



 *infrared illuminators*
MICROLIGHT

Infrared illuminators

WHAT?

MICROLIGHT infrared illuminators are manufactured basing on high-performance light-emitting arrays and light-emitting diodes of the best foreign and domestic producers.

Before being applied LEDs pass tight incoming inspection and testing.

Unique designs and processing technology developed by the company's specialists allow to increase each element's emission intensity significantly.

A wide range of products makes it possible to choose an optimal solution for any project in CCTV systems where infrared lighting is efficient to apply.

All Microlight Infrared illuminators are provided with a 3 year warranty, unmatched anywhere in the CCTV lighting industry.

WHERE?

MICROLIGHT's product range can be divided into several groups according to the application purpose and technical characteristics:

- short range illuminators (illumination distance up to 10 meters) are used for lighting entrances and porches, elevators, offices, garages, storage facilities, passenger compartments etc.
- medium range illuminators (illumination distance from 10 to 60 meters) are applied for lighting cinemas, night clubs, casinos, parking places, private residences and surrounding areas.
- long range illuminators (illumination distance from 60 to 350 meters) are used for lighting airports, tunnels, boundary protection, sports grounds, large storage facilities, industrial enterprises territories etc.

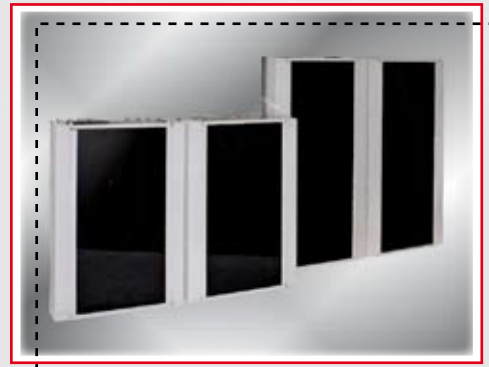
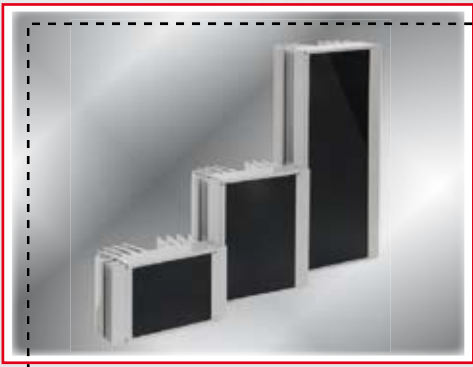
WHEN?

IR illuminators are applied:

- when covert video surveillance is needed;
- in conditions of insufficient lighting in night video surveillance systems, security and access control systems;
- in case energy efficiency is one of the main decision-making criteria when choosing illumination type (perimeter protection, protection of big industrial enterprises imply high running costs)

NEW LINE!

MICROLIGHT launches a new line of infrared illuminators with 30°, 45°, 60°&90° beam angles, and a wide selection of effective illumination distances. Thus the new product line offersthe widest choice of "flood" infrared illuminators at the illumination distances over 100m .



FEATURES

Unique combination of illumination distance / beam angle parameters.

Flood illumination capability.

30°, 45°, 60° and 90° illumination angles. Perfect for most CCTV-Cameras

Universal bracket for all models in the line is included.

XL, XXL models come equipped with a power supply unit. S, M, L models have a power supply unit available as an option.

Uniform design for all the models

MICROLIGHT infrared illuminators' parameters					
IR-Illuminator	Illumination distance depending on a wavelength, m		Emission angel, °	Continuous current, A (MAX)	
	880 nm	940 nm*			
Medium range	IR-294-S/90	35.0	-	90	1.2
	IR-294-S/60	40.0	-	60	1.2
	IR-294-M/90	45.0	-	90	2.4
	IR-294-M/60	60.0	-	60	2.4
	IR-294-S/45	60.0	-	45	1.2
	IR-294-L/90	60.0	-	60	3.0
	IR-294-M/45	80.0	-	45	2.4
	IR-294-L/60	75.0	-	60	3.0
	IR-294-XL/90	80.0	-	90	5.5
	IR-294-XXL/90	90.0	-	90	7.0
Long range	IR-294-S/30	100.0	-	30	1.2
	IR-294-L/45	100.0	-	45	3.0
	IR-294-XL/60	110.0	-	60	5.5
	IR-294-XXL/60	130.0	-	60	7.0
	IR-294-M/30	140.0	-	30	2.4
	IR-294-XL/45	140.0	-	45	5.5
	IR-294-L/30	170.0	-	30	3.0
	IR-294-XXL/45	170.0	-	45	7.0
	IR-294-XL/30	240.0	-	30	5.5
	IR-294-XXL/30	270.0	-	30	7.0

Order code:

Model name/Emission angle-Wavelength

Example:IR-21/25-880

IR-21 – model name

25 – emission angle

880 – wavelength

Photosensor:

Optional

Notes:

*NEW IR-294 Models are only with 880nm wavelength available. This models launch at 01.01.2009 with 940nm wavelength and angles 60°x40° and 20°.

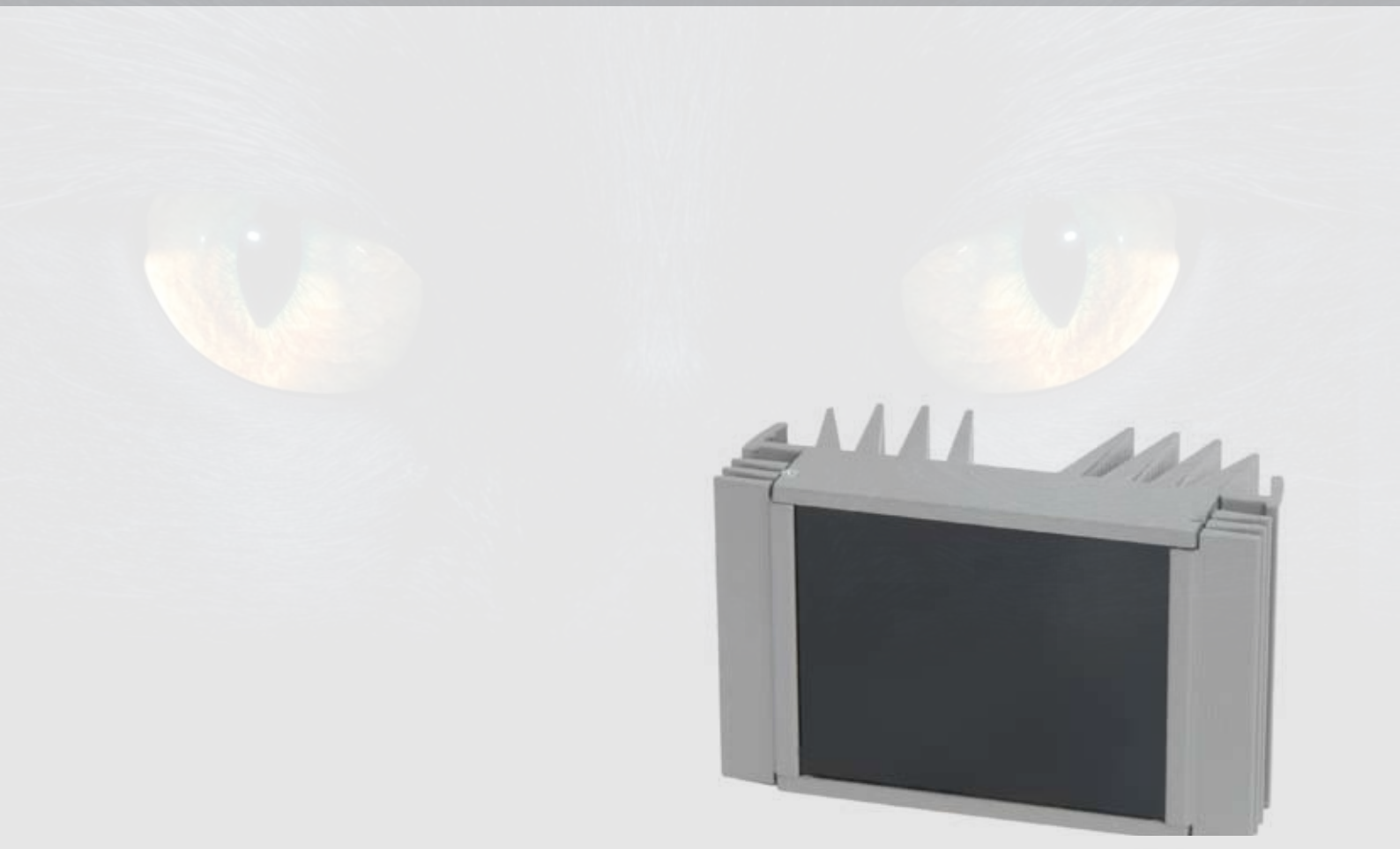
Illumination distance is indicated for black and white video cameras without IR correction featured with the 1/3 CCD matrix the sensitivity of which is no less than 1,5·10⁻⁵ W/m in the IR range of 0,8...1 μm (the equivalent of a video camera with the sensitivity of 0,01 lx), the lens is F1.4.

