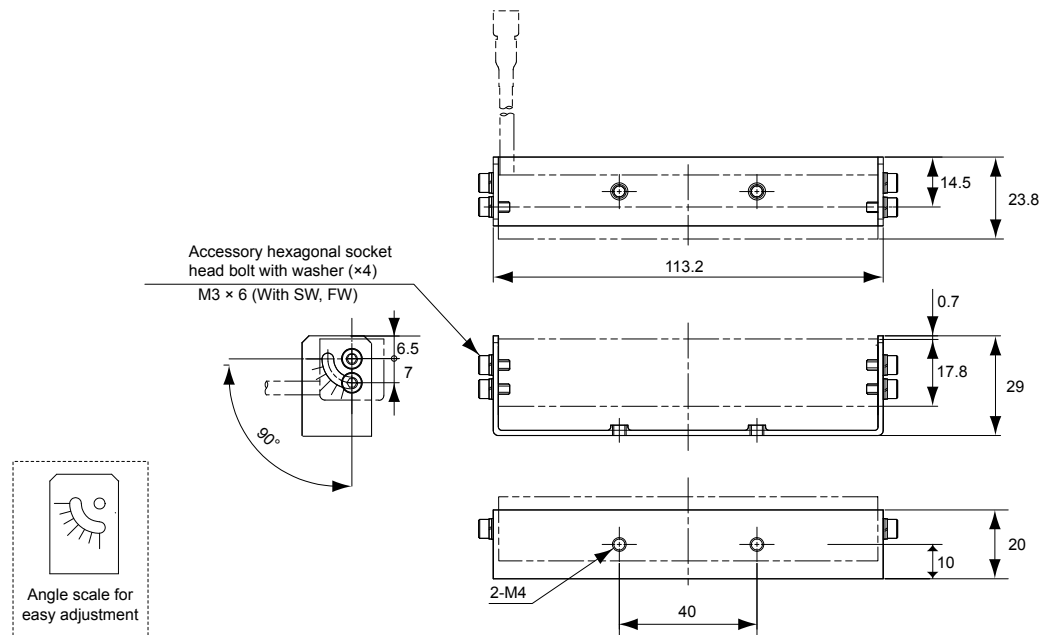


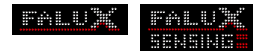
Model	Dimension a
OPB-S5015W	78
OPB-S10015W	128
OPB-S15015W	178
OPB-S20015W	228
OPB-S25015W	278
OPB-S30015W	328



#### 9 BKT-OPB-C100

C-shaped bracket for OPB-S10015W

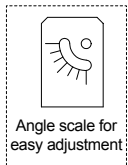




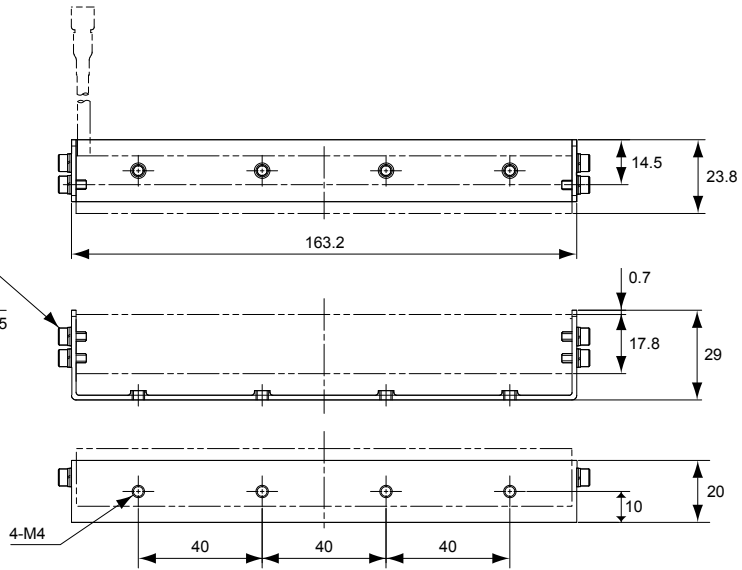
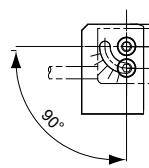
(unit: mm)

