

dimensions	9 x 240 x 40.8mm to 9 x 2250 x 40.8mm
light curtain	field height 60 to 2040mm

- ✓ flat design 9mm
- ✓ fully automatic, fast sensitivity control with fuzzy logic
- ✓ semiconductor relay, wear-free and potential-free, no/nc configurable
- ✓ test input
- ✓ turn-on or turn-off delay configurable
- ✓ bracket or bolt mounting
- ✓ lengths of 240 to 2250mm
- ✓ connection with 4-pin M8-connector



**fully automatic light curtains  
5 or 10m range**

#### description

These light curtains are the only light curtains on the market just 9mm-thick that combine such an enormous variety with a wide range of technical possibilities.

Thanks to the free configurability without tools, the light curtains can be adapted to most installation situations and customer requests directly on-site.

Functions such as normally open / normally closed, beam failure toleration, freely-definable channel suppression, test input active on plus or minus, turn-on and turn-off delay, etc., can be set. Only the transmitter needs to be configured. The data is optically transmitted to the receiver and permanently stored in both devices.

The light curtains are offered in standard designs as well as in versions with increased degree of protection or with integrated heater. The signal strength of the light curtains is controlled automatically with the aid of fuzzy-logic. In this way, optimum light power is always achieved without any

adjustment work - at short range, at the threshold and in the event of soiling.

Even at doors or gates with traveling light curtains, this functionality is retained to a range of zero, independent of the door speed.

With the test input, the correct function can be tested. If there is a signal at this input, the transmitter switches off. The receiver output must then also switch off, something that can be controlled by the primary control.

#### application examples

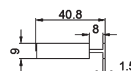
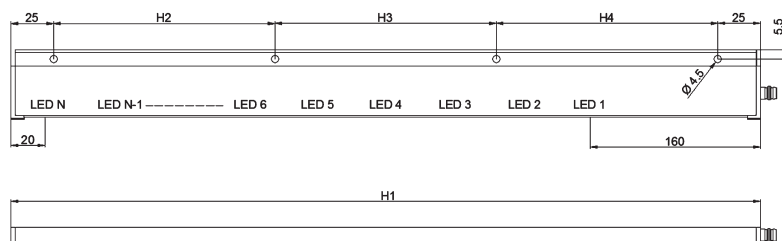
- ▶ passenger elevators
- ▶ controls for doors and gates indoors and outdoors
- ▶ entrances into industrial production, on automatic storage systems, etc.
- ▶ monitoring of cargo

TECHNICAL DATA	
range	5m (optional: 10m)
LED grid	20mm, 40mm, 60mm, 120mm
field height	60 ... 2040mm
output signal	semiconductor relay, potential-free, dark-on and light-on mode
operating voltage	without heater: 10 ... 30V DC, residual ripple 10% with heater: 11 ... 30V DC, residual ripple 10%
current consumption (without load)	max. 100mA with 16 channels, max. 160mA with 32 channels max. 220mA with 48 channels, max. 280mA with 64 channels
output current (max. load)	150mA at 20°C, 100mA at 55°C, switching voltage 35V AC/DC
transmitting element (pulsed)	LED, infrared
wavelength	880nm
light beam (angle of beam spread)	15°
response time	"crossed beam" configuration - light path interrupted: 140ms, light path free: 220ms test input set: 180ms, test input free: 260ms
response time	"parallel beam" configuration - light path interrupted: 50ms, light path free: 72ms test input set: 90ms, test input free: 112ms
readiness delay	300ms
ambient light shielding	200klx at 20° C
fitting position	arbitrary
display (operation)	transmitter: yellow LED
display (signal)	receiver: yellow LED / red LED
test input	+
short-circuit protection	+
reverse polarity protection	+
dimensions	bracket mounting: 9 x H1 x 40.8mm / bolt mounting: 9 x H1 x 31.3mm
housing material	aluminum, black plastic end pieces
material (front screen)	transparent red plastic
operating temperature	-25 ... 55°C
storage temperature	-40 ... +70°C, no icing or condensation
humidity	operation: 35 ... 85% / storage: 35 ... 95%
degree of protection (EN 60529)	IP54 (optional IP65)
connection	transmitter: M8-connector, 4-pin / receiver: M8-connector, 4-pin
connection accessories	transmitter: e.g. <b>VK200375</b> / receiver: e.g. <b>VK200375</b>

multi-function light curtain with other field heights on request.