An illuminator is to be connected to a power supply unit of the output voltage 12±0,6 V. Cable should not be more than 10 meters.

The illuminators do not impede due functioning of nearby electronic equipment.

The illuminators meet Protection Standards IP54... IP66 (depending on a model).

The illuminators comply with IEC/TS60825-7:2000 ("Safety of products emitting infrared optical radiation, exclusively used for surveillance").

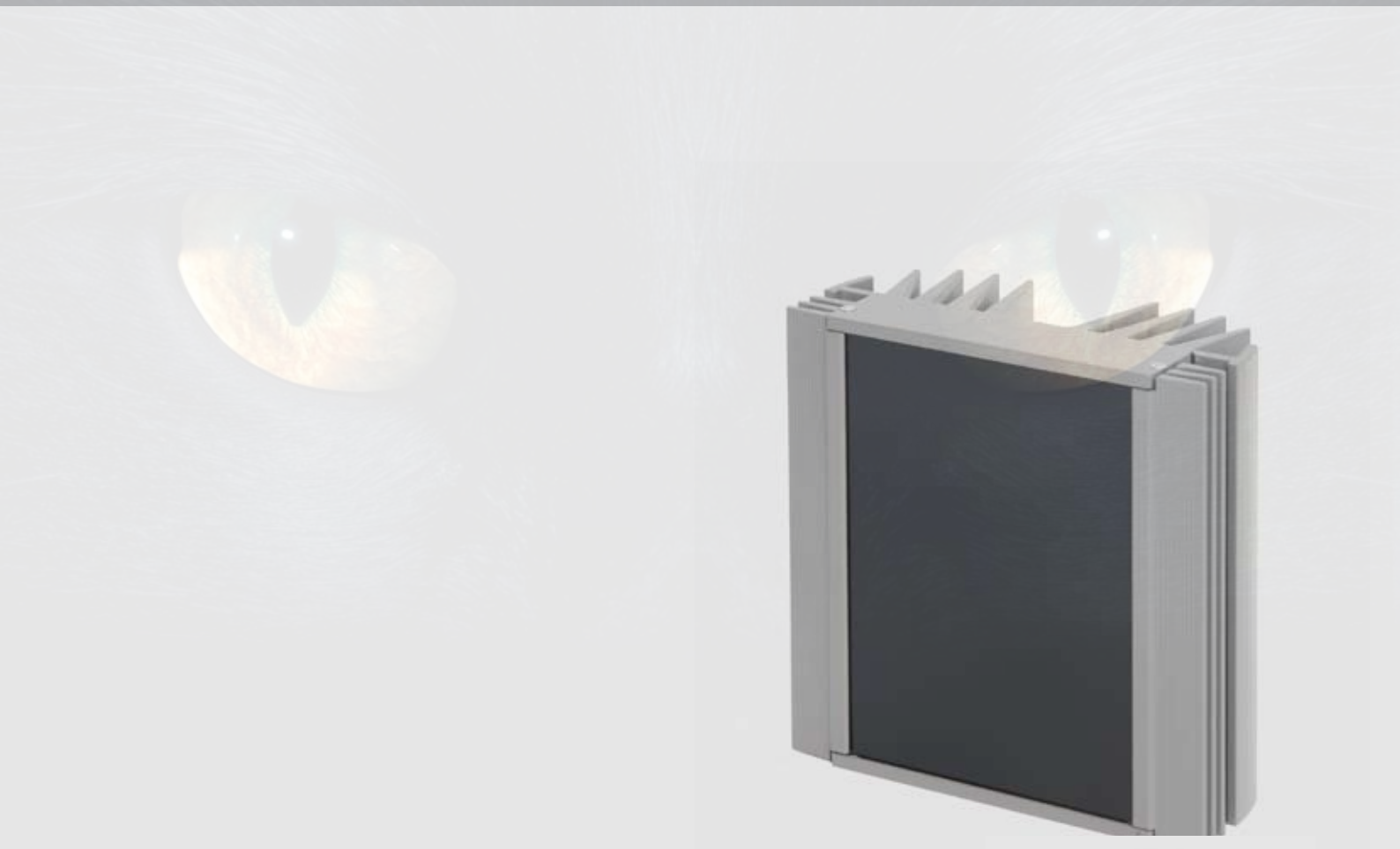


IR-294-S

incl. ST-3



Order code	IR-294-S/30-880	IR-294-S/45-880	IR-294-S/60-880	IR-294-S/90-880
Wavelength, nm	880±20			
Illumination range, m	100	60	45	30
Emission angle, °	30±3	45±5	60±6	90±9
Continuous current, A	1.0 nominal/1.2 max			
Input voltage, V	12±0.6			
Dimensions w. Bracket, mm	219x134x134			
Weight, kg	0.99			
Protection Standard	IP66			

