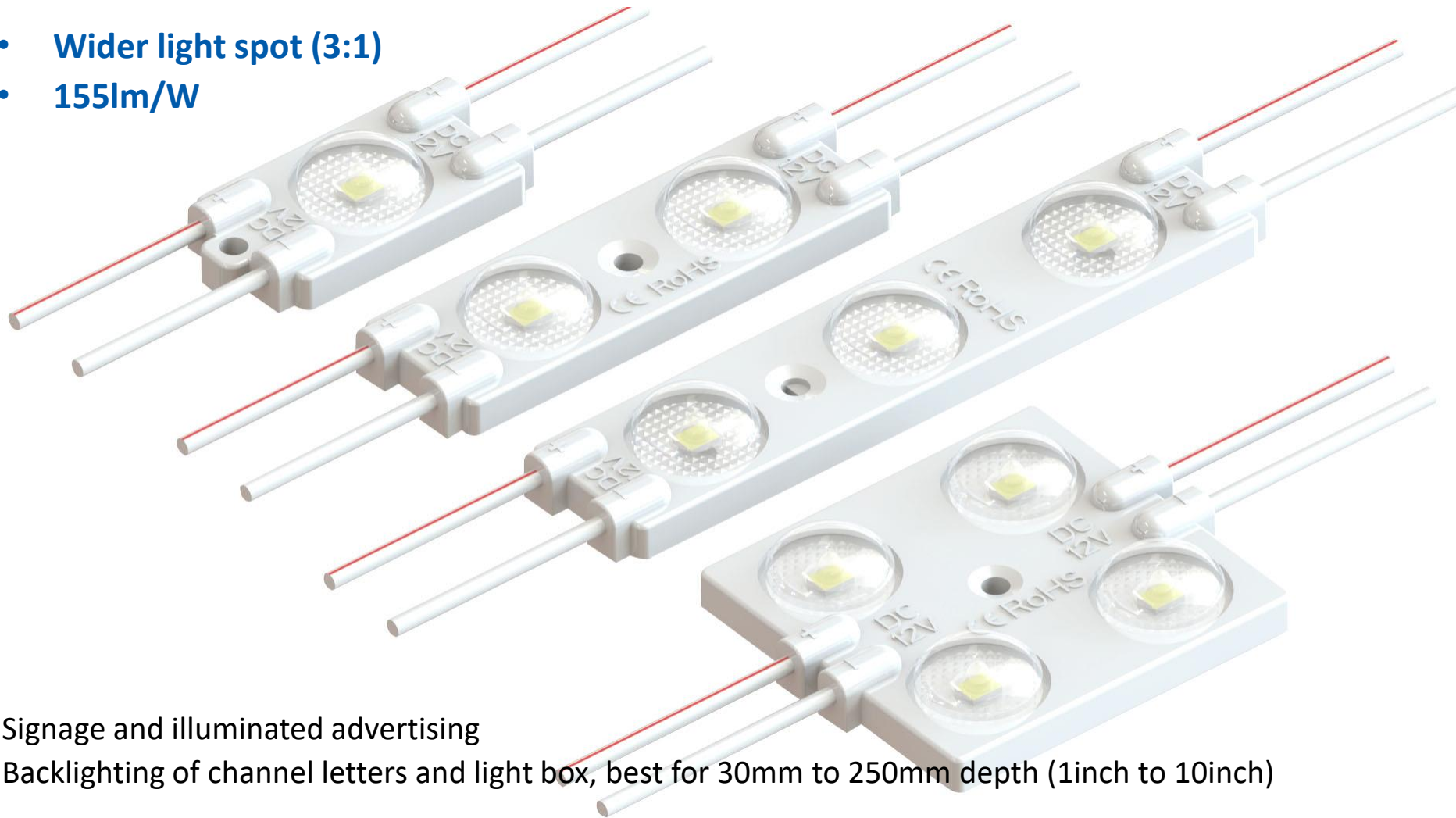


Backlighting Wide-High efficiency series

Product datasheet



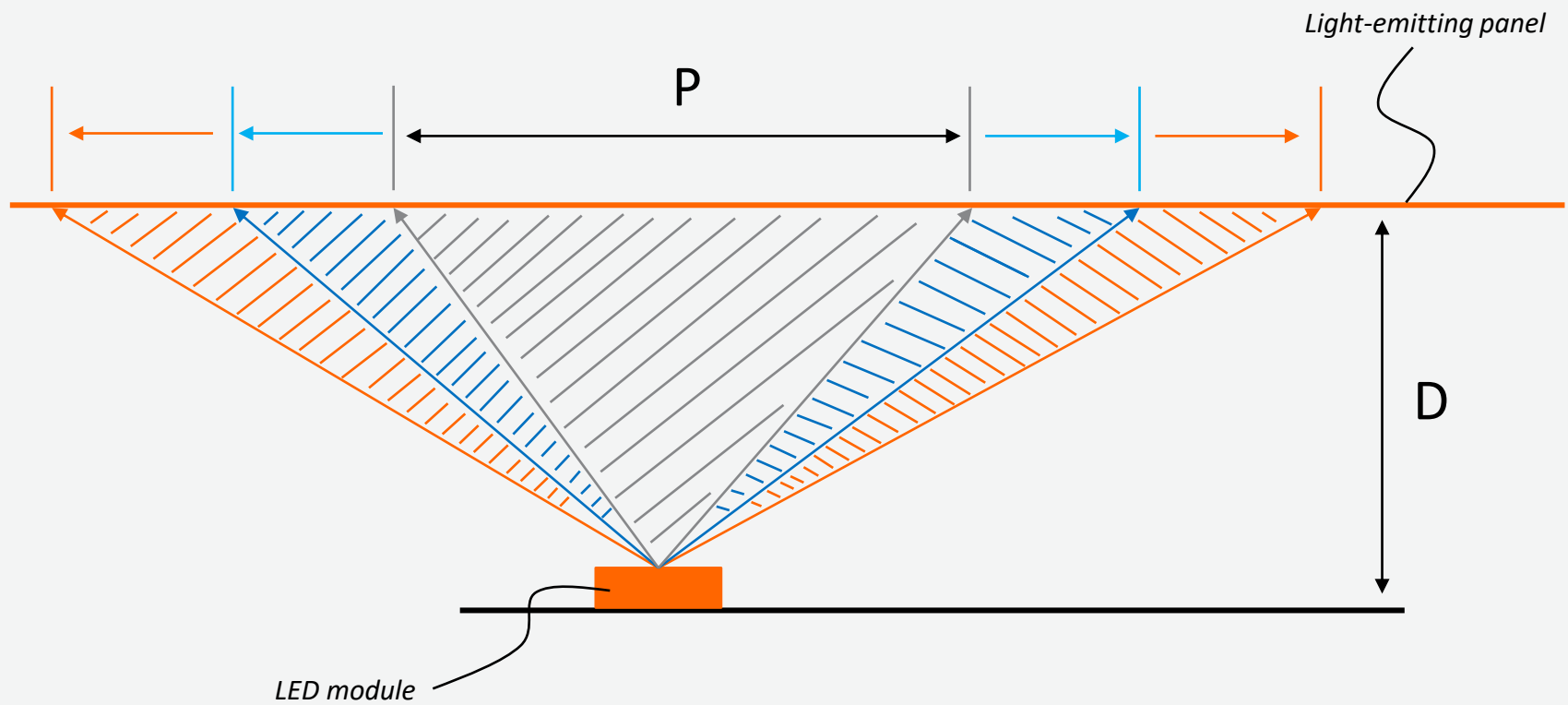
- Wider light spot (3:1)
- 155lm/W



- Signage and illuminated advertising
- Backlighting of channel letters and light box, best for 30mm to 250mm depth (1inch to 10inch)



New Lens Design – Wider Light Spot



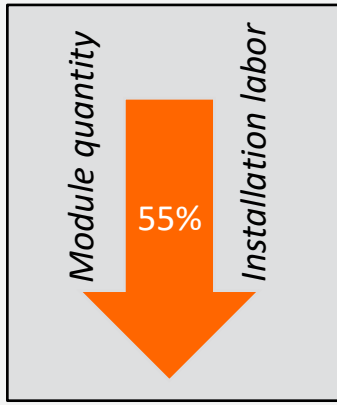
The proportion of “P” and “D” can show the performance of lens design, normally, the bigger proportion, the larger light spot.