**range 5m / degree of protection IP54**

article-no.	distance light beams [mm]	number light beams	field height [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]
OYL20470	20	4	60	240	0	190	0
OYL20570	20	5	80	260	0	210	0
OYL20670	20	6	100	280	0	230	0
OYL20770	20	7	120	300	0	250	0
OYL20870	20	8	140	320	0	270	0
OYL21270	20	12	220	400	0	350	0
OYL21370	20	13	240	420	0	770	0
OYL21470	20	14	260	440	0	390	0
OYL21570	20	15	280	460	0	420	0
OYL21670	20	16	300	480	0	430	0
OYL22070	20	20	380	560	255	0	255
OYL22170	20	21	400	580	265	0	265
OYL22270	20	22	420	600	275	0	275
OYL22370	20	23	440	620	285	0	285
OYL22470	20	24	460	640	295	0	295
OYL22870	20	28	540	720	335	0	335
OYL22970	20	29	560	740	345	0	345
OYL23070	20	30	580	760	355	0	355
OYL23170	20	31	600	780	365	0	365
OYL23270	20	32	620	800	375	0	375
OYL23670	20	36	700	880	415	0	415
OYL23770	20	37	720	900	425	0	425
OYL23870	20	38	740	920	435	0	435
OYL23970	20	39	760	940	445	0	445
OYL24070	20	40	780	960	455	0	455
OYL24470	20	44	860	1040	495	0	495
OYL24570	20	45	880	1060	505	0	505
OYL24670	20	46	900	1080	515	0	515
OYL24770	20	47	920	1100	525	0	525
OYL24870	20	48	940	1120	535	0	535
OYL25270	20	52	1020	1200	575	0	575
OYL25370	20	53	1040	1220	585	0	585
OYL25470	20	54	1060	1240	595	0	595
OYL25570	20	55	1080	1260	605	0	605
OYL25670	20	56	1100	1280	615	0	615
OYL26070	20	60	1180	1360	655	0	655
OYL26170	20	61	1200	1380	665	0	665
OYL26270	20	62	1220	1400	675	0	675
OYL26370	20	63	1240	1420	685	0	685
OYL26470	20	64	1260	1440	695	0	695

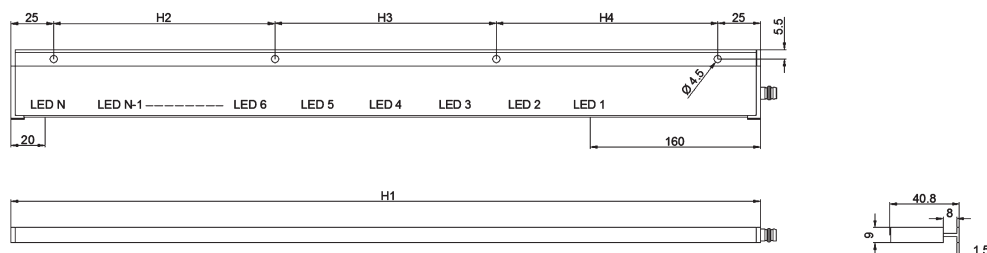


### range 5m / degree of protection IP54

article-no.	distance light beams [mm]	number light beams	field height [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]
OYL40670	40	6	200	400	0	350	0
OYL41170	40	11	400	600	275	0	275
OYL41270	40	12	440	640	295	0	295
OYL41370	40	13	480	680	315	0	315
OYL41570	40	15	560	760	355	0	355
OYL41970	40	19	720	920	435	0	435
OYL42070	40	20	760	960	455	0	455
OYL42170	40	21	800	1000	475	0	475
OYL42470	40	24	920	1120	535	0	535
OYL42670	40	26	1000	1200	575	0	575
OYL42770	40	27	1040	1240	595	0	595
OYL42870	40	28	1080	1280	615	0	615
OYL43070	40	30	1160	1360	655	0	655
OYL43170	40	31	1200	1400	675	0	675
OYL43270	40	32	1240	1440	695	0	695
OYL43470	40	34	1320	1520	735	0	735
OYL43570	40	35	1360	1560	755	0	755
OYL43670	40	36	1400	1600	775	0	775
OYL43870	40	38	1480	1680	815	0	815
OYL44070	40	40	1560	1760	855	0	855
OYL44470	40	44	1720	1920	635	600	635
OYL44670	40	46	1800	2000	650	650	650
OYL60470	60	4	180	390	0	340	0
OYL60870	60	8	420	630	290	0	290
OYL61070	60	10	540	750	350	0	350
OYL61870	60	18	1020	1230	590	0	590
OYL62070	60	20	1140	1350	650	0	650
OYL62770	60	27	1560	1770	860	0	860
OYL62870	60	28	1620	1830	890	0	890
OYL63570	60	35	2040	2250	750	700	750