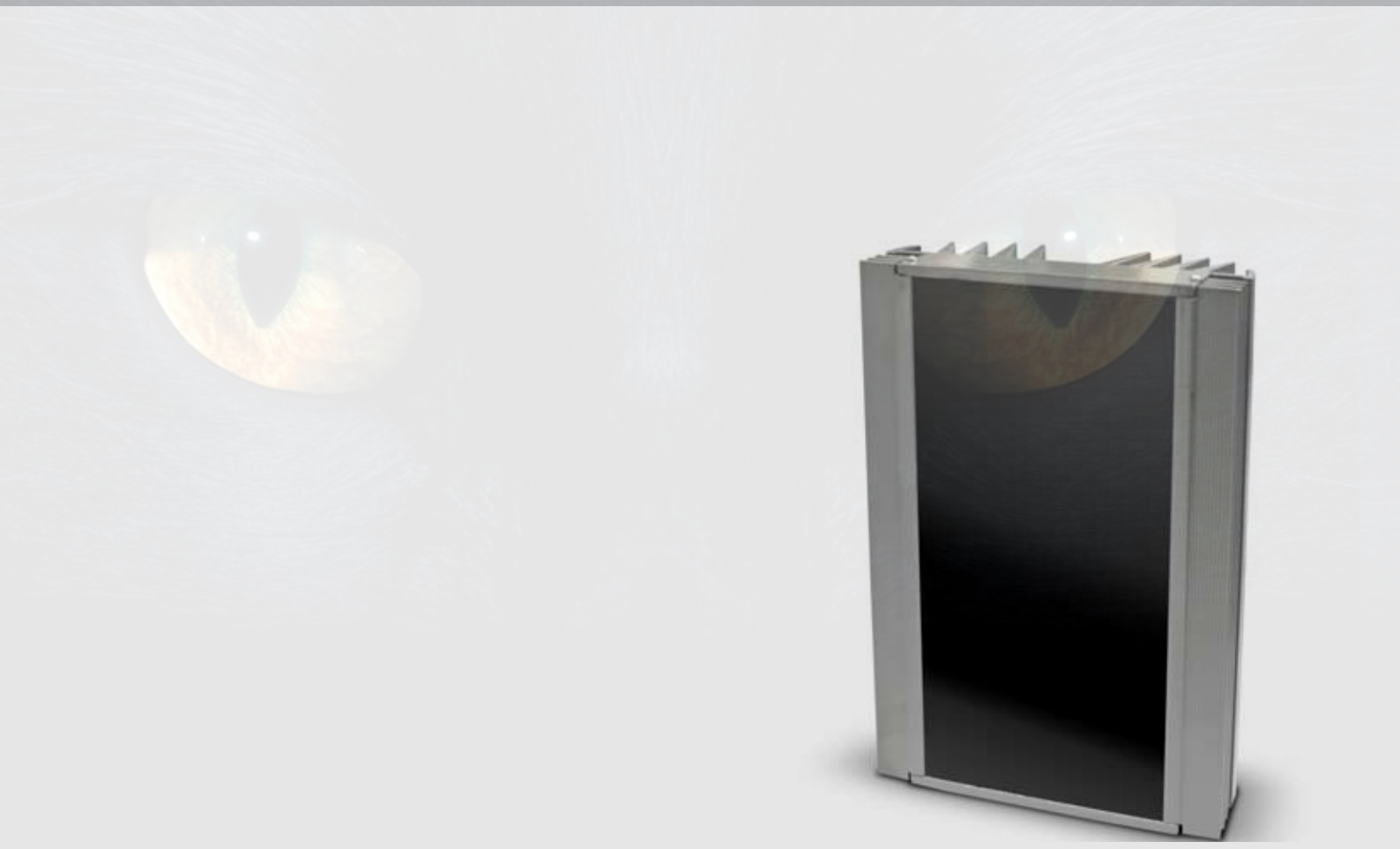


IR-294-M

incl. ST-3



Order code	IR-294-M/30-880	IR-294-M/45-880	IR-294-M/60-880	IR-294-M/90-880
Wavelength, nm	880±20			
Illumination range, m	140	80	60	45
Emission angle, °	30±3	45±5	60±6	90±9
Continuous current, A	2.1 nominal/2.4 max			
Input voltage, V	12±0.6			
Dimensions w. Bracket, mm	219x141x134			
Weight, kg	1.2			
Protection Standard	IP66			



IR-294-L

incl. ST-3



Order code	IR-294-L/30-880	IR-294-L/45-880	IR-294-L/60-880	IR-294-L/90-880
Wavelength, nm	880±20			
Illumination range, m	170	100	75	60
Emission angle, °	30±3	45±5	60±6	90±9
Continuous current, A	2.8 nominal/3.0 max			
Input voltage, V	12±0.6			
Dimensions w. Bracket, mm	219x200x134			
Weight, kg	1.88			
Protection Standard	IP66			

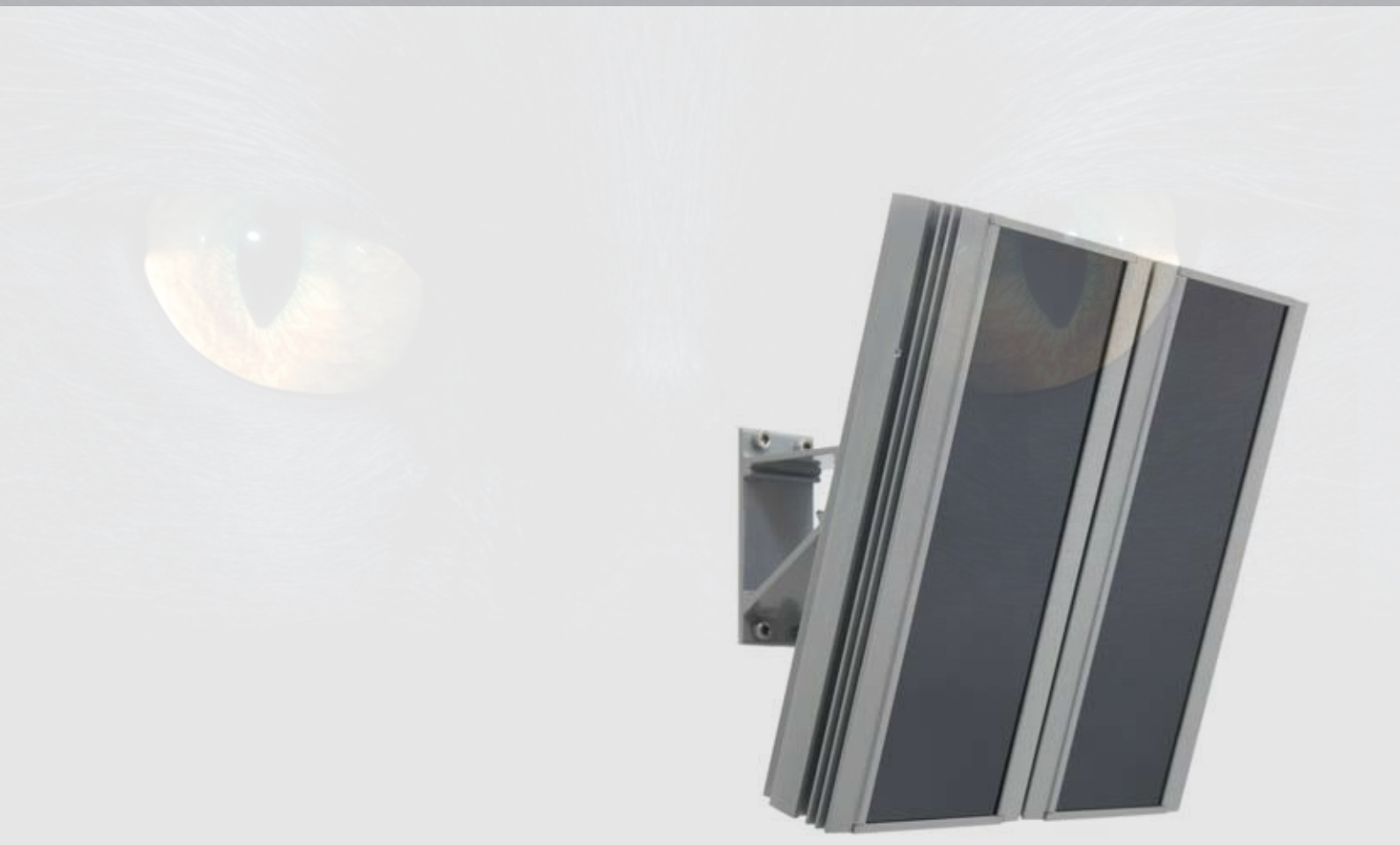


IR-294-XL

incl. PSU incl. ST-5



Order code	IR-294-XL/30-880	IR-294-XL/45-880	IR-294-XL/60-880	IR-294-XL/90-880
Wavelength, nm	880±20			
Illumination range, m	240	140	110	80
Emission angle, °	30±3	45±5	60±6	90±9
Continuous current, A	5.2 nominal/5.5 max			
Input voltage, V	12±0.6			
Dimensions w. Bracket, mm	236x200x272			
Weight, kg	3.8			
Protection Standard	IP66			



