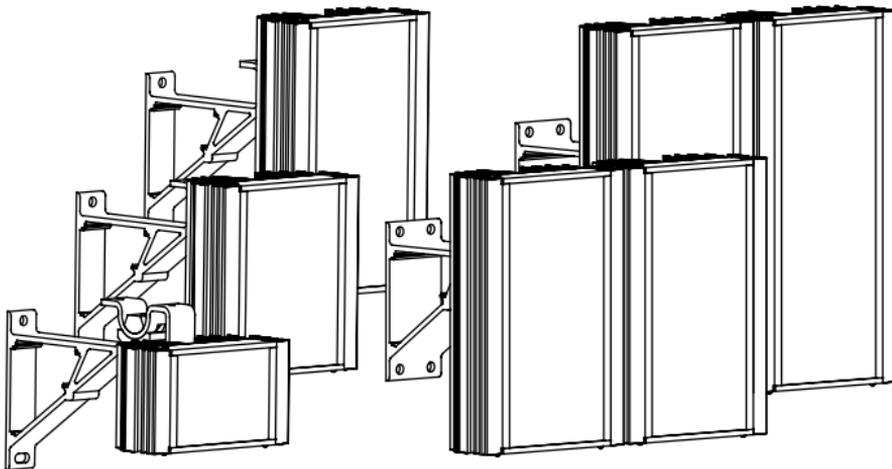


Infrared illuminators IR-294 series

Technical Manual



Thank you for purchasing a product by Microlight!

Product description

IR-294 series infrared illuminators are designed for covert surveillance in conditions of dim lighting. Infrared projection of IR-294 series illuminators is provided by optically enhanced LED matrix. Body is made of aluminum alloy. Frontally placed LEDs are covered by dark plastic IR-passing filter. Back side is equipped with a heat sink for supreme cooling and mounting platform for screws threaded M6 for a standard mounting bracket. All needed screws and ST-3M mounting bracket are included. Model IR-294XXL comes with an extra-strong ST-5 mounting bracket.

Icons used in this manual

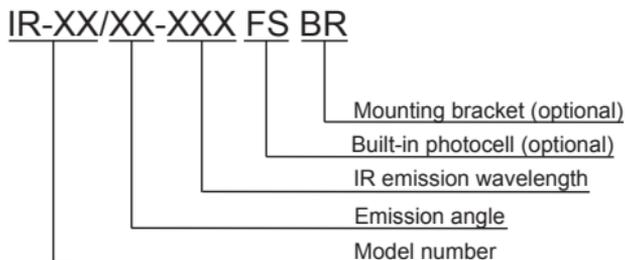


Attention



Eye Danger

Illuminator's model name de-coding



Technical characteristics

Model		IR-294*	IR-294-S	IR-294-M	IR-294-L	IR-294-XL	IR-294-XXL
IR emission wavelength, nm	Emission angle, °	Illumination range, m					
880±20	18±2	-	-	-	-	-	500
	20±2	100	-	-	-	-	-
	30±3	-	100	140	170	240	280
	45±5	-	60	80	100	140	170
	60±6	-	45	60	75	110	130
	90±9	-	30	45	60	80	90
	60±6×40±4	40	-	-	-	-	-
940±20	18±2	-	-	-	-	-	370
	20±2	70	45	65	80	110	130
	60±6×40±4	28	17	25	30	42	50
Max DC current, A		3,9	1,3	2,5	3,0	5,5	7,0
Input voltage, V		12±0,6					
Working temperatures, °C		-30...+40					
Dimensions W×H×D, mm		219x200x63,5	219x134x134	219x141x134	219x200x134	236x200x272	236x270x272
Weight, kg		1,5	1,0	1,43	1,73	4,2	5,2
Protection		IP66					

* IR-294 model comes with no mounting bracket included



Parameter (60×40) in angle section represents 60° horizontal angle and 40° vertical angle of elliptical illumination spot.

The distances are indicated for B/W video cameras without IR correction with 1/3" CCD and sensitivity equal or better than $1,5 \cdot 10^{-5}$ W/m² in the IR band of 0,8...1 μm (an equivalent of a video camera with sensitivity of 0,01 lux) and F1.4 objective.

Installation

IR-294 series illuminator may be installed for indoors, as well as for outdoors surveillance. It's essential to provide proper air circulation around the unit for best cooling.