**10 BKT-OPB-C150**

C-shaped bracket for OPB-S15015W

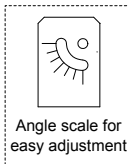


Accessory hexagonal socket head bolt with washer (x4)  
M3 × 6 (With SW, FW)

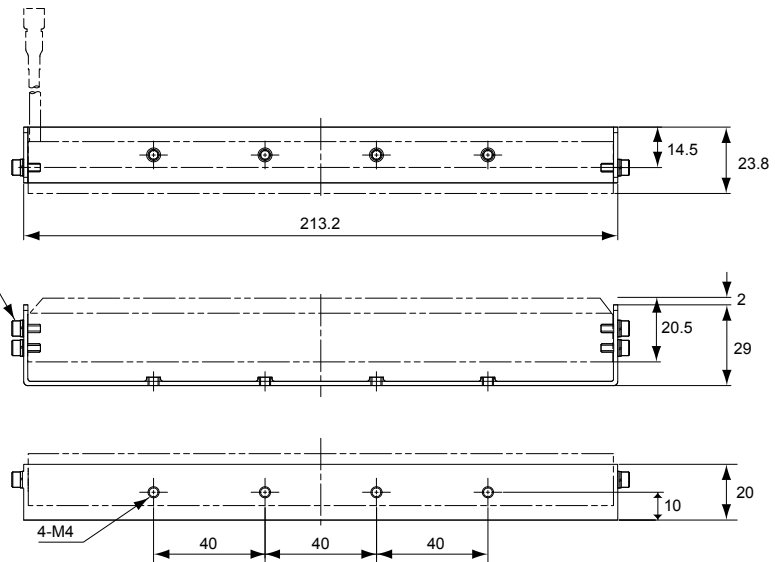
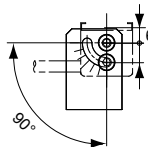


**11 BKT-OPB-C200**

C-shaped bracket for OPB-S20015W

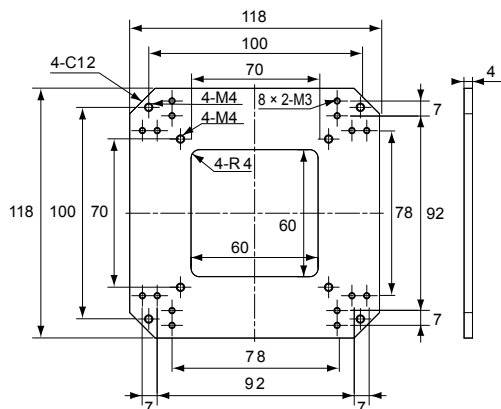


Accessory hexagonal socket head bolt with washer (x4)  
M3 × 6 (With SW, FW)



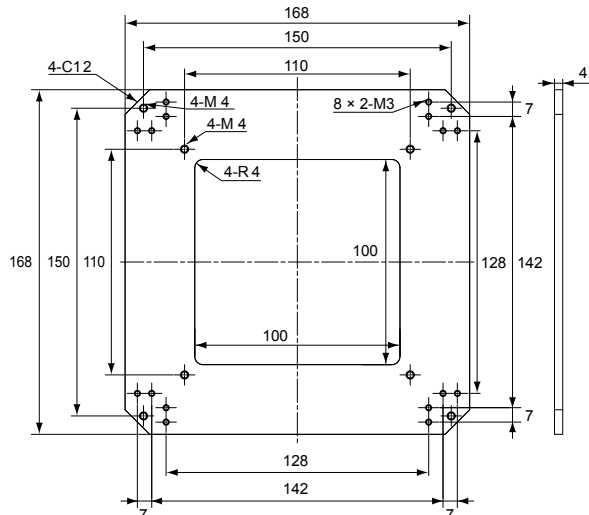
**12 BKT-OPB-Q50**

Square bracket for OPB-S5015W (for mounting 1 to 4 devices)



**13 BKT-OPB-Q100**

Square bracket for OPB-S10015W (for mounting 1 to 4 devices)



Ring	OPR
Bar	OPB-S
Backlight	OPF
Coaxial	OPX
Spot	OPS-S
Controllers	OPPD-15
	OPPD-30
	OPPF
Options	CB/RCB