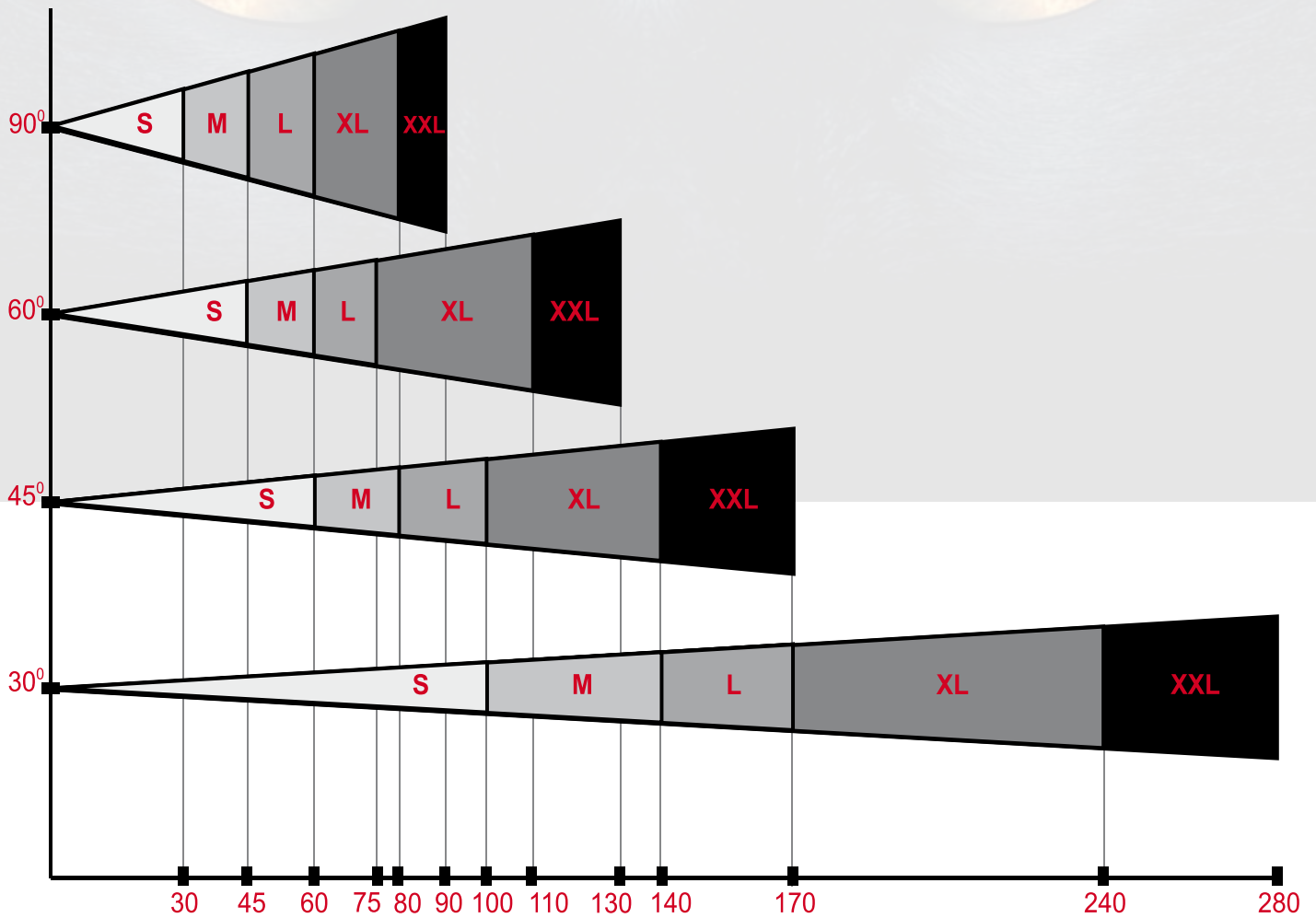
IR-294-XXL

incl. PSU incl. ST-5



Order code	IR-294-XXL/30-880	IR-294-XXL/45-880	IR-294-XXL/60-880	IR-294-XXL/90-880
Wavelength, nm	880±20			
Illumination range, m	280	170	130	90
Emission angle, °	30±3	45±5	60±6	90±9
Continuous current, A	6.8 nominal/7.0 max			
Input voltage, V	12±0.6			
Dimensions w. Bracket, mm	236x270x272			
Weight, kg	4.5			
Protection Standard	IP66			

*Illumination distance / angle diagram**



SHORT RANGE	Entrances and porches, office and bank areas, hospitals and prisons, nurseries, corridors, garages and small indoor spaces
MEDIUM RANGE	Cottages and private residences, theatres, night clubs and casinos, parking areas and tunnels, car plate recognition
LONG RANGE	Airports, football grounds and large fields, parking areas, tunnels and roads, perimeters security, boundary protection

MICROLIGHT infrared illuminators' parameters					
IR-Illuminator	Illumination distance depending on a wavelength, m		Emission angel, °	Continuous current, A (MAX)	
	880 nm	940 nm			
Short range	IR-Plate 940	-	3.5	160	0.5
	IR-112/120	10.0	7.0	120	1.5
	IR-21/60x40	12.0	10.0	60x40	0.35
	IR-294/120	17.0	12.0	120	3.9
	IR-56/60x40	18.0	13.0	60x40	0.81
	IR-16/20	25.0	17.5	20	0.45
	IR-21/25	25.0	20.0	25	0.35
	IR-98/60x40	25.0	17.0	60x40	1.5
Medium range	IR-294/60x40	40.0	28.0	60x40	3.9
	IR-56/20	40.0	30.0	20	0.81
	IR-84/30	50.0	30.0	30	1.3
	IR-16/10	50.0	35.0	10	0.45
	IR-98/20	60.0	40.0	20	1.5
	IR-112/20	80.0	55.0	20	1.5
	IR-16/6	90.0	63.0	6	0.45
Long range	IR-294/20	100.0	70.0	20	3.9
	IR-16/5	120.0	84.0	5	0.45
	IR-16/3	180.0	126.0	3	0.45
	IR-576/18	350	250	18	8.2
	IR-16/4-850	350*	-	4	0.45

Order code:

Model name/Emission angle-Wavelength

Example:IR-21/25-880

IR-21 – model name

25 –emission angle

880 – wavelength

Photosensor:

Optional

Notes:

*Only 850nm

Illumination distance is indicated for black and white video cameras without IR correction featured with the 1/3 CCD matrix the sensitivity of which is no less than 1,5•10⁻⁵ W/m in the IR range of 0,8...1 μm (the equivalent of a video camera with the sensitivity of 0,01 lx), the lens is F1.4.

