

LED STATUS

Led Status	Internal controller with 4 driving modes	
1	100%	Continuous use
2	200%	Semi-continuous use
3	400%	Strobe use
4	10-100%	Analog Reg

Internal Controller with  
**4 driving modes**

M12 5P Male Connector	
Pin 1	+24V
Pin 2	Start NPN < 1 to 0V
Pin 3	GND
Pin 4	Start PNP > 3 to 24V
Pin 5	1-10V Analog Reg.

Special version develop your custom

18 Standard Colours

Base IP65 Protection Degree

CE RoHS

24 Vdc

Optional Polarizing Filter

Optional Collimating Filter

### Illuminator Features :

- Project achieved by internal resources and Genesi skills;
- Fast controller which allows to have the following modes: continuous use, semi-continuous use, strobe (PNP, NPN), analog regulation.
- Microcontroller to monitor the pulse duration and the maximum temperature;
- Model with opaline or transparent covers;
- Powerful and Fast strobe mode with energy buffering and strobe duration control, min. pulse from 3 µs;

COLOUR	WHITE		UV-A	VISIBLE					NIR		SWIR				
	White 6000K -6K	White 4000K -4K	UV 405nm -405	Blue 450nm -470	Green 530nm -524	Red 625nm -625	Deep Red 660nm -660	IR 730nm -730	IR 850nm -850	IR 950nm -950	SWIR 1050nm -1050	SWIR 1200nm -1200	SWIR 1300nm -1300	SWIR 1450nm -1450	SWIR 1550nm -1550
Continuous use power	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Semi-continuous use power	200 %	200 %	175 %	200 %	200 %	200 %	200 %	200 %	200 %	200 %	200 %	200 %	200 %	200 %	200 %
Strobe use power	500 %	500 %	330 %	500 %	500 %	500 %	500 %	320 %	320 %	320 %	320 %	320 %	320 %	320 %	320 %



**Genesi LUX®**

GENESI ELETTRONICA SRL - VIA BACHELET, 3/A - 41057 SPILAMBERTO (MO) - ITALY

[info@genesi-lux.it](mailto:info@genesi-lux.it) - TEL. +39 059785566 - [www.genesi-elettronica.com](http://www.genesi-elettronica.com)

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Rev. 02/24

# GB Part Number

Ex. Code : **GBAAABBBXXX** -YYY -WW1 -WW2

XXX	Lengths	Heights
Thickness 26 mm		
GB060060	6 cm	6 cm
GB060120	6 cm	12 cm
GB060180	6 cm	18 cm
GB120120	12 cm	12 cm
GB120180	12 cm	18 cm
GB180180	18 cm	18 cm
GB180300	18 cm	30 cm
GB300300	30 cm	30 cm
GB300420	30 cm	42 cm
GB420420	42 cm	42 cm
GBAAABBB	From 6 cm to 100 cm on demand	

-YYY	Led Colours		EN 62471
-6K	Base 6000K Cold White	White	RISK1
-4K	4000K Natural White		
-405	UV 405 nm	UV - A	RISK2
-450	450 nm Royal Blue	Visible	RISK2
-524	524 nm Green		RISK1
-625	625 nm Red		
-660	660 nm Deep Red		
-730	730 nm IR	Nir	RISK2
-850	850 nm IR		
-950	950 nm IR		
-1050	1050 nm SWIR	Swir	RISK2
-1200	1200 nm SWIR		
-1300	1300 nm SWIR		
-1450	1450 nm SWIR		
-1550	1550 nm SWIR		
-YYY	Colour on demand		

-WW1	Cover variants
	Base Opaline cover
-T	Transparent cover
-OPC	Collimating filter + Opaline cover
-TP	Polarizing filter + Transparent cover
-OPP	Polarizing filter + Opaline cover
-WW1	Cover on demand

-WW2	Cables
	20 cm cable + M12 5P M
-WW2	Supply connection on demand

Cable extensions for M12: page 5

Not all combinations are available

**Part Number Examples:**

**GB180180-6K**  
Backlight 4 Driving Modes 180x180mm White 6000K Opaline cover 3900/26000Lm 1,08/7,2A 26/173W 20cm cable M12 M 5P

