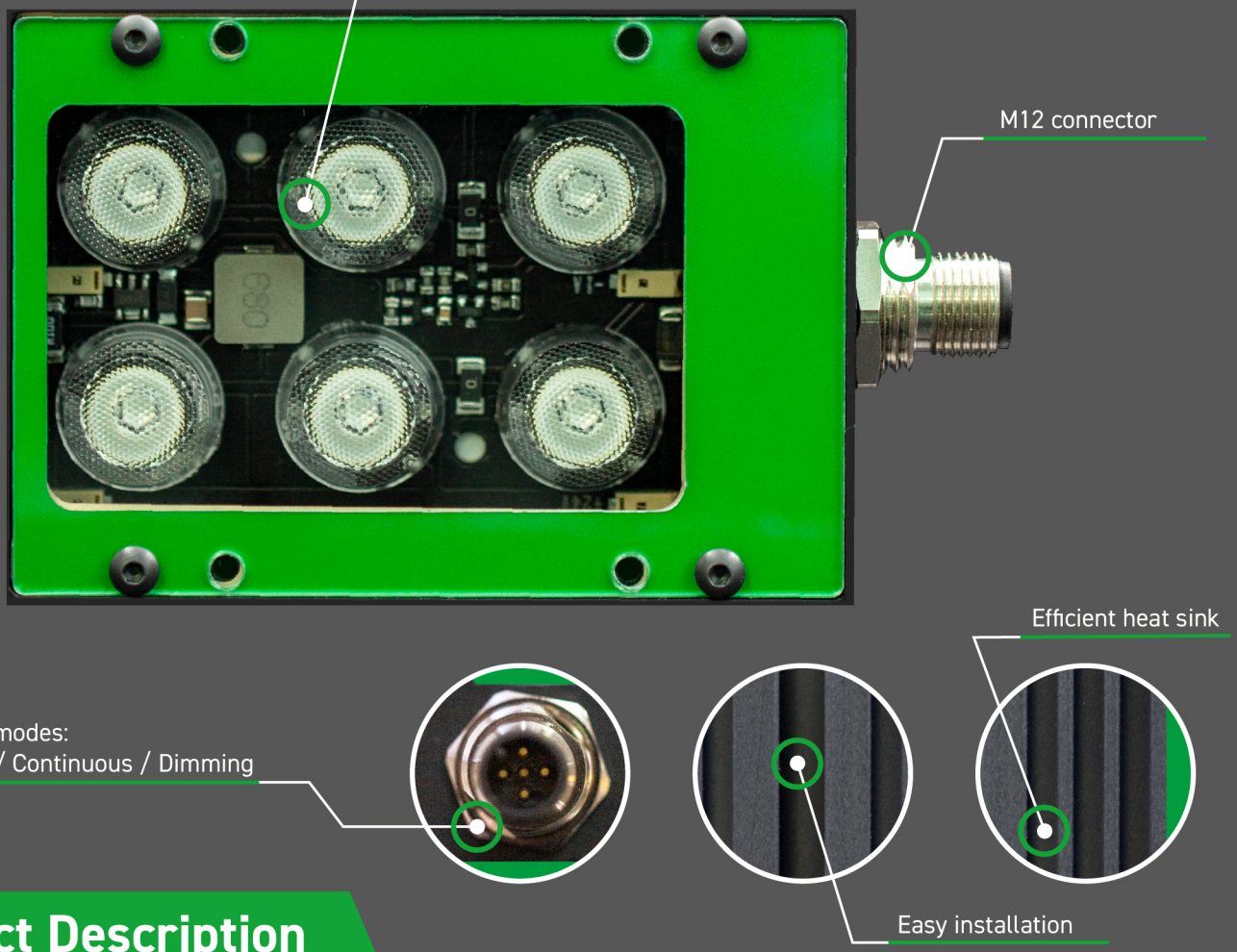
IBRPX
BRICK LIGHT POWER X

Manufacturer: ISCON
Product: LED Illuminator – Brick Light Power X



Product Description

IBRPX is the next-generation version of the IBRP model, delivering enhanced luminous performance. Offering up to 5× higher output in OVERDRIVE mode and 30% higher brightness in continuous mode, it is an ideal solution for demanding vision systems.
The IBRPX features integrated filter guides for easy adaptation to a variety of applications. Its housing with an efficient heat sink provides optimal cooling and ensures long-term operational stability. Additionally, IBRPX includes a light intensity control function, enabling precise adjustment to meet specific application requirements.
Thanks to its carefully engineered design, the IBRPX allows for quick and easy installation, ensuring maximum convenience when integrating into vision systems.