An illuminator is to be connected to a power supply unit of the output voltage 12±0,6 V. Cable should not be more than 10 meters.

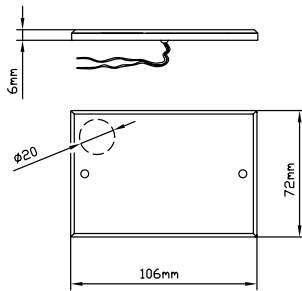
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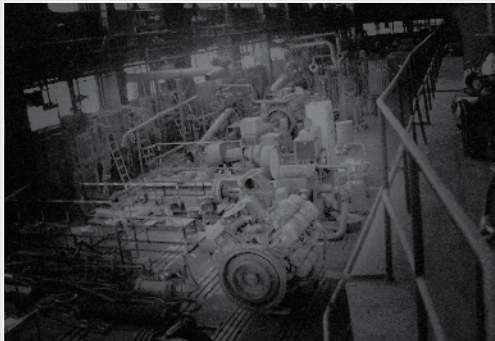
IR-PLATE



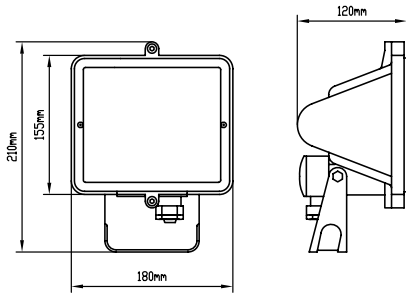
Order code	IR-PLATE
Wavelength, nm	940±20
Illumination range, m	3.5
Emission angle, °	160±10
Continuous current, A	0.4 nominal/0.5 max
Input voltage, V	12±0.6
Dimensions, mm	106x72x6
Weight, kg	0.1
Protection Standard	IP65

Example of insallation camera





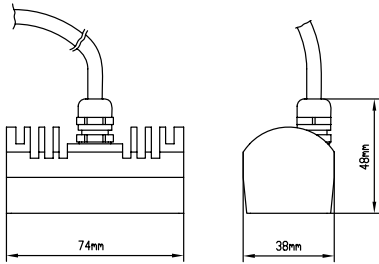
IR-16



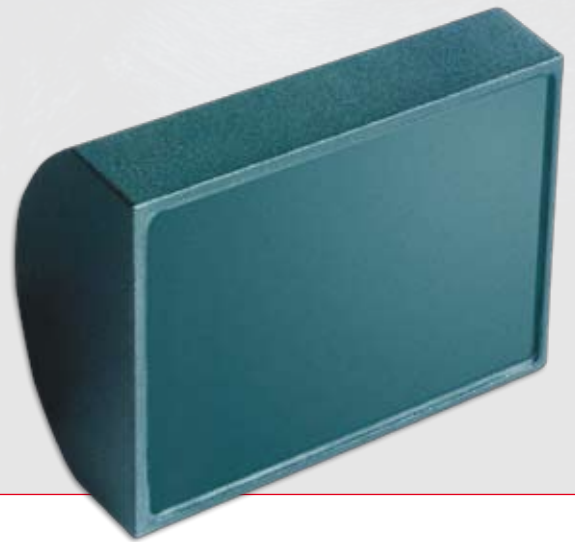
Order code	IR-16/4-850	IR-16/3-880	IR-16/5-880	IR-16/6-880	IR-16/10-880	IR-16/20-880	IR-16/3-940	IR-16/5-940	IR-16/6-940	IR-16/10-940	IR-16/20-940
Wavelength, nm	850±20	880±20					940±20				
Illumination range, m	350	180	120	90	50	25	126	84	63	35	17.5
Emission angle, °	4±0.4	3±0.3	5±0.5	6±0.6	10±1	20±2	3±0.3	5±0.5	6±0.6	10±1	20±2
Continuous current, A	0.35 nominal/0.45 max										
Input voltage, V	12±0.6										
Dimensions, mm	210x180x120										
Weight, kg	0.9										
Protection Standard	IP55										



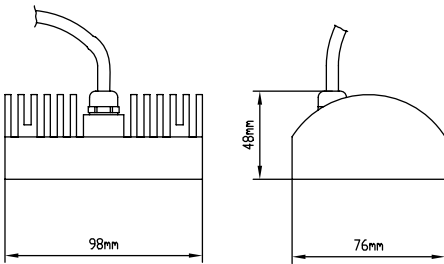
IR-21



Order code	IR-21/25-880	IR-21/(60x40) - 880	IR-21/25-940	IR-21/(60x40) - 940
Wavelength, nm	880±20		940±20	
Illumination range, m	25	12	20	10
Emission angle, °	25±2	60±6x40±4	25±2	60±6x40±4
Continuous current, A	0.2 nominal/0.35 max			
Input voltage, V	12±0.6			
Dimensions, mm	74x38x48			
Weight, kg	0.245			
Protection Standard	IP66			



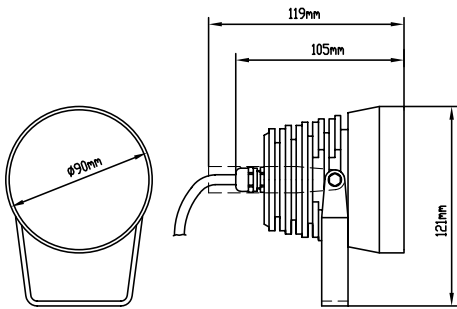
IR-56



Order code	IR-56/20-880	IR-56/(60x40)-880	IR-56/20-940	IR-56/(60x40)-940
Wavelength, nm	880±20		940±20	
Illumination range, m	40	18	30	13
Emission angle, °	20±2	60±6x40±4	20±2	60±6x40±4
Continuous current, A	0.6 nominal/0.81 max			
Input voltage, V	12±0.6			
Dimensions, mm	98x76x48			
Weight, kg	0.51			
Protection Standard	IP66			