**GB120120-524**  
Backlight 4 Driving Modes 120x120mm GREEN 624nm Opaline cover 0,64/3,2A 15/77W 20cm cable M12 M 5P

**GB180240-1550**  
Backlight 4 Driving Modes 180x240mm SWIR 1550nm Opaline cover 1,2/3,84A 29/92W 20cm cable M12 M 5P



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# OPERATING MODE

## 100% CONTINUOUS USE


Connector	PINS	Function	Description
M12 Male 	1	+24 V	A) START NPN → PIN2: 0 to 1 V; B) START PNP → PIN4: 3 to 24 V;  For the continuous use: it is possible to connect PIN4 directly to +24 V or PIN2 to GND
	2	A) Start NPN: 0-1 V	
	3	GND	
	4	B) Start PNP: 3-24 V	
	5	-	

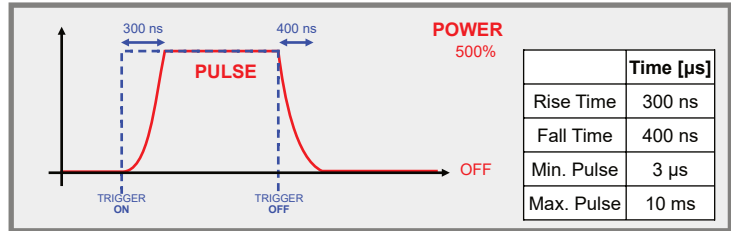
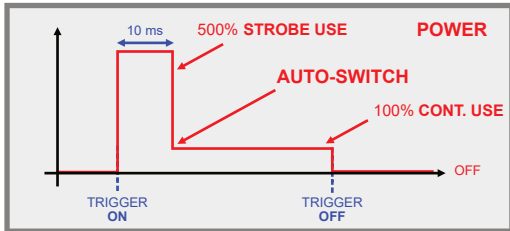
## 200% SEMI-CONTINUOUS USE

Connector	PINS	Function	Description
M12 Male 	1	+24 V	<b>Precondition:</b> PIN5: 24 V  A) START NPN → PIN2: 0 to 1 V; B) START PNP → PIN4: 3 to 24 V;  <b>In this mode → Ton<sub>max</sub> = 60 s - Dt<sub>max</sub> = 50%</b>  For the semi-continuous use: it is possible to connect PIN4 directly to +24 V or PIN2 to GND.  To use it in continuous mode with DT <sub>max</sub> from 51% to 100%: it is necessary to use the heat sink or forced ventilation.
	2	A) Start NPN: 0-1 V	
	3	GND	
	4	B) Start PNP: 3-24 V	
	5	+24 V	


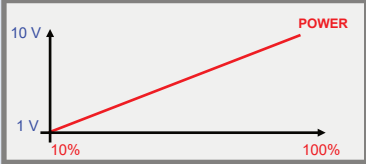
## 400% STROBE USE



Connector	PINS	Function	Description
M12 Male 	1	+24 V	A) START NPN → PIN2: 0 to 1 V; B) START PNP → PIN4: 3 to 24 V;  <b>In this mode → Ton<sub>max</sub> = 10 ms - Dt<sub>max</sub> = 10%</b>  AUTO-SWITCH in continuous use.
	2	A) Start NPN: 0-1 V	
	3	GND	
	4	B) Start PNP: 3-24 V	
	5	-	



## ANALOG REGULATION USE 100%

Connector	PINS	Function	Description
M12 Male 	1	+24 V	PIN5 from 1 to 10 V can adjust the power from 10% to 100%.  
	2	-	
	3	GND	
	4	-	
	5	1 V - 10 V	