- Compact design – functional form factor, available in multiple sizes: 60, 90, 120, 170 mm.
- Multiple wavelengths – available in white, red, blue, green, infrared (IR), and UV versions.
- OVERDRIVE mode – short pulses of increased intensity, perfect for high-speed vision applications.
- Advanced cooling system – passive convection cooling for improved durability and operational stability.
- Industrial-grade durability – robust anodised housing, resistant to harsh production environments.

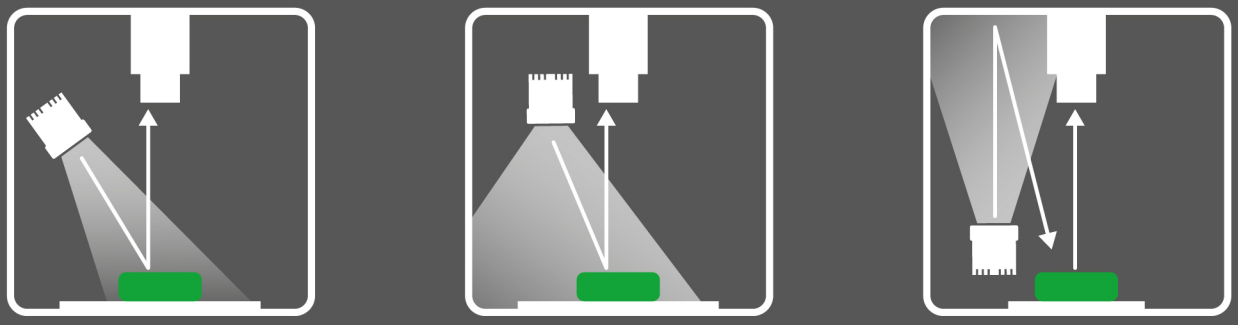
Specifications

Applications

- Surface inspection – detection of scratches, dents, and defects on metal, plastic, and glass surfaces.t
- Optical quality control – analysis of prints, barcodes, laser markings, and product details.
- Industrial microscopy – precise illumination of samples in inspection systems.

The IBRPX is a modern, high-performance LED illuminator designed specifically for vision systems that demand intense, precise, and uniform illumination of object surfaces. With improved optics and an optimised cooling system, the IBRPX offers superior performance and longer lifespan compared to standard brick light models.

HOW TO SPECIFY YOUR ILLUMINATOR



Reference coding

IBRPX									
Type		Size	Light colour		Lens angle		Additional protection
-O	(OVERDRIVE)*	-60	-W	White	-15	±15	/IP67
*Overdrive : 5 x more power		-90	-R	Red	-25	±25	
		-120	-G	Green	-40	±40	
		-170	-B	Blue	NL	No Lens	
			-IR	IR			
			-UV365	UV			
			-UV400	UV			

Example 1:
IBRPX-90-IR-NL
— Illuminator, size 90 mm, no Overdrive, IR light, no lens

Example 2:
IBRPX-O-90-R-15
— Illuminator, size 90 mm, with Overdrive, red light, 15° lens

Example 3: (rated protection IP67)
IBRPX-O-90-W-15/IP67
— Illuminator, size 90 mm, with Overdrive, white light, 15° lens, IP67-rated protection