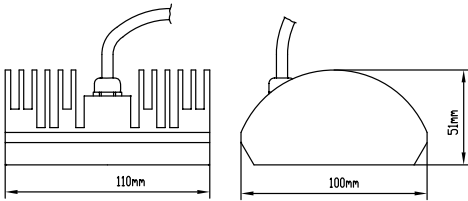
IR-84



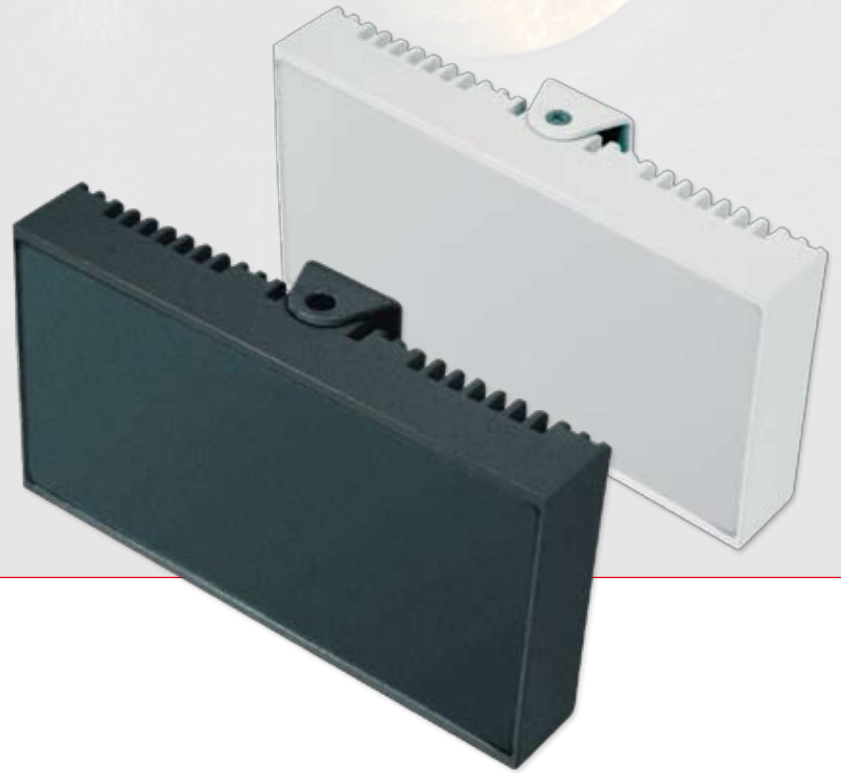
Order code	IR-84/30-880	IR-84/30-940
Wavelength, nm	880±20	940±20
Illumination range, m	50	30
Emission angle, °	30±3	
Continuous current, A	1,0 nominal/1,3 max	
Input voltage, V	12±0.6	
Dimensions, mm	∅ 90x105x121	
Weight, kg	1.03	
Protection Standard	IP66	



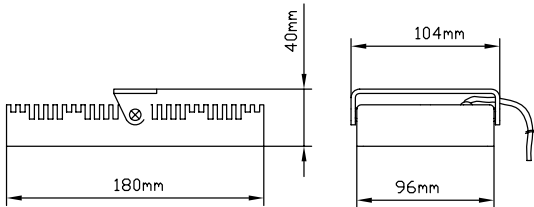
IR-98



Order code	IR-98/20-880	IR-98/(60x40) - 880	IR-98/20-940	IR-98/(60x40) - 940
Wavelength, nm	880±20		940±20	
Illumination range, m	60	25	40	17
Emission angle, °	20±2	60±6x40±4	20±2	60±6x40±4
Continuous current, A	1.1 nominal/1.5 max			
Input voltage, V	12±0.6			
Dimensions, mm	110x100x51			
Weight, kg	0.83			
Protection Standard	IP66			



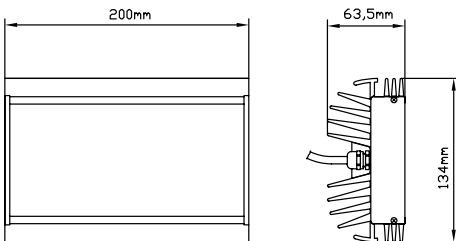
IR-112



Order code	IR-112/20-880	IR-112/120-880	IR-112/20-940	IR-112/120-940
Wavelength, nm	880±20		940±20	
Illumination range, m	80	10	55	7
Emission angle, °	20±2	120±12	20±2	120±12
Continuous current, A	1.2 nominal/1.5 max			
Input voltage, V	12±0.6			
Dimensions, mm	180x104x40			
Weight, kg	0.8			
Protection Standard	IP65			



IR-294

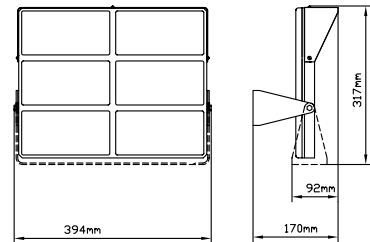


Order code	IR-294/20-880	IR-294/(60x40) - 880	IR-294/20-940	IR-294/(60x40) - 940
Wavelength, nm	880±20		940±20	
Illumination range, m	100	40	70	28
Emission angle, °	20±2	60±6x40±4	20±2	60±6x40±4
Continuous current, A	3.0 nominal/3.9 max			
Input voltage, V	12±0.6			
Dimensions, mm	200x134x64			
Weight, kg	1.6			
Protection Standard	IP66			



IR-576

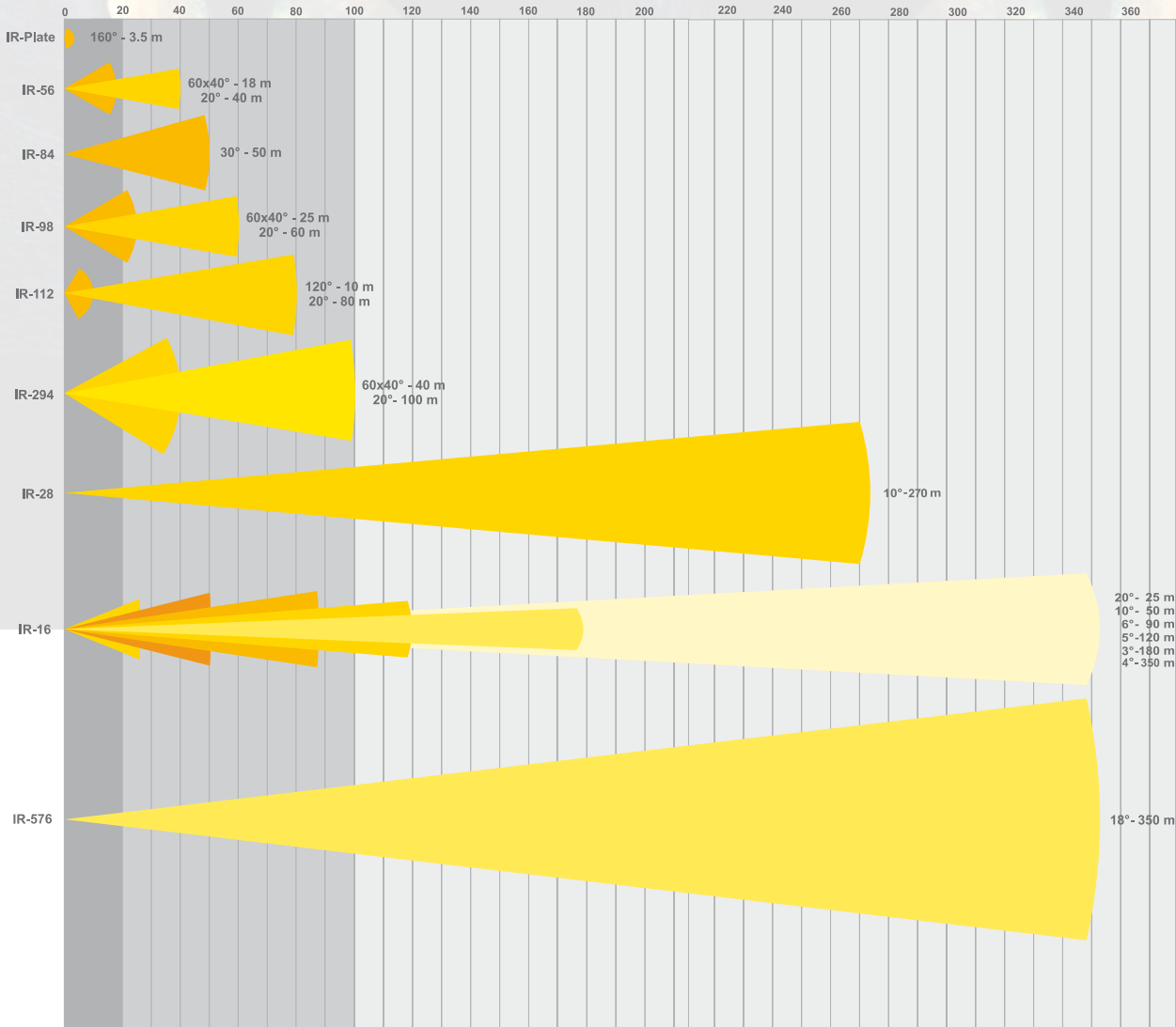
Order code	IR-576/18-880	IR-576/18-940
Wavelength, nm	880±20	940±20
Illumination range, m	350	250
Emission angle, °	18±3	
Continuous current, A	7.5 nominal/8.2 max	
Input voltage, V	12±0.6	
Dimensions, mm	394x317 (304)x92 (170)	
Weight, kg	6.8	
Protection Standard	IP66	
Power supply (optional)		
Input voltage, V AC	88-264 selected by switch	
Output voltage, V DC	12	
Dimensions, mm	240x160x90	
Weight, kg	1.2	