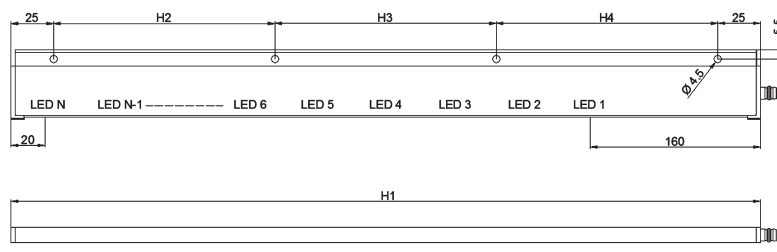
### range 5m / degree of protection IP65 with integrated heater

OYL20677	20	6	100	280	0	230	0
OYL22177	20	21	400	580	265	0	265
OYL43677	40	36	1400	1600	775	0	775
OYL44077	40	40	1560	1720	855	0	855
OYL62477	60	24	1380	1590	770	0	770



**range 5m / degree of protection IP65**

article-no.	distance light beams	number [mm]	field height [mm] light beams	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]
OYL20476	20	4	60	240	0	190	0
OYL20576	20	5	80	260	0	210	0
OYL20676	20	6	100	280	0	230	0
OYL20776	20	7	120	300	0	250	0
OYL20876	20	8	140	320	0	270	0
OYL21276	20	12	220	400	0	350	0
OYL21376	20	13	240	420	0	770	0
OYL21476	20	14	260	440	0	390	0
OYL21576	20	15	280	460	0	420	0
OYL21676	20	16	300	480	0	430	0
OYL22076	20	20	380	560	255	0	255
OYL22176	20	21	400	580	265	0	265
OYL22276	20	22	420	600	275	0	275
OYL22376	20	23	440	620	285	0	285
OYL22476	20	24	460	640	295	0	295
OYL22876	20	28	540	720	335	0	335
OYL22976	20	29	560	740	345	0	345
OYL23076	20	30	580	760	355	0	355
OYL23176	20	31	600	780	365	0	365
OYL23276	20	32	620	800	375	0	375
OYL23676	20	36	700	880	415	0	415
OYL23776	20	37	720	900	425	0	425
OYL23876	20	38	740	920	435	0	435
OYL23976	20	39	760	940	445	0	445
OYL24076	20	40	780	960	455	0	455
OYL24476	20	44	860	1040	495	0	495
OYL24576	20	45	880	1060	505	0	505
OYL24676	20	46	900	1080	515	0	515
OYL24776	20	47	920	1100	525	0	525
OYL24876	20	48	940	1120	535	0	535
OYL25276	20	52	1020	1200	575	0	575
OYL25376	20	53	1040	1220	585	0	585
OYL25476	20	54	1060	1240	595	0	595
OYL25576	20	55	1080	1260	605	0	605
OYL25676	20	56	1100	1280	615	0	615
OYL26076	20	60	1180	1360	655	0	655
OYL26176	20	61	1200	1380	665	0	665
OYL26276	20	62	1220	1400	675	0	675
OYL26376	20	63	1240	1420	685	0	685
OYL26476	20	64	1260	1440	695	0	695
OYL41176	40	11	400	600	275	0	275
OYL43476	40	34	1320	1520	735	0	735
OYLC0776	120	7	720	990	470	0	470