Specifications

tabela 1

BASIC PARAMETERS				
IBRPX	**60**	**90**	**120**	**170**
Number of LEDs	4	6	12	12
LED configuration	2x2	2x3	3x4	2x6
LED colors	W-White R-Red G-Green B-Blue IR-Infrared (855nm) UV-Ultraviolet (365nm,400nm)			
Max current consumption (without OVERDRIVE) [A]	0.4	0.6	1.5	1.5
Max current consumption (with OVERDRIVE) [A]	1.5	2.2	4.5	4.5
Max power (without OVERDRIVE) [W]	12.0	15.0	30.0	30.0
Max power (with OVERDRIVE) [W]	50.0	55.0	120.0	120.0
Weight [g]	193	250	409	440

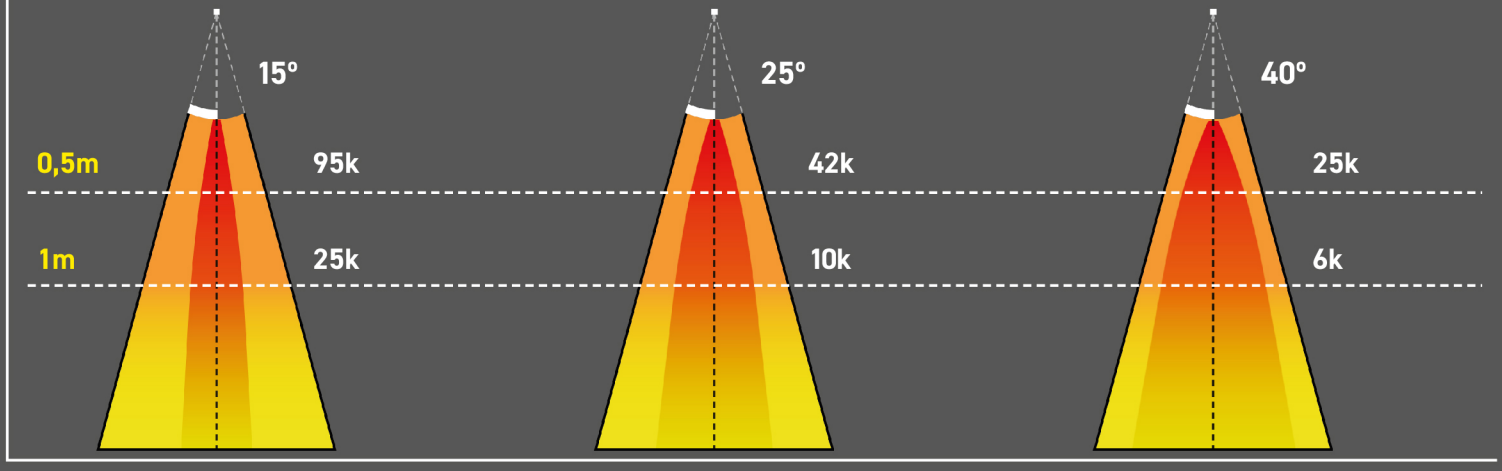
	TECHNICAL SPECIFICATIONS	
	With OVERDRIVE module	**Without OVERDRIVE module**
Power supply	24-30 VDC	
Power	See Table 1	
Current consumption	See Table 1	
Operating mode	PNP/NPN - see wiring diagram	PNP - see wiring diagram
STROBE signal	Min. 5VDC / 10mA, PNP, NPN	Min. 5VDC / 10mA
STROBE signal duration	Min 10 µs Max 100ms	Min 5µs max ∞
STROBE delay	Ok 5 µs	
Trigger frequency	10%, max 1000Hz	∞
Dimming control	-	0–10 VDC (10–100%) Full intensity can be achieved by connecting Pin 5 to Pin 1 (see wiring diagram). Without this connection, light output defaults to 10% of nominal intensity.
Light colours	UV (365nm), UV (400nm), Blue B (450nm), White W (6000K), Green G (530nm), Red R (625nm), IR (850nm)	
Connector	M12 / 5 PIN, male type	
Operating temperature	from -10°C to 50°C	
Housing material	Aluminum	
Cooling	Passive convection	
Protection rating	from IP 50 to IP67	
Light emission angle	Lenses: 15°, 25°, 40°, NL-120°	
Compliance	UKCA RoHS III CE	

