

Sd = 30 ... 250 mm

- current or voltage output
- resolution up to 10 µm
- with laser line for rough surfaces



**general data**

sensing element	photoelectric array
adjustment	no
power on indication	LED green
soiled lens indicator	LED red / LED red blinking
light source	pulsed red laser diode
wave length	675 nm
laser class	2

**measuring distance Sd = 30 ... 50 mm**

resolution	< 0,01 mm
linearity error	± 0,03 mm

**measuring distance Sd = 30 ... 130 mm**

resolution	< 0,06 mm
linearity error	± 0,2 mm

**measuring distance Sd = 50 ... 250 mm**

resolution	< 0,3 mm
linearity error	± 0,9 mm

**electrical data**

response time / release time	< 10 ms
voltage supply range +Vs	12 ... 28 VDC
current consumption max.	120 mA
output circuit	analog
output signal	4 ... 20 mA / 0 ... 10 VDC
load resistance (analog I)	< (+Vs - 6 V) / 0,02 A
load resistance (analog U)	> 100 kOhm
output current	< 100 mA
alarm output	PNP
short circuit protection	yes
reverse polarity protection	yes, Vs to GND

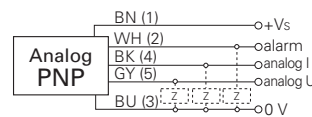
**mechanical data**

width / diameter	20,6 mm
height / length	65 mm
depth	50 mm
housing material	die-cast zinc
front (optics)	glass
connection types	connector M12, 5 pin, rotatable

**ambient conditions**

operating temperature	0 ... +50 °C
protection class	IP 67

**connection diagram**



**connectors**

ES 34CP2B	5 pin	2 m straight (shielded)
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additional cable connectors and field wireable connectors, see accessories

**accessories**

mounting bracket	131521
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for details, see accessories section

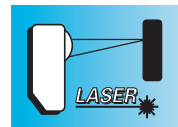
**remarks**

While switching-on the sensor, it checks if there is a current at current output BK (4). If so, the current output is activated. If not, the voltage output GY (5) is activated after 100 ms.

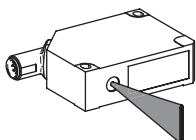
**laser warning**



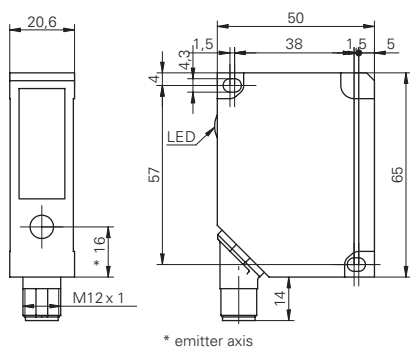
order reference	measuring distance Sd	beam type	beam width	beam height	beam diameter
OADM 20I4440/S14C	30 ... 50 mm	point	-	-	1 ... 0,4 mm
OADM 20I4460/S14C	30 ... 130 mm	point	-	-	2 ... 1 mm
OADM 20I4470/S14C	50 ... 250 mm	point	-	-	2 mm
OADM 20I4540/S14C	30 ... 50 mm	line	1 ... 0,4 mm	2 mm	-
OADM 20I4560/S14C	30 ... 130 mm	line	2 ... 1 mm	3 ... 5 mm	-
OADM 20I4570/S14C	50 ... 250 mm	line	2,5 mm	4 ... 10 mm	-



beam alignment (line)

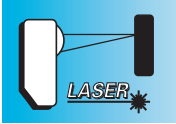


dimension drawing



OADM 20 Sd = 30 ... 250 mm

Distance sensors



Sd = 100 ... 1000 mm

- current or voltage output
- resolution up to 0,5 mm
- with laser line for rough surfaces



OADM 20 Sd = 100 ... 1000 mm

**general data**

sensing element	photoelectric array
adjustment	no
power on indication	LED green
soiled lens indicator	LED red / LED red blinking
light source	pulsed red laser diode
wave length	675 nm
laser class	2