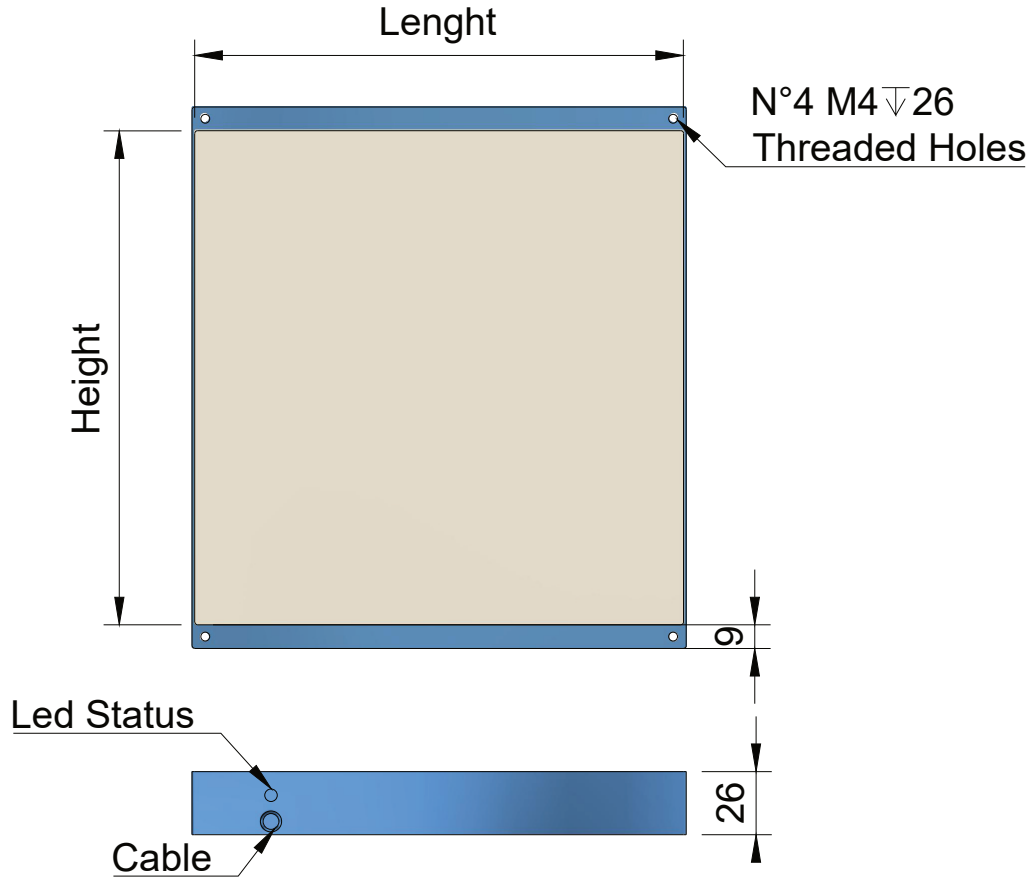
400% STROBE USE POWER can be reached only from WHITE / VISIBLE / NIR LEDS, for other wavelengths check the power table at page 1.



MicroController temperature protection → at 80°C the PCB enables the protection and restores the functioning at T < 60°C.

# MECHANICAL DRAWING

<b>Weight GB060060</b>	230g
<b>Weight GB120120</b>	450g
<b>Unit of measurement</b>	mm
<b>Weight GB180180</b>	750 g