Lens Selection Guide

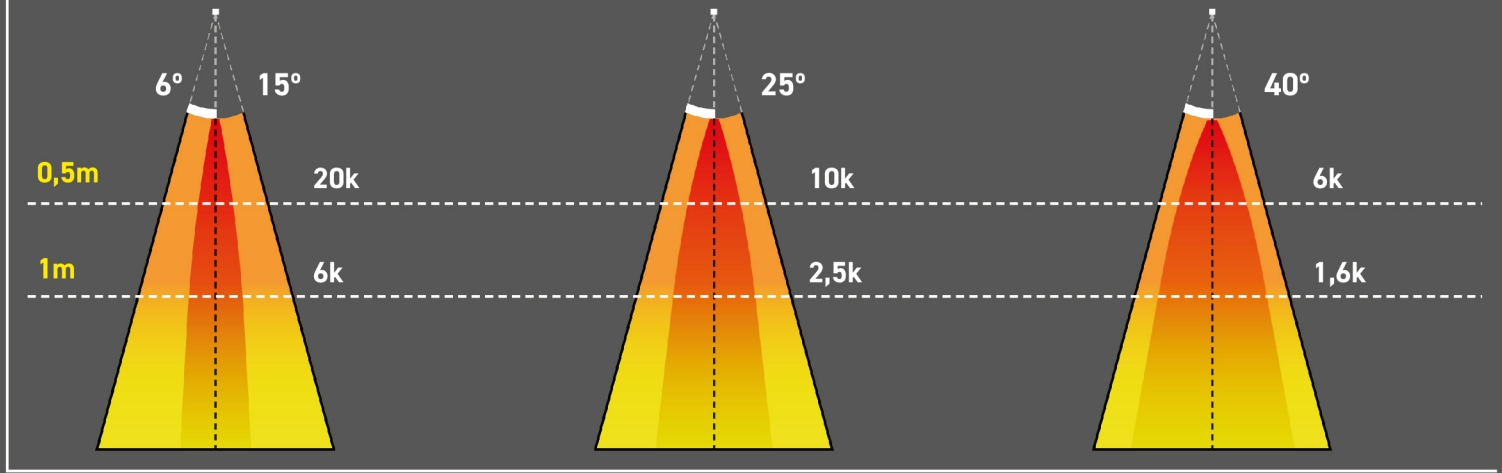
			Illuminated area [mm]			
			60	90	120	170
		LED configuration				
Object distance	0,5 metra	15 angle	250 x 250	350 x 250	420 x 350	550 x 250
	Lens angle	25 angle	350 x 350	400 x 350	520 x 400	680 x 350
		40 angle	500 x 500	620 x 500	720 x 620	820 x 500
	1 metr	15 angle	400 x 400	520 x 400	620 x 520	1000 x 400
	Lens angle	25 angle	550 x 550	650 x 550	900 x 650	1200 x 550
		40 angle	1000 x 1000	1200 x 1000	1350 x 1200	1500 x 1000

Approximate values for IBRPX-120-X-X i IBRPX-O-120-X-X illuminators

OVERDRIVE



WITHOUT OVERDRIVE



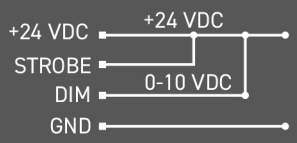
Connection Diagrams

STROBE WITHOUT OVERDRIVE

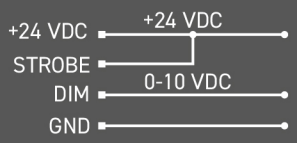
Example: IBLPX-125-W-15

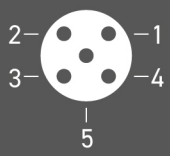
1 Brown (BN)	+24VDC
2 White (WH)	NA
3 Blue (BU)	GND
4 Black (BK)	STROBE
5 Gray (GR)	DIM

Continuous mode (100% brightness)