**measuring distance Sd = 100 ... 500 mm**

resolution	< 0,5 mm
linearity error	± 1,5 mm

**measuring distance Sd = 200 ... 1000 mm**

resolution	< 3 mm
linearity error	± 12 mm

**electrical data**

response time / release time	< 10 ms
voltage supply range +Vs	12 ... 28 VDC
current consumption max.	120 mA
output circuit	analog
output signal	4 ... 20 mA / 0 ... 10 VDC
load resistance (analog I)	< (+Vs - 6 V) / 0,02 A
load resistance (analog U)	> 100 kOhm
output current	< 100 mA
alarm output	PNP
short circuit protection	yes
reverse polarity protection	yes, Vs to GND

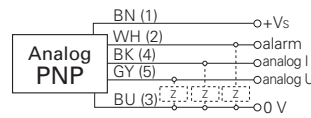
**mechanical data**

width / diameter	20,6 mm
height / length	65 mm
depth	50 mm
housing material	die-cast zinc
front (optics)	glass
connection types	connector M12, 5 pin, rotatable

**ambient conditions**

operating temperature	0 ... +50 °C
protection class	IP 67

**connection diagram**



**connectors**

ES 34CP2B 5 pin 2 m straight (shielded)  
additional cable connectors and field wireable connectors, see accessories

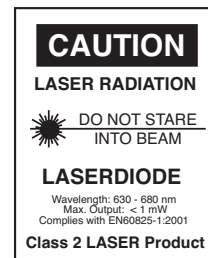
**accessories**

mounting bracket 131521  
for details, see accessories section

**remarks**

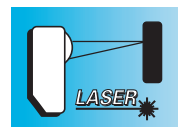
While switching-on the sensor, it checks if there is a current at current output BK (4). If so, the current output is activated. If not, the voltage output GY (5) is activated after 100 ms.

**laser warning**

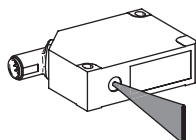


Distance sensors

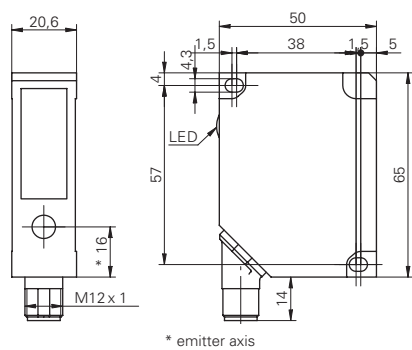
order reference	measuring distance Sd	beam type	beam width	beam height	beam diameter
OADM 20I4471/S14C	100 ... 500 mm	point	-	-	2 mm
OADM 20I4481/S14C	200 ... 1000 mm	point	-	-	2 mm
OADM 20I4571/S14C	100 ... 500 mm	line	2,5 mm	5,5 ... 18 mm	-
OADM 20I4581/S14C	200 ... 1000 mm	line	2,5 mm	8,5 ... 35 mm	-

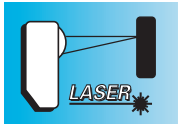


beam alignment (line)



dimension drawing





**Sd = 30 ... 250 mm**

- serial interface RS 485
- resolution up to 10 µm
- with laser line for rough surfaces



#### general data

sensing element	photoelectric array
adjustment	no
power on indication	LED green
soiled lens indicator	LED red / LED red blinking
light source	pulsed red laser diode
wave length	675 nm
laser class	2

#### measuring distance Sd = 30 ... 50 mm

resolution	< 0,01 mm
linearity error	± 0,03 mm

#### measuring distance Sd = 30 ... 130 mm

resolution	< 0,06 mm
linearity error	± 0,2 mm

#### measuring distance Sd = 50 ... 250 mm

resolution	< 0,3 mm
linearity error	± 0,9 mm

#### electrical data

response time / release time	< 10 ms
voltage supply range +Vs	12 ... 28 VDC
current consumption max.	120 mA
output circuit	RS 485
output current	< 100 mA
alarm output	push-pull
short circuit protection	yes
reverse polarity protection	yes, Vs to GND

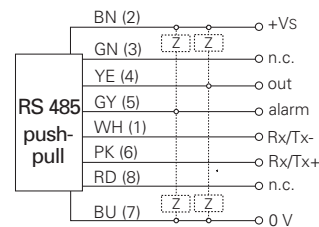
#### mechanical data

width / diameter	20,6 mm
height / length	65 mm
depth	50 mm
housing material	die-cast zinc
front (optics)	glass
connection types	connector M12, 8 pin, rotatable