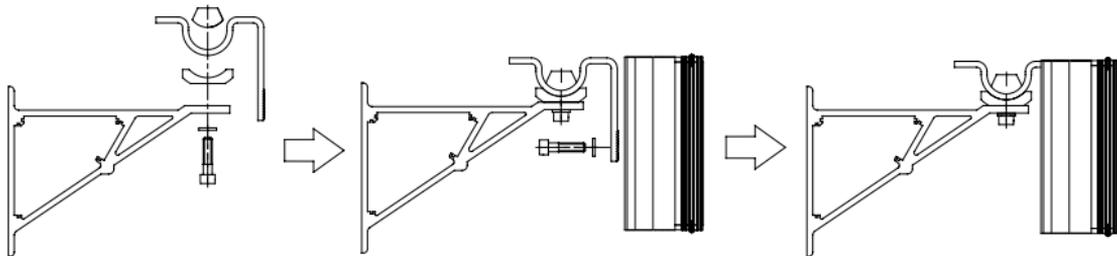
Please follow these steps for proper installation:

-assemble the mounting bracket as shown on this picture

-attach illuminator's case to a smaller bracket part (for IR-294-XL and IR-294-XXL - double-case) with M6×25 screws, included in package;

– Vertically fix the bracket with the illuminator, losing the hinge screw adjust rotation and vertical angles, tighten the screw;

– Connect to a power source;



Safety measures

IR-294 series illuminators comply with EN60065:2001+Amd1: Audio, Video & similar electronic equipment: Safety requirements and maximum permissible exposure limits of IEC60825-1. This product conforms to EMC Directive 89/336/EEC as amended by 92/31/EEC and 93/68/EEC.



Caution! Invisible LED radiation! Do not look directly into optical magnifiers. Product of CLASS 1M LED.



Attention!!! Connection polarity is necessary: (+) red or brown wire; (-) black or blue wire. It's strictly prohibited to use this product with parameters exceeding the maximums allowed.

Maintenance

Periodically clean the protective light filter and illuminator's case.

Use a scrub or a brush to clean the heat sink. Water may be used if needed.

The light filter cleaning is done with a wet cotton cloth. Continuously change the contacting surface of a cloth to avoid filter's damage.



Warning! Never use dissolvents or chemical reagents to clean this product!

Storage rules

The illuminator should be stored in a closed space away from acid vapors or alkali mist. Ambient air temperature should be from -50°C to $+50^{\circ}\text{C}$; relative humidity should not exceed 95% at 25°C .

Warranty

Warranty period is 24 months from the date of sale. The warranty is voided in case of user's non-compliance with the storage or operation rules, case integrity breach or voluntary repair, alteration, modernization etc.

Certificate of acceptance

Serial number _____

This illuminator passed the engineering control test and is considered to be in operational condition.

ECD (Engineering Control Department) Stamp _____

Date of the test _____

Trade organization _____

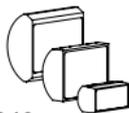
(place for stamp)

Date of sale _____

Buyer's signature

Other Microlight products

IR-21/56/98 series



Wavelength, nm:	880 and 940
Illumination angles, °:	20, 25, (60×40)
Illumination distance, m:	от 10 до 60
Consumed power, W:	от 4.5 до 18
Protection standard:	IP66

Comes with a built-in photocell switch (optional)

Comes with a mounting bracket (optional)

IR-1 Helios. Adjustable angle illuminator



Wavelength, nm:	850
Illumination angles,°:	2 - 100
Illumination distance, m:	18 - 400
Consumed power, W:	under 4
Input current, V:	12...24 AC/DC
Protection standard:	IP66

Comes with a built-in photocell switch (10 lux, 30 sec delay) and ST-3M mounting bracket

IR-Plate

Wavelength, nm:	940
Illumination distance, m:	up to 5
Consumed power, W:	6
Protection standard:	IP66



PSU power supply

Input current, V:	100...240
Output current, V:	12
Max output power, A:	2, 4, 6, 8
Protection standard:	IP66

Comes with a built-in photocell switch (10 lux, 30 sec delay), several power outputs (two outputs are controllable by the photocell switch)



External photocell switch FS-2

FS-2 is to be installed externally into a power line break	
Max current power, A:	8
Activation threshold, lux:	3
Turn-off delay, sec:	30
Protection standard:	IP66



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