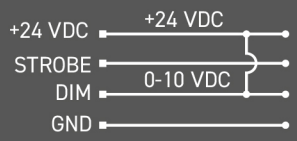


Continuous mode + DIMMING

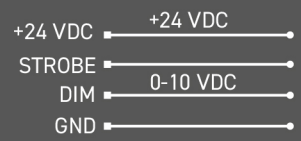




STROBE mode (100% brightness)



STROBE mode + DIMMING

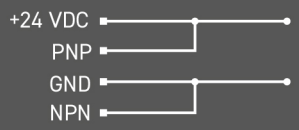


Connection of the illuminator in strobe mode without overdrive.
Minimum strobe trigger current - 0.01 A / Maximum strobe frequency – 1000 Hz

STROBE OVERDRIVE

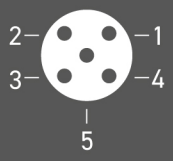
Example: IBLPX-O-125-W-15

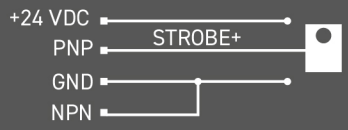
1 Brown (BN)	+24VDC
2 White (WH)	NPN STROBE-
3 Blue (BU)	GND
4 Black (BK)	PNP STROBE+
5 Gray (GR)	NA



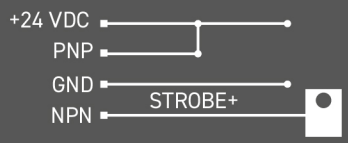
Connection of the illuminator in continuous operation mode.

When the illuminator with strobe overdrive module is turned on, it flashes (approx. 1s) and then switches to continuous operation mode.





Connection of the illuminator in STROBE OVERDRIVE mode.
PNP



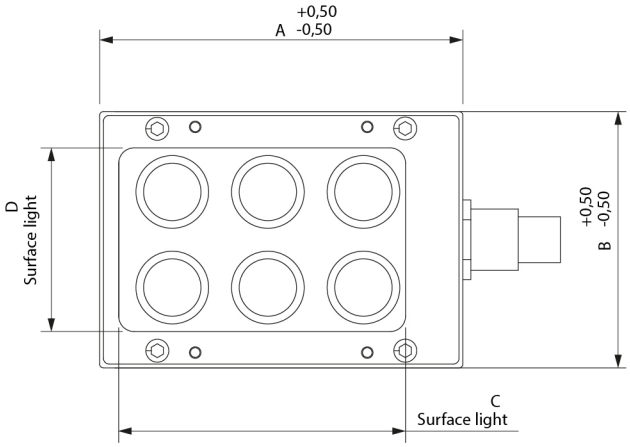
Connection of the illuminator in STROBE OVERDRIVE mode.
NPN

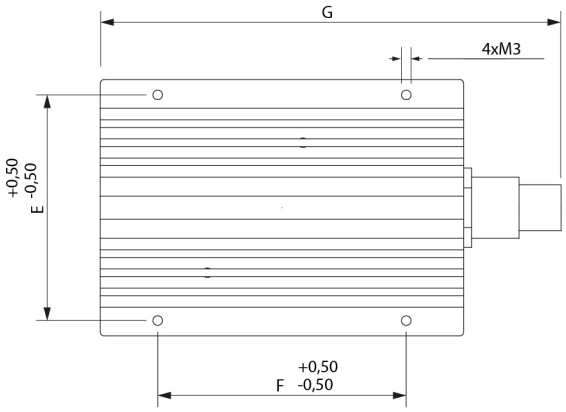
Mode If the duration of the trigger signal pulse is 5 milliseconds,
the rest period between subsequent pulses must be equal to or longer than 45 milliseconds (9x5 = 45 ms).