MICROLIGHT IR-Illuminator selection for camera & objective 1/3"

FOCAL DISTANCE of objective (f), mm	VIEWING ANGLE, °	IR-ILLUMINATOR 880 and 940 nm	DISTANCE, m, (for cameras 0,01 lx)	BEAM DIAMETER, m
2	100	IR-PLATE-940	3,5	10
2,45	90	IR-112/120-880	10	18
		IR-112/120-940	7	13
3,6 3,7	67 65	IR-21/(60X40)-880	12	14X9
		IR-21/(60X40)-940	10	12X7,3
4	62	IR-56/(60X40)-880	18	21X13
		IR-56/(60X40)-940	13	15X9,5
4,3	58	IR-98/(60X40)-880	25	29X18
		IR-98/(60X40)-940	17	20X12,4
4,9	52	IR-294/(60X40)-880	40	35X25
		IR-294/(60X40)-940	28	32X20,4
8	33	IR-84/30-880	50	27
		IR-84/30-940	35	19
12	22	IR-112/20-880	80	28
		IR-112/20-940	56	20
		IR-21/25-880	25	11
		IR-21/25-940	20	7
		IR-56/20-880	40	14
		IR-56/20-940	30	10,6
		IR-98/20-880	60	21
		IR-98/20-940	40	14
16	17	IR-16/20-880	25	7
		IR-16/20-940	17,5	5
		IR-294/20-880	100	27
		IR-294/20-940	70	19
		IR-576/18-880 IR-576/18-940	350 250	95 70
25	11	IR-16/10-880	50	9
36	8	IR-16/10-940	35	4,5
50	5,5	IR-16/5-880	120	9,2
		IR-16/5-940	84	6,5
		IR-16/6-880	90	8
		IR-16/6-940	63	5,5
72	4	IR-16/3-880	180	11
		IR-16/3-940	126	7
		IR-16/4-850	350	22

Illumination distance / angle diagram*

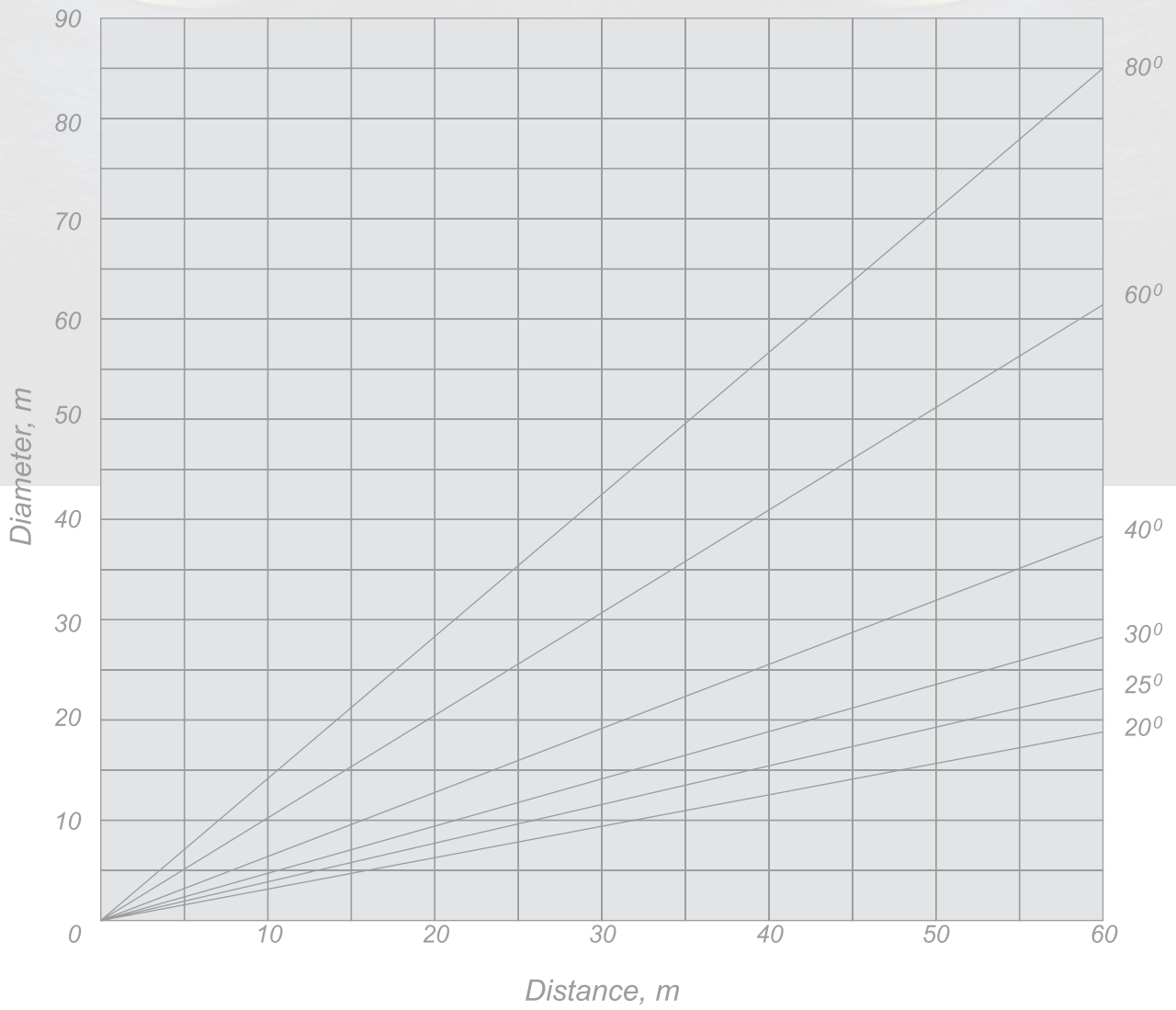


SHORT RANGE	Entrances and porches, office and bank areas, hospitals and prisons, nurseries, corridors, garages and small indoor spaces
MEDIUM RANGE	Cottages and private residences, theatres, night clubs and casinos, parking areas and tunnels, car plate recognition
LONG RANGE	Airports, football grounds and large fields, parking areas, tunnels and roads, perimeters security, boundary protection