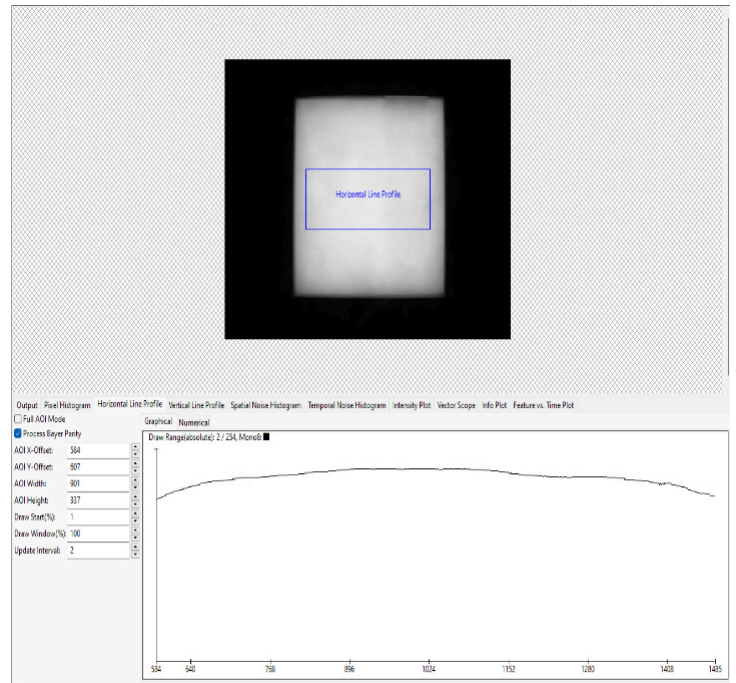
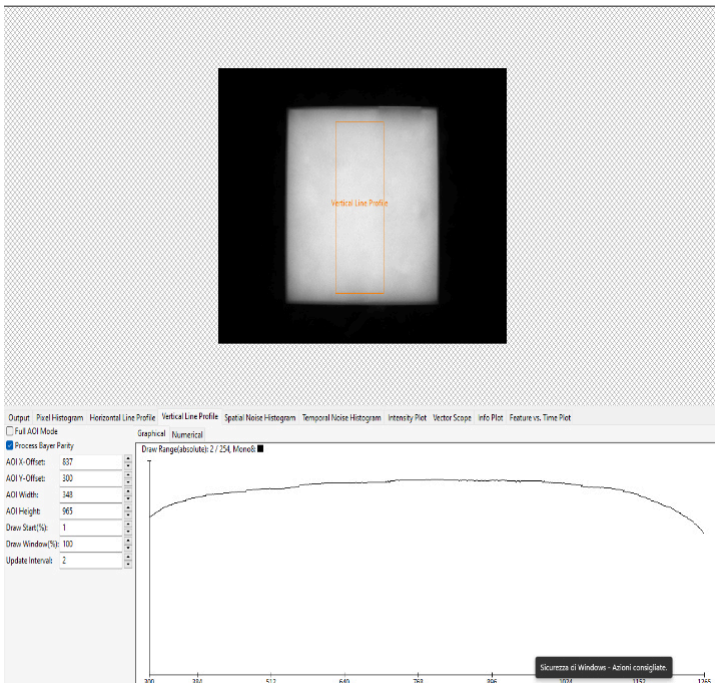


For 3D mechanical drawing requests - [info@genesi-lux.it](mailto:info@genesi-lux.it)

## - OP BACKLIGHT FUNCTION

Working Distance	Luminance cd/m <sup>2</sup> Continuous - Semi Cont. - Strobe
On Surface	32.000-64.000-128.00