* Maximum strobe pulse duration: 100 ms

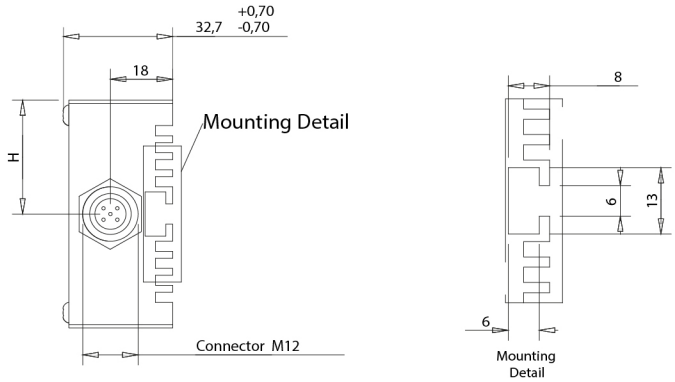
Drawings + Mounting

IBRPX	60	90	120	170
A [mm]	68	95	120	170
B [mm]	67	67	92	67
C [mm]	48	70	95	145
D [mm]	48	45	72	48
E [mm]	59	59	84	59
F [mm]	38	65	92	120
G [mm]	86	111	138	188
H [mm]	33,5	33,5	46	33,5



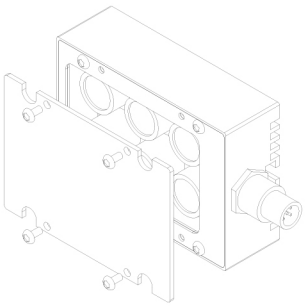


Basic Mounting Options



The illuminator can be mounted from the rear using the T-slot or the 4×M3 threaded holes located on the back of the device. It is recommended to mount the unit on the machine's metal frame with maximum surface contact to minimise vibrations and improve heat dissipation.

Filter Installation



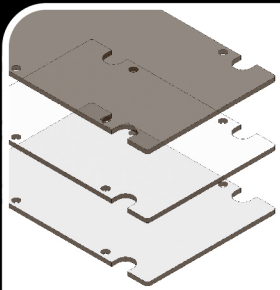
Additional filters can be mounted to the illuminator by fastening them to the designated holes located on the front side of the unit.

Accessories & Additional Services

Accessories

ICB Cable
ICB-2M-M12/FY-5PUR - 2m
ICB-2M-M12/FY-5PVC - 2m
ICB-5M-M12/FY-5PUR - 5m
ICB-5M-M12/FY-5PVC - 5m
ICB-10M-M12/FY-5PUR - 10m
ICB-10M-M12/FY-5PVC - 10m
ICB-15M-M12/FY-5PUR - 15m
ICB-15M-M12/FY-5PVC - 15m
ICB-25M-M12/FY-5PUR - 25m
ICB-25M-M12/FY-5PVC - 25m

ICBA Cable
ICBA-2M-M12/FY-5PUR - 2m
ICBA-2M-M12/FY-5PVC - 2m
ICBA-5M-M12/FY-5PUR - 5m
ICBA-5M-M12/FY-5PVC - 5m
ICBA-10M-M12/FY-5PUR - 10m
ICBA-10M-M12/FY-5PVC - 10m
ICBA-15M-M12/FY-5PUR - 15m
ICBA-15M-M12/FY-5PVC - 15m
ICBA-25M-M12/FY-5PUR - 25m
ICBA-25M-M12/FY-5PVC - 25m



Filters
IBRPX-x-POL - polarizing
IBRPX-x- DIF - diffusing
IBRPX-x-SAT - satin

Additional Services

- Technical consulting
- Configuration
- Testing
- Custom parameter configuration available
- Training
- Demo equipment available
- Post-warranty service

Instructions, Documentation, Contact & Certifications

User Instructions

Operating Modes:
Continuous Mode: Light operates continuously when 24V power is supplied.
Strobe Mode: Triggered by a camera or PLC signal.

Installation Recommendations:
Tilt Angle: 15-55 degrees relative to the object.
Distance: Dependent on lens size and angle.

Safety:
Do not look directly at the LEDs.
Do not touch the device during operation - the surface may be hot.

Additional Documentation

Available Files: PDF, DWG, DXF, STEP

Datasheets: Available online

Contact & Support

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+48 660 220 729
kontakt@iscon.pl
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Certificates & Warranty

Certificates: UKCA, RoHS, CE

Warranty: 24 months.
Post-warranty service: Yes.