**range 10m / degree of protection IP54**

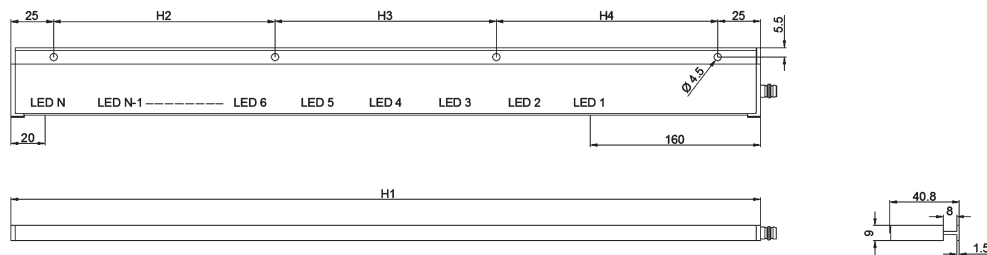
article-no.	distance light beams [mm]	number light beams	field height [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]
OYL22171	20	21	400	580	265	0	265
<b>OYL23171</b>	20	31	600	780			
OYL41671	40	16	600	800			

**range 10m / degree of protection IP65**

OYL24478	20	44	860	1040			
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**range 10m / degree of protection IP65 with integrated heater**

OYL23179	20	21	400	580			
<b>OYL44079</b>	20	31	600	780			
OYL41671	40	16	600	800			



**range 5m / degree of protection IP54**

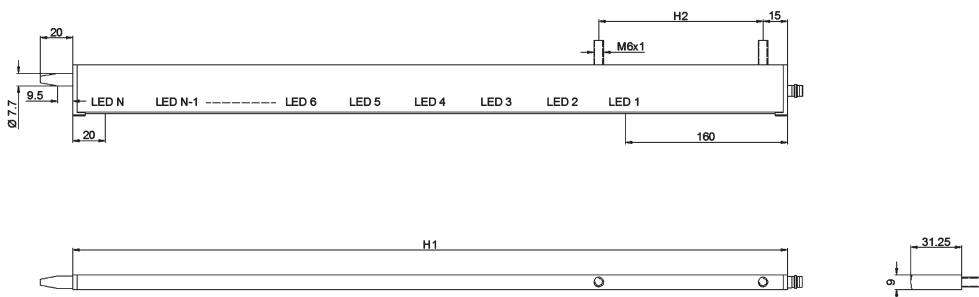
article-no.	distance light beams [mm]	number light beams	field height [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]
OYB21670	20	16	300	480	0	-	-
OYB41570	40	15	560	760	200	-	-
OYB43170	40	31	1200	1400	200	-	-
OYB63570	60	35	2040	2250	200	-	-

**range 5m / degree of protection IP65**

OYB22077	20	20	380	560	0	-	-
OYB22477	20	24	460	640	0	-	-

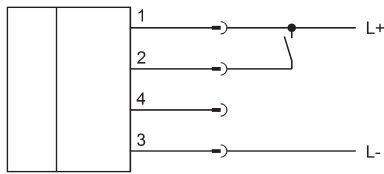
**range 10m / degree of protection IP65 with integrated heater**

OYB61579	60	15	400	580	200	-	-
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### connection

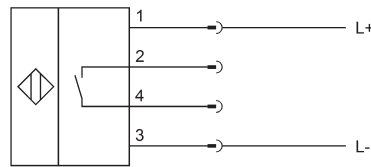
#### transmitter



**wire colors:**

1	L+	br	brown
2	test input	wh	white
4	not assigned	bk	black
3	L-	bl	blue

#### receiver



**wire colors:**

1	L+	br	brown
2	relay	wh	white
4	relay	bk	black
3	L-	bl	blue

**System testing:** By closing a switch between brown (1) and white (2), the transmitter is switched off.

The housing must be connected to ground potential.

### Description of the LED functions

transmitter	yellow LED		description
	off		transmitter is off (no voltage)
	on		transmitter in operation
	flashing		test input active
receiver	yellow LED	red LED	description
	off	off	receiver is off (no voltage)
	off	on	light path interrupted (output not switched)
	on	off	light path is free (output switched)
	on	on	light path is free, but beam failure toleration is active (output switched)
	off	flashing	soiled, misaligned or range limit (output not switched)
	on	flashing	soiled, misaligned or range limit (output switched)

This data sheet contains the standard versions only. Kindly request the availability of other output and connection versions.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets ipf-SENSORFLEX®" or search our website for "VK".

Warning: Never use these devices in applications where the safety of a person depends on their functionality.

This data sheet as well as your personal contact can be found at [www.ipf-electronic.com](http://www.ipf-electronic.com)