# LIGHT UNIFORMITY TEST



Powers related to the white colour with homogeneity:  $\pm 5\%$

Design & Production  
Made in Italy



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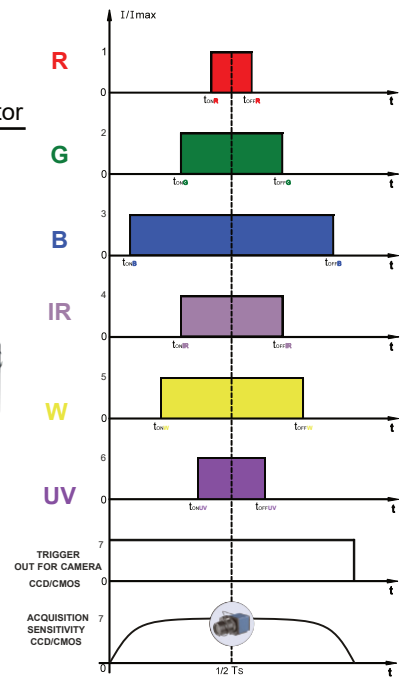
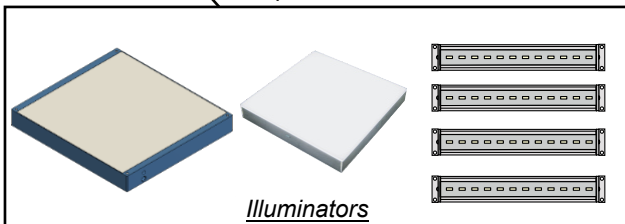
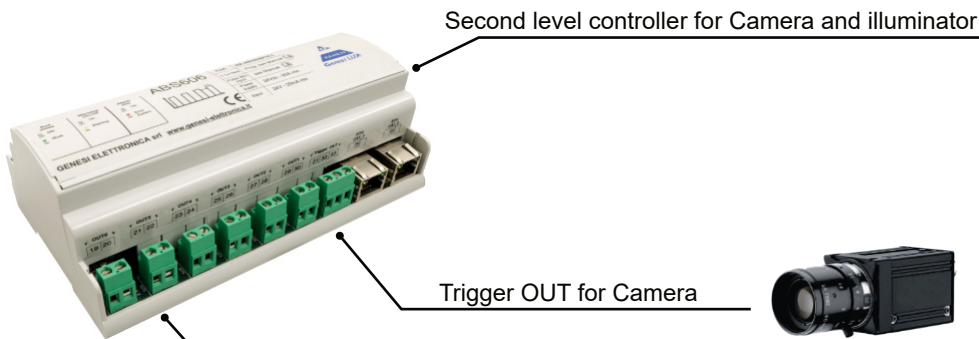
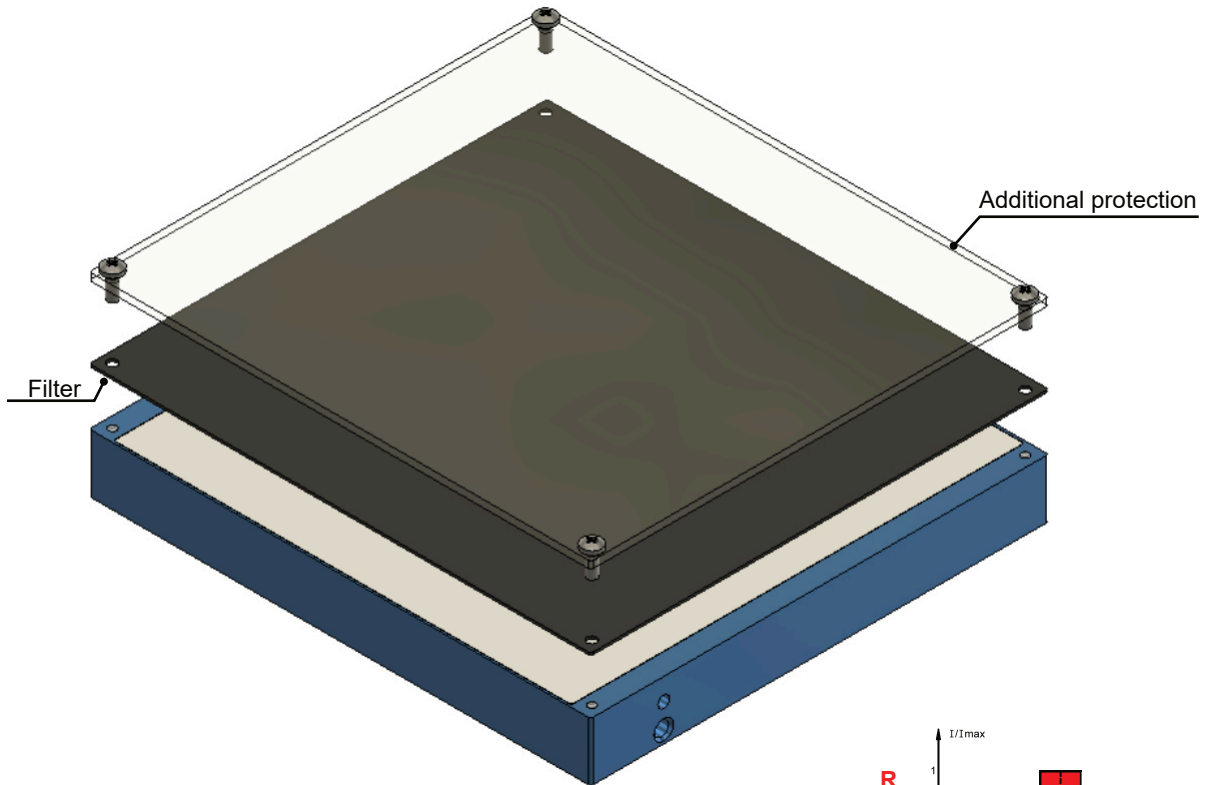