#### ambient conditions

operating temperature	0 ... +50 °C
protection class	IP 67

#### connection diagram



#### connectors

ESG 34FP0200B 8 pin 2 m straight (shielded)

additional cable connectors and field wireable connectors, see accessories

#### accessories

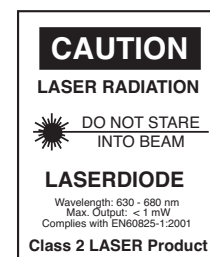
mounting bracket 131521

for details, see accessories section

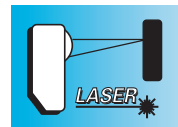
#### remarks

The sensor has a switching output (out) that is activated when the measurement is determined within the range between threshold 1 and threshold 2. Both thresholds can be set via interface.

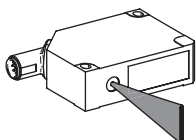
#### laser warning



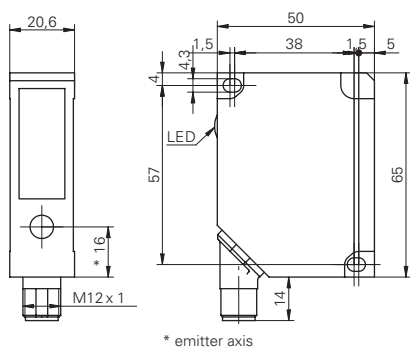
order reference	measuring distance Sd	beam type	beam width	beam height	beam diameter
OADM 20S4440/S14F	30 ... 50 mm	point	-	-	1 ... 0,4 mm
OADM 20S4460/S14F	30 ... 130 mm	point	-	-	2 ... 1 mm
OADM 20S4470/S14F	50 ... 250 mm	point	-	-	2 mm
OADM 20S4540/S14F	30 ... 50 mm	line	1 ... 0,4 mm	2 mm	-
OADM 20S4560/S14F	30 ... 130 mm	line	2 ... 1 mm	3 ... 5 mm	-
OADM 20S4570/S14F	50 ... 250 mm	line	2,5 mm	4 ... 10 mm	-



beam alignment (line)

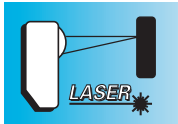


dimension drawing



OADM 20 Sd = 30 ... 250 mm

Distance sensors



Sd = 100 ... 1000 mm

- measuring ranges from 30 to 1000 mm
- resolution up to 0,5 mm
- with laser line for rough surfaces



**general data**

sensing element	photoelectric array
adjustment	no
power on indication	LED green
soiled lens indicator	LED red / LED red blinking
light source	pulsed red laser diode
wave length	675 nm
laser class	2

**measuring distance Sd = 100 ... 500 mm**

resolution	< 0,5 mm
linearity error	± 1,5 mm

**measuring distance Sd = 200 ... 1000 mm**

resolution	< 3 mm
linearity error	± 12 mm

**electrical data**

response time / release time	< 10 ms
voltage supply range +Vs	12 ... 28 VDC
current consumption max.	120 mA
output circuit	RS 485
output current	< 100 mA
alarm output	push-pull
short circuit protection	yes
reverse polarity protection	yes, Vs to GND

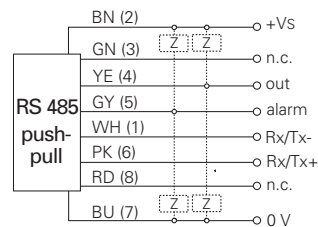
**mechanical data**

width / diameter	20,6 mm
height / length	65 mm
depth	50 mm
housing material	die-cast zinc
front (optics)	glass
connection types	connector M12, 8 pin, rotatable

**ambient conditions**

operating temperature	0 ... +50 °C
protection class	IP 67

**connection diagram**



**connectors**

ESG 34FP0200B 8 pin 2 m straight (shielded)  
 additional cable connectors and field wireable connectors, see accessories

**accessories**

mounting bracket 131521  
 for details, see accessories section

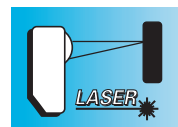
**remarks**

The sensor has a switching output (out) that is activated when the measurement is determined within the range between threshold 1 and threshold 2. Both thresholds can be set via interface.

