LED PV Lighting System for billboards

Technical features:

- ***LED Solid state lighting***
- ***High luminous efficiency***
- ***Power supplying @ 12-24VDC***
- ***Lamp power: 12W***
- ***Number of used LED: 12***
- ***Minimum guaranteed efficiency: 100lumen/Watt for each LED***
- ***Luminous flux: 1200lm***
- ***Luminous intensity: 680lux at 1mt***
- ***Maintenance of initial flux >70% after 50.000h***
- ***MTBF: 100.000h***
- ***Constant current power supply - 350mA***
- ***Driver efficiency >92%***
- ***Flux reduction –30%***
- ***Control by microcontroller***
- ***Protection fuse***
- ***Over temperature protection***
- ***Terminal block for cables up to 2,5mmq***
- ***Aluminium die cast frame***
- ***Tempered glass - 5mm***
- ***Protection IP65***
- ***Easy cabling***

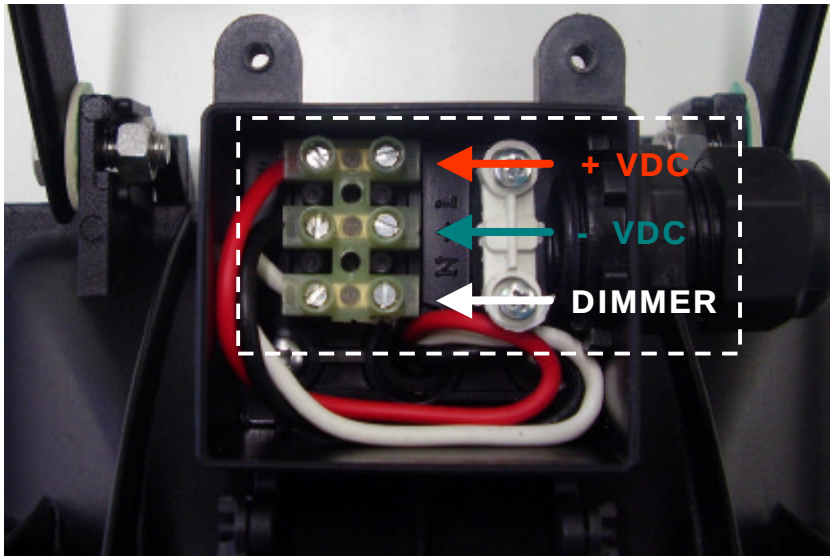
General description:

LED12.BB has been properly studied for the use in high luminous efficiency and high Energy saving applications as in PV stand alone systems. It has been optimized for outdoor lighting as regards fixings and light projection.
All this is the ideal solution for the lighting of billboards considering also the possibility of a direct connection to Western Co. charge regulators code **SPB-LB, SPB-LR e SPB-LG.**
The lamp has got a power supplying and control electronics @ DC low voltage (**12-24VDC**) which has an average conversion efficiency > 92% and a control system by microcontroller of the maximum working temperature.
In case of reduced Energy availability it is possible to obtain a consumption saving by using the ***flux reduction up to -30%;*** this function can be activated and managed directly by the PV charge regulators SPB-LB, SPB-LR and SPB-LG.

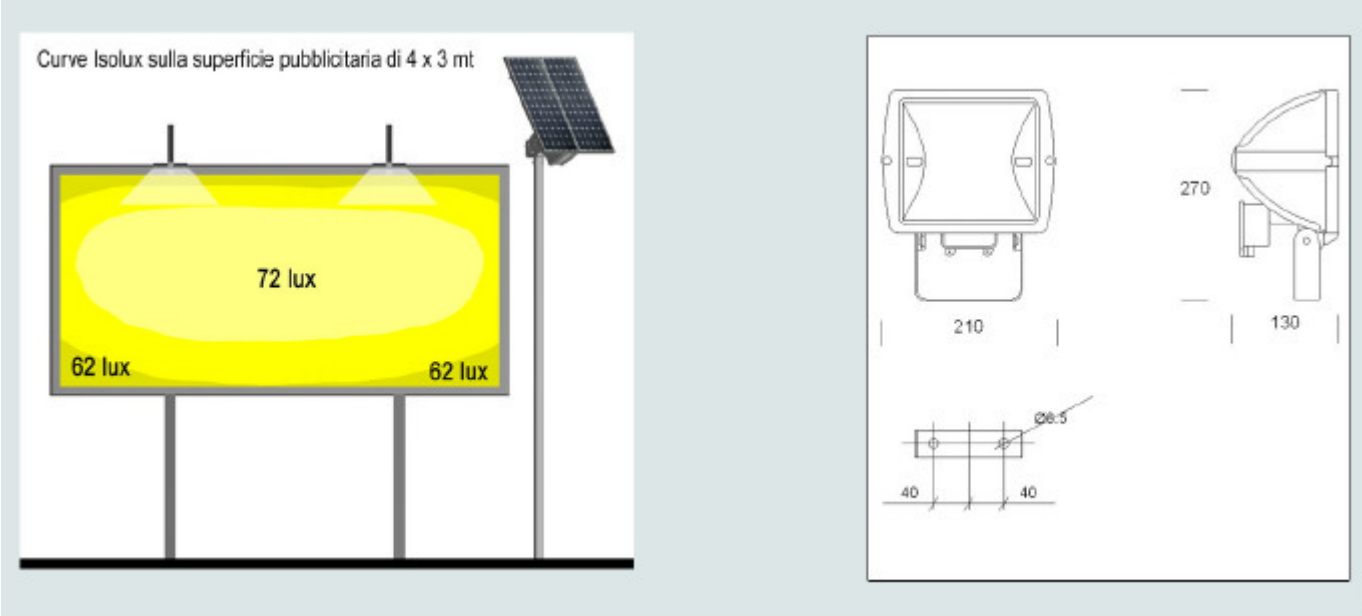
Installation procedure:

LED12.BB has been studied for fixing and installation with adjustable projection angle in outdoor applications. Having a IP65 degree protection, it provides protection against dust and water. While installing pay the maximum attention ***in respecting the polarities and avoid short-circuits;*** *they are destructive and they annul warranty.* Place **LED12.BB** having care to block its position using the proper fixings. ***We recommend an horizontal installation to avoid dazzling effects, light pollution and a greater quantity of direct flux.***

Connect to the input terminal-block the power supplying cables +VDC, -VDC and DIMMER, paying attention to respect the right polarities. In case of direct power supplying from battery the connection causes the lamp activation and the entry into service of the device.



Lighting performances: LED.12BB-12 *has been optimized for the projection ob billboard with* ***90°V e 140°H asymmetrical opening angle*** *so to obtain a good uniformity even for a minimum distance of projection.*
Typically for installation on billboard having dimensions 4x3mt we obtain the following Isolux diagram:



Electric features:

FEATURES	SYM	CONDITION	MIN	TIP	MAX	UNIT
Power supplying: Working voltage: Current voltage:	VDD IDD	12V LED 12W, VDD=12,6V	10 1,2	12,6 0,95	30 0,4	V A
Output voltage (Led string)	VLED	T=25°C	30	33	51	V
Inrush current	IPEAK	T=25°C	1,5	2	2,5	A
Operative Frequency	Fosc	T=25°C		100,0		KHz
Efficiency	EFF	LED 24W, VDD=12,6V	90	92	95	%
Input voltage of flux reduction	VDin	T=25°C	0	5	5.5	V
Working environment temperature	TA		-10	25	60	°C
Section of power conductors	-		-	2,5	-	mm^2
Protection	IP			65		IP
Mechanical dimensions	-			270 x 210 x 130		mm
Weight	W			1500		g