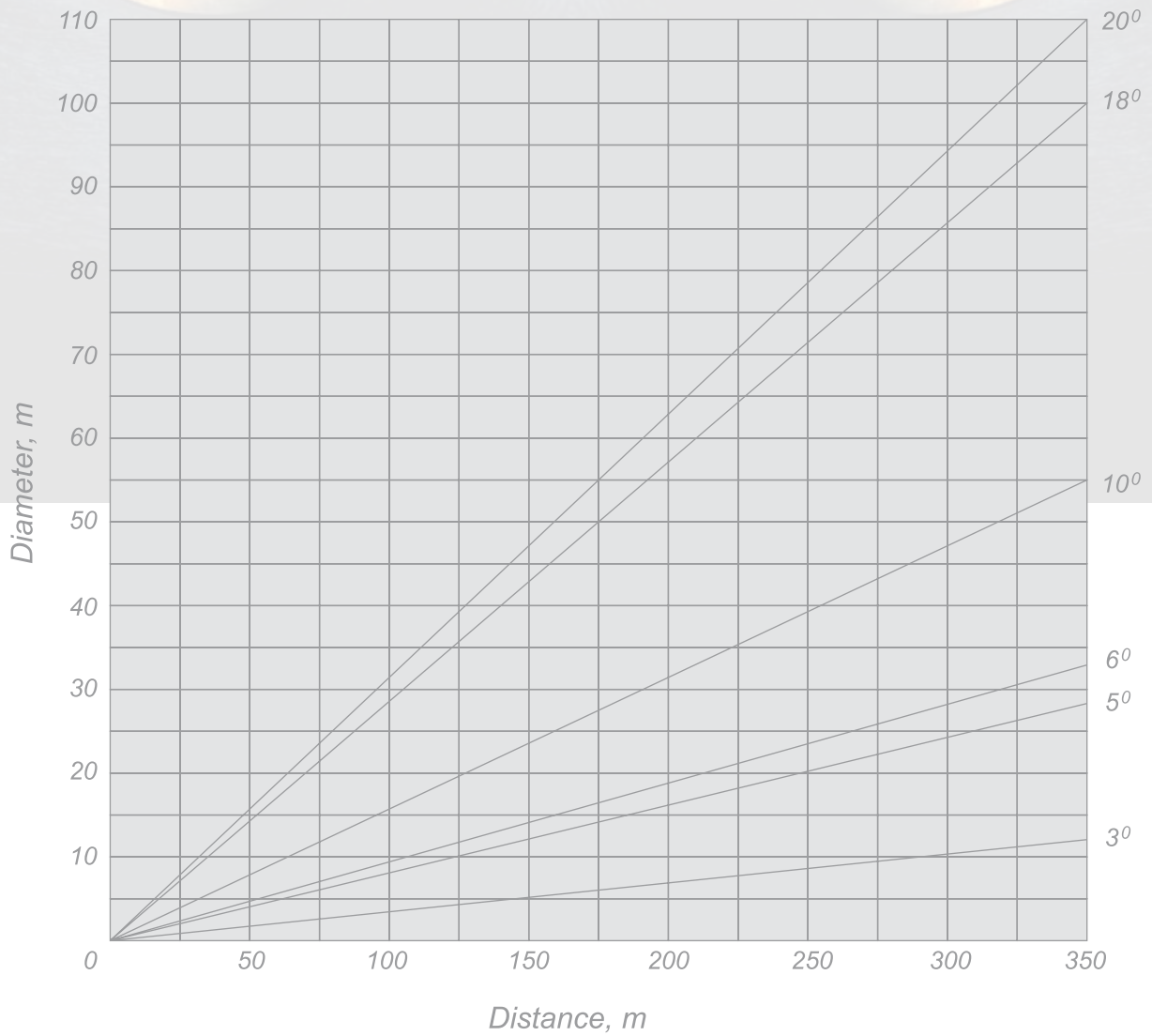
- Short range
- Medium range
- Long range

*This diagram is for illuminators with emission wavelength of 880 nm

*Beam diameter diagram
(short and middle range illuminators)*

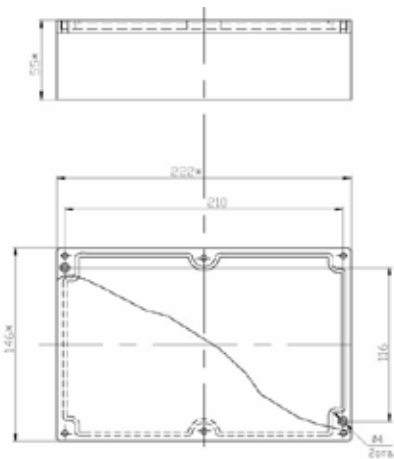


*Beam diameter diagram
(long range illuminators)*





PSU



Order code	PSU-2	PSU-4	PSU-6*	PSU-8*
Input Voltage, V (AC)	88-264			
Output Voltage, V (DC)	12±1%			
Number of output channels	2			
Channels:	Channel 1: Adjustable by day/night switch (photo sensor), V(lx) Channel 2: Adjustable power, V			
Output current, A	2	4	6	8
Operating temperature range, C°	-20 ... +50			
Dimensions, mm	222x146x55			
Wight, kg	1.25	1.37	1.42	1.6
IP Protection standart	IP66			
Photocell	incl.	incl.	incl.	incl.

* PSU-6 and PSU-8 supplied with XL, XXL IR Illuminators only

ST-1



Order code	ST-1
Fit to	IR-21
European standart screw jont, inch	1/4
Weight, kg	0.072
Height (up to joint-hinge), mm	43
Foot diameter, mm	40

ST-2

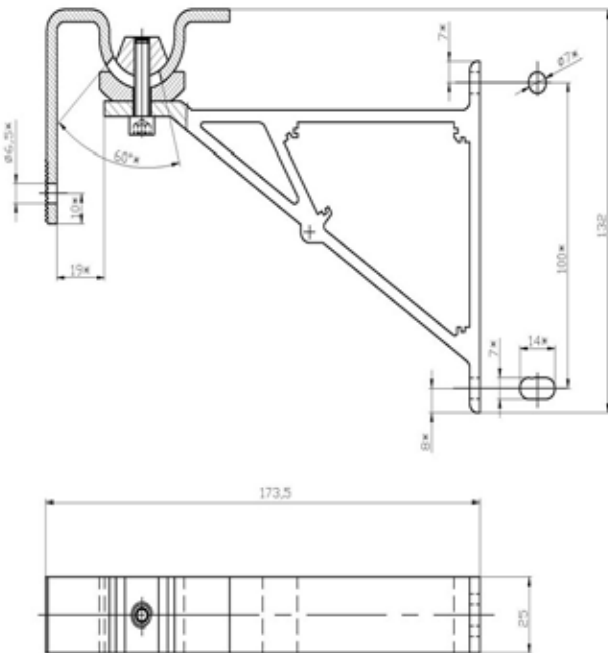


Order code	ST-2
Fit to	IR-21, IR-56,IR-84, IR-98
European standart screw jont, inch	1/4
Weight, kg	0.12
Height (up to joint-hinge), mm	131
Foot diameter, mm	65

example



ST-3



Order code	ST-3
Fit to	IR-56, IR-98, IR-294
Fastening holes, mm	Ø6.5; Ø7; oval 7x14
Weight, kg	0.12
Height (up to joint-hinge), mm	131
Foot diameter, mm	65