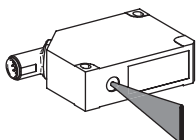
**laser warning**



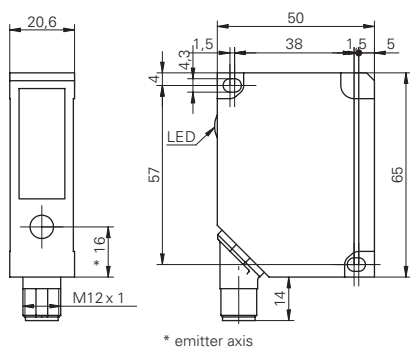
order reference	measuring distance Sd	beam type	beam width	beam height	beam diameter
OADM 20S4471/S14F	100 ... 500 mm	point	-	-	2 mm
OADM 20S4481/S14F	200 ... 1000 mm	point	-	-	2 mm
OADM 20S4571/S14F	100 ... 500 mm	line	2,5 mm	5,5 ... 18 mm	-
OADM 20S4581/S14F	200 ... 1000 mm	line	2,5 mm	8,5 ... 35 mm	-



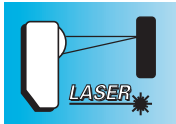
beam alignment (line)



dimension drawing







**Sd = 30 ... 300 mm**

- synchronization input
- teachable measuring range
- resolution up to 4 µm



#### general data

sensing element	photoelectric array
adjustment	Teach-in: button / external
power on indication	LED green
soiled lens indicator	LED red / LED red blinking
light source	pulsed red laser diode
wave length	675 nm
laser class	2

#### measuring distance Sd = 30 ... 70 mm

Teach-in range min.	> 2 mm
resolution	0,004 ... 0,02 mm
linearity error	± 0,012 ... ± 0,06 mm

#### measuring distance Sd = 30 ... 130 mm

Teach-in range min.	> 3 mm
resolution	0,005 ... 0,06 mm
linearity error	± 0,015 ... ± 0,2 mm

#### measuring distance Sd = 50 ... 300 mm

Teach-in range min.	> 5 mm
resolution	0,01 ... 0,33 mm
linearity error	± 0,03 ... ± 1 mm

#### electrical data

response time / release time	< 0,9 ms
voltage supply range +Vs	12 ... 28 VDC
current consumption max.	120 mA
output circuit	analog
output signal	4 ... 20 mA / 0 ... 10 VDC
load resistance (analog I)	< (+Vs - 6 V) / 0,02 A
load resistance (analog U)	> 100 kOhm
output current	< 100 mA
alarm output	PNP
short circuit protection	yes
reverse polarity protection	yes, Vs to GND

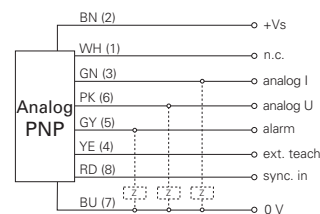
#### mechanical data

width / diameter	20,6 mm
height / length	65 mm
depth	50 mm
housing material	die-cast zinc
front (optics)	glass
connection types	connector M12, 8 pin, rotatable

#### ambient conditions

operating temperature	0 ... +50 °C
protection class	IP 67

#### connection diagram



#### connectors

ESG 34FP0200B 8 pin 2 m straight (shielded)

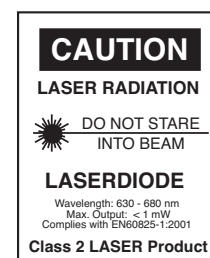
additional cable connectors and field wireable connectors, see accessories