Proportion	Normal bat-wing lens in market	Previous generation “wide light spot”	New generation “wide light spot”
P:D	1.5:1	2:1	3:1

New Lens Design – Wider Light Spot



The product with new generation lens can save module quantity and installation labor cost about 55%.



High Efficacy Design

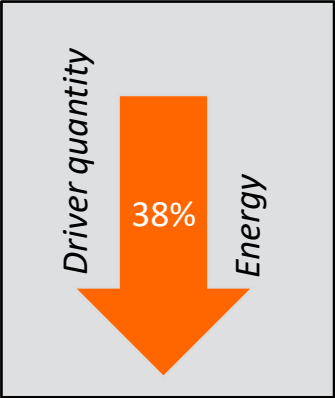


Normal in marketing
Efficiency: ~ 95 lm/W



New generation
Efficiency: 155 lm/W

High efficiency can save power supplier quantity and energy cost about 38%.



Application calculated data comparison

Product	L1000 x W1000mm Light box	Normal bat-wing lens in market – 1.5:1	Previous generation “wide light spot” – 2:1	New generation “wide light spot” – 3:1
1LED module (D60mm)	module quantity for one light box	81 modules	64 modules	36 modules
	light box total lumen	2754 lm	2176 lm	2808 lm
	light box total power	29 W	23 W	18 W
2LED module (D75mm)	module quantity for one light box	55 modules	45 modules	25 modules
	light box total lumen	3740 lm	3060 lm	3875 lm
	light box total power	40 W	32 W	25 W
3LED module (D90mm)	module quantity for one light box	36 modules	31 modules	16 modules
	light box total lumen	3672 lm	3162 lm	3720 lm
	light box total power	39 W	33 W	24 W
4LED module (D120mm)	module quantity for one light box	20 modules	16 modules	9 modules
	light box total lumen	2720 lm	2176 lm	2790 lm
	light box total power	29 W	23 W	18 W

- Based on same light box brightness:

- Save 55% module cost and installation labor cost
- Save 38% power supplier cost and energy cost



- 2706/2713

Product features

- 12VDC
- 78 lm/module (white)
- 155 lm/W (white)
- Beam angle 175°
- CE marked and UL listed

Electrical data

Product Description	Typical Voltage	Energy Consumption (W/module)	Energy Consumption (W/chain)	Connecting Quantity (modules/chain)	Energy Consumption (W/ft.)
2706 2713	12VDC	0.5	25	50	1.13

Photometrical data

Product Description	Light color (designation)	Color (CCT)	Color Rendering Index	Typical Brightness (lumen/module)	Typical Brightness (lumen/chain)	Typical Brightness (lumen/ft.)
2706	Cool White	6500K	Ra > 70	78	3900	176
2713	Warm White	4500K	Ra > 70	78	3900	176



- 2714/2715

Product features

- 12VDC
- 155 lm/module (white)
- 155 lm/W (white)
- Beam angle 175°
- CE marked and UL listed

Electrical data

Product Description	Typical Voltage	Energy Consumption (W/module)	Energy Consumption (W/chain)	Connecting Quantity (modules/chain)	Energy Consumption (W/ft.)
2714 2715	12VDC	1	30	30	1.6

Photometrical data

Product Description	Light color (designation)	Color (CCT)	Color Rendering Index	Typical Brightness (lumen/module)	Typical Brightness (lumen/chain)	Typical Brightness (lumen/ft.)
2714	Cool White	6500K	Ra > 70	155	4650	249
2715	Warm White	4500K	Ra > 70	155	4650	249



- 2716/2717

Product features

- 12VDC
- 233 lm/module (white)
- 155 lm/W (white)
- Beam angle 175°
- CE marked and UL listed

Electrical data

Product Description	Typical Voltage	Energy Consumption (W/module)	Energy Consumption (W/chain)	Connecting Quantity (modules/chain)	Energy Consumption (W/ft.)
2716 2717	12VDC	1.5	30	20	2.18

Photometrical data

Product Description	Light color (designation)	Color (CCT)	Color Rendering Index	Typical Brightness (lumen/module)	Typical Brightness (lumen/chain)	Typical Brightness (lumen/ft.)
2716	Cool White	6500K	Ra > 70	233	4660	338
2717	Warm White	4500K	Ra > 70	233	4660	338