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# ACCESSORIES

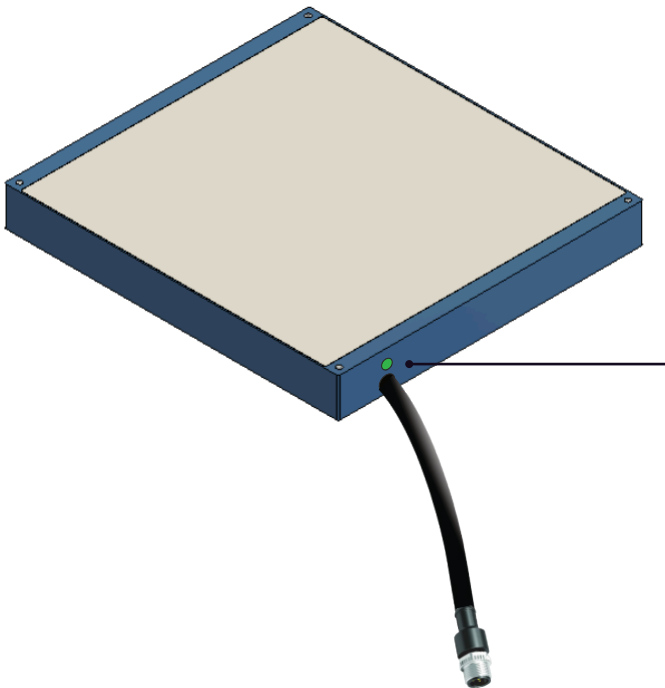
CODE	DESCRIPTION
GBAAABBB-PX2-AP	Additional protection 2 mm transparent plexiglass + screws
GBAAABBB-P-AP	Additional protection 2 mm Transparent plexiglass + Polarizing Filter horizontal + screws
GBAAABBB-C-AP	Additional protection 2 mm Transparent plexiglass + Collimating Filter + screws
GE-M12F-5X050-2M	M12 connector 2 meter long female PVC cable
GE-M12F-5X050-5M	M12 connector 5 meter long female PVC cable
GE-M12F-5X050-10M	M12 connector 10 meter long female PVC cable
GE-ABS606E	LED Voltage Controller with 6 programmable channels and 10/100 Ethernet. Second level controller for Camera and illuminator.











## Tailor-Made

Connector	PINS	Function	Description
M12 Male	1		
	2		
	3		
	4		
	5		

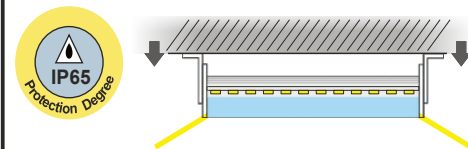
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## LED STATUS

Mode	Led colour signal	Function/note
Powered	Blue 	-
100% Continuous use	Green 	-
0-100% Analog Reg	Yellow 	-
400% Strobe Use	Fast blinking green 	-
200% Semi-continuous use standby	Purple 	Without PNP or NPN input only +24V analog IN
200% Semi-continuous use	Slow blinking purple 	With PNP or NPN input +24V analog IN
Over 10% ton error	Fast blinking red 	10 sec stop
Over 80° temperature in pcb controller	Slow blinking green-yellow-red 	Up to < 60° stop

The indicated IP protection degree is guaranteed only if the product is positioned downward



### STANDARDS

EMC immunity :	EN 61547:2009	
EMC emission :	EN 55015:2013 + A1	
Photobiologic risk :	EN 62471:2008 GLS:	
Assessment of lighting equipment related to human exposure to electromagnetic fields	EN 62493:2015	

### WARNING

-Electrical device exclusively for professional use. Installation can be done by qualified personnel only.  
-In case of power supply wire damage, its replacement has to be done at the head office exclusively.

Warranty loss in case of inappropriate use and tampering.



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