#### accessories

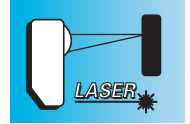
mounting bracket 131521

for details, see accessories section

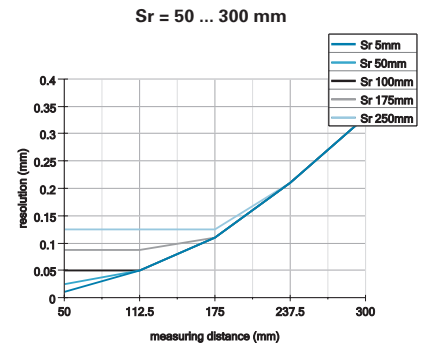
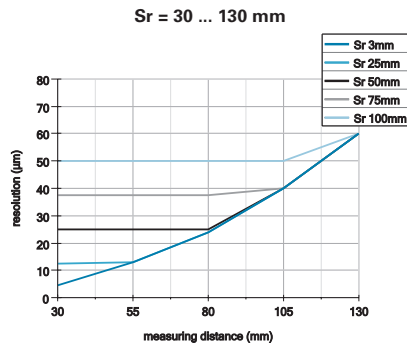
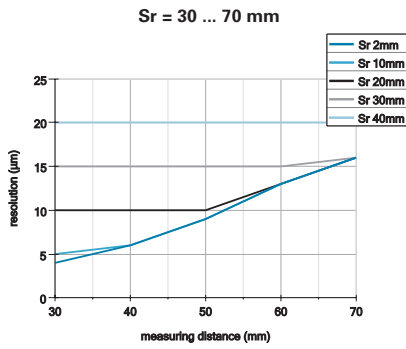
#### laser warning



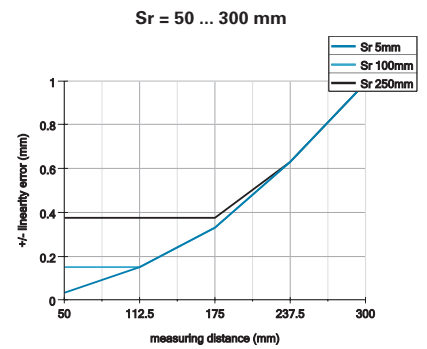
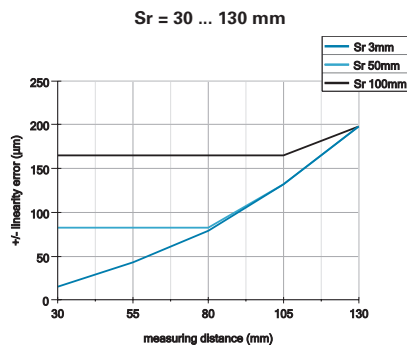
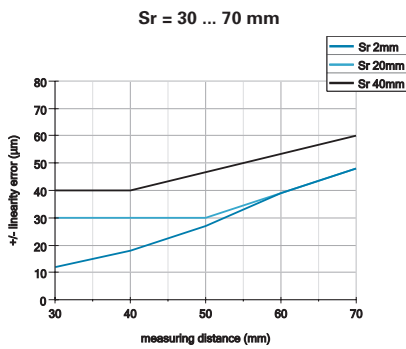
order reference	measuring distance Sd	beam type	beam width	beam height	beam diameter
OADM 20I6441/S14F	30 ... 70 mm	point	-	-	1 ... 0,2 mm
OADM 20I6460/S14F	30 ... 130 mm	point	-	-	2 ... 1 mm
OADM 20I6472/S14F	50 ... 300 mm	point	-	-	2 mm
OADM 20I6541/S14F	30 ... 70 mm	line	1 ... 0,2 mm	2 mm	-
OADM 20I6560/S14F	30 ... 130 mm	line	2 ... 1 mm	3 ... 5 mm	-
OADM 20I6572/S14F	50 ... 300 mm	line	2,5 mm	4 ... 12 mm	-



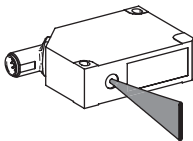
resolution



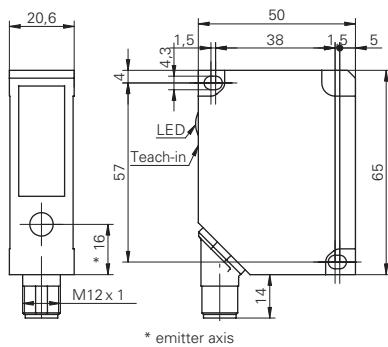
linearity error

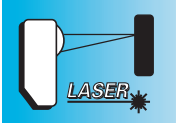


beam alignment (line)



dimension drawing





Sd = 100 ... 1000 mm

- synchronization input
- teachable measuring range
- resolution up to 15 µm



**general data**

sensing element	photoelectric array
adjustment	Teach-in: button / external
power on indication	LED green
soiled lens indicator	LED red / LED red blinking
light source	pulsed red laser diode
wave length	675 nm
laser class	2

**measuring distance Sd = 100 ... 600 mm**

Teach-in range min.	> 10 mm
resolution	0,015 ... 0,67 mm
linearity error	± 0,05 ... ± 2 mm