- 2718/2719

Product features

- 12VDC
- 310 lm/module (white)
- 155 lm/W (white)
- Beam angle 175°
- CE marked and UL listed

Electrical data

Product Description	Typical Voltage	Energy Consumption (W/module)	Energy Consumption (W/chain)	Connecting Quantity (modules/chain)	Energy Consumption (W/ft.)
2718 2719	12VDC	2	40	20	2.65

Photometrical data

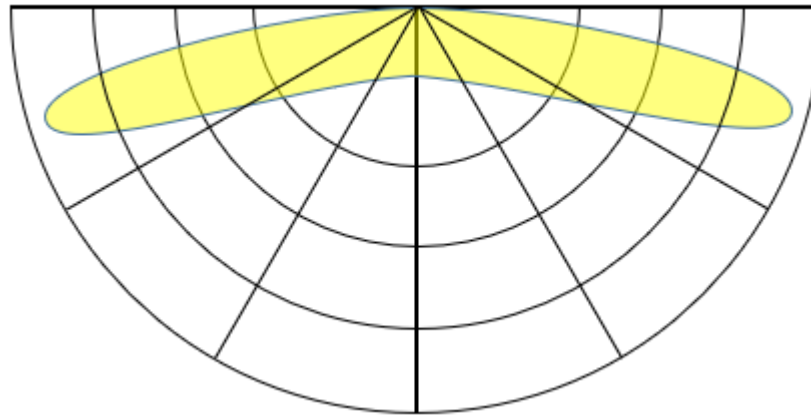
Product Description	Light color (designation)	Color (CCT)	Color Rendering Index	Typical Brightness (lumen/module)	Typical Brightness (lumen/chain)	Typical Brightness (lumen/ft.)
2718	White	6500K	Ra > 70	310	6200	411
2719	Warm White	4500K	Ra > 70	310	6200	411



Environmental and Application Conditions

Operating Environment (t_a)	-25°C to +55°C
Storage Temperature Range (t_s)	-40°C to +85°C
Max. operating (case) temperature (t_c)	80°C
IP Rating	IP67
Lifetime (L70B50)	50,000 hours
Dimming mode	Dimmable
Cutting Resolution	Cut on wire between every module

Light distribution

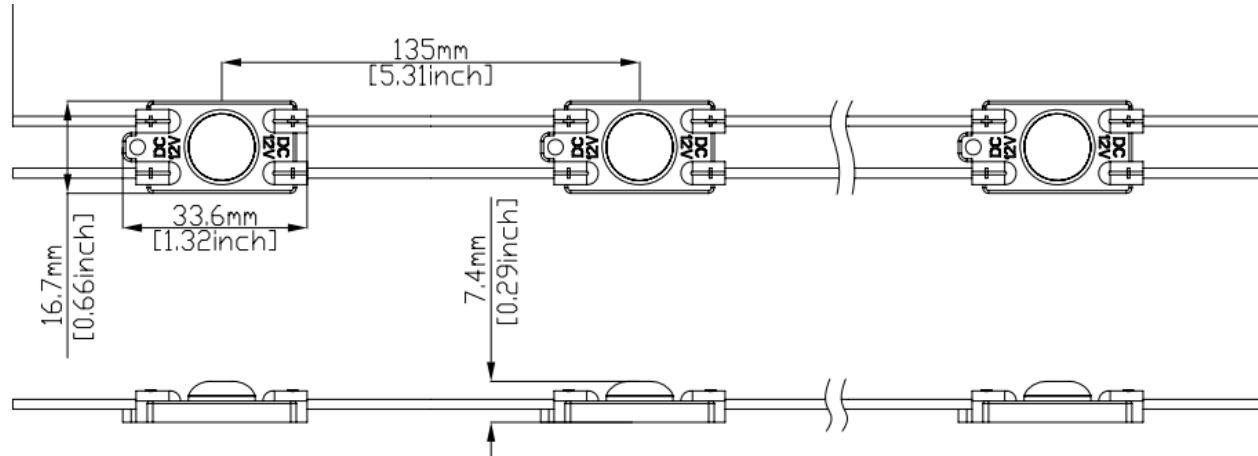


Beam angle: 175°

