

The new "GEMMA" series includes a wide range of LED Modules for sign lighting. The exclusive lens with prisms, the high efficiency LEDs and low luminous decay, allow to reduce the quantity of modules required per square meter compared to common modules and to illuminate in a homogeneous and efficient way with significant energy savings. The innovative sturdy structure and the facilitated removal of adhesive protection, significantly reduce installation and maintenance costs.

### Led Module HM30M-1

#### Applications

- Small and medium size channel letters illumination
- Backlighting of single sided light boxes, depth 30 to 80 mm.
- Linear lighting
- Architectural and decorative applications

#### Benefits

- The oval lens optimally diffuses the light along the channels of letters making the luminous uniformity perfect, minimizing the light dispersion and increasing the efficiency.
- The 3M VHB adhesive with the special protective film removal tab offers greater security and speed in fixing operations, contributing to cost reduction.
- Consistent white light 3-step MacAdam
- Color rendering index Ra: > 80
- Production date is marked on back of module for traceability

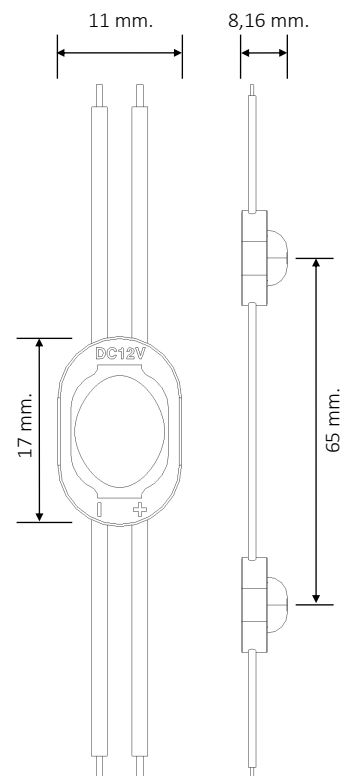
## HM30M-1

Model	Color	CCT / λd	Lumen
HM30M-1CW12	Cool White	8000 k	32
HM30M-1W12	White	6500 k	32
HM30M-1NW12	Natural White	4000 k	32
HM30M-1WW12	Warm white	3000 k	29
HM30M-1G12	Green	520/530 nm	18
HM30M-1B12	Blue	460/470 nm	6

#### Features

Module Operating Voltage	DC 12V
Wattage ( W/Module)	0,30 W
IP Class	IP66 / IP67
Operating Temperature Range	-40 C° ~ +60 C°
Storage Temperature Range	+5 C° ~ +40 C°
Storage Environment Humidity	RH < 60%
Distance ( Centre Module/Module )	65 mm.
Viewing Angle	170° x 140°
Life Time (temperature at T <sub>c</sub> = 75 °C)	50.000h ( L70 )
Consistent white light	< 3 SDCM
Chain ( No. Modules )	70
Bag ( No. Modules )	140
Warranty	5 Years *

\*See terms and conditions



## Electrical Data

Model	Nominal Voltage	Voltage Range	Accidental reverse input voltage protection up to	Nominal wattage per chain	Nominal wattage per module
HM30M-1CW12	12 VDC	11...13 VDC	13 VDC	21 W	0,30 W
HM30M-1W12	12 VDC	11...13 VDC	13 VDC	21 W	0,30 W
HM30M-1NW12	12 VDC	11...13 VDC	13 VDC	21 W	0,30 W
HM30M-1WW12	12 VDC	11...13 VDC	13 VDC	21 W	0,30 W
HM30M-1G12	12 VDC	11...13 VDC	13 VDC	21 W	0,30 W
HM30M-1B12	12 VDC	11...13 VDC	13 VDC	21 W	0,30 W

## Photometrical Data

Model	Color	Color Temperature	Color Rendering Index	Typical Luminous Flux	Typical Luminous Efficiency
HM30M-1CW12	Cool White	8000K ±5%	> 80	32 Lm	106,6 Lm/W
HM30M-1W12	White	6500K ±5%	> 80	32 Lm	106,6 Lm/W
HM30M-1NW12	Natural White	4000K ±4%	> 80	32 Lm	106,6 Lm/W
HM30M-1WW12	Warm white	3000K ±4%	> 80	29 Lm	96,6 Lm/W
HM30M-1G12	Green	520/530 nm		20 Lm	66,6 Lm/W
HM30M-1B12	Blue	460/470 nm		6 Lm	20 Lm/W

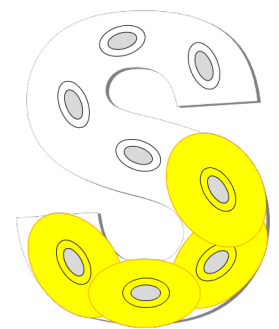
## Coding

Model	Code
HM30M-1CW12	HTL 000712
HM30M-1W12	HTL 000713
HM30M-1NW12	HTL 000714
HM30M-1WW12	HTL 000715
HM30M-1G12	HTL 000716
HM30M-1B12	HTL 000717

## Modules Positioning

The oval lens of the HM30M-1 module is suitable to light the channel letters.

Modules should be fix with the oval shape oriented towards the length of the channel following the path, this allows to minimize the quantity of modules needed.



## The product comply with the following European Standard

<input checked="" type="checkbox"/>	EN 62471: 2008	Photobiological safety of lamps and lamp systems
<input checked="" type="checkbox"/>	EN 62031: 2008+A1: 2013	LED modules for general lighting, Safety specifications
<input checked="" type="checkbox"/>	RoHS2 2011/65/UE	Restriction in the use of hazardous substances in electrical and electronic equipment