**measuring distance Sd = 200 ... 1000 mm**

Teach-in range min.	> 20 mm
resolution	0,12 ... 3 mm
linearity error	± 0,48 ... ± 12 mm

**electrical data**

voltage supply range +Vs	12 ... 28 VDC
current consumption max.	120 mA
output circuit	analog
output signal	4 ... 20 mA / 0 ... 10 VDC
load resistance (analog I)	< (+Vs - 6 V) / 0,02 A
load resistance (analog U)	> 100 kOhm
output current	< 100 mA
alarm output	PNP
short circuit protection	yes
reverse polarity protection	yes, Vs to GND

**measuring distance Sd = 100 ... 600 mm**

response time / release time	< 0,9 ms
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**measuring distance Sd = 200 ... 1000 mm**

response time / release time	< 2,8 ms
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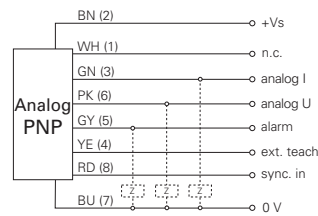
**mechanical data**

width / diameter	20,6 mm
height / length	65 mm
depth	50 mm
housing material	die-cast zinc
front (optics)	glass
connection types	connector M12, 8 pin, rotatable

**ambient conditions**

operating temperature	0 ... +50 °C
protection class	IP 67

**connection diagram**



**connectors**

ESG 34FP0200B 8 pin 2 m straight (shielded)  
 additional cable connectors and field wireable connectors, see accessories

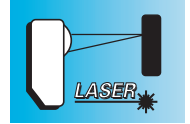
**accessories**

mounting bracket 131521  
 for details, see accessories section

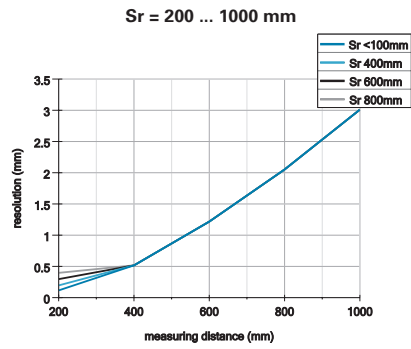
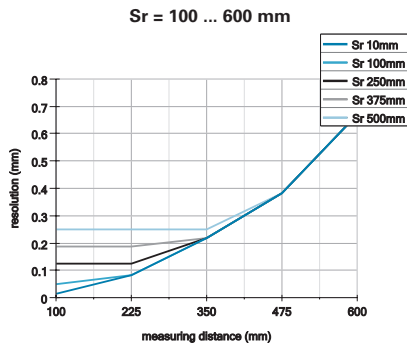
**laser warning**



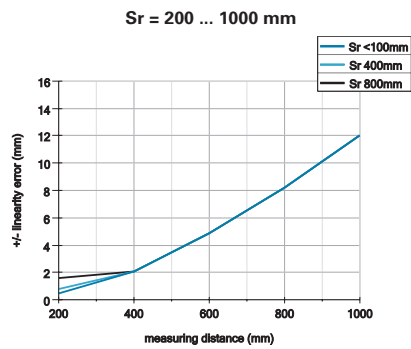
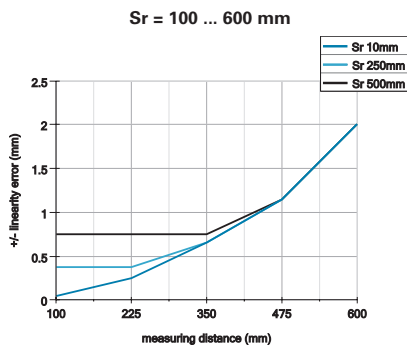
order reference	measuring distance Sd	beam type	beam width	beam height	beam diameter
OADM 20I6480/S14F	100 ... 600 mm	point	-	-	2 mm
OADM 20I6481/S14F	200 ... 1000 mm	point	-	-	2 mm
OADM 20I6580/S14F	100 ... 600 mm	line	2,5 mm	5,5 ... 21 mm	-
OADM 20I6581/S14F	200 ... 1000 mm	line	2,5 mm	8,5 ... 35 mm	-



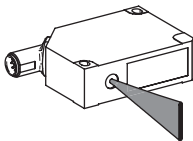
resolution



linearity error



beam alignment (line)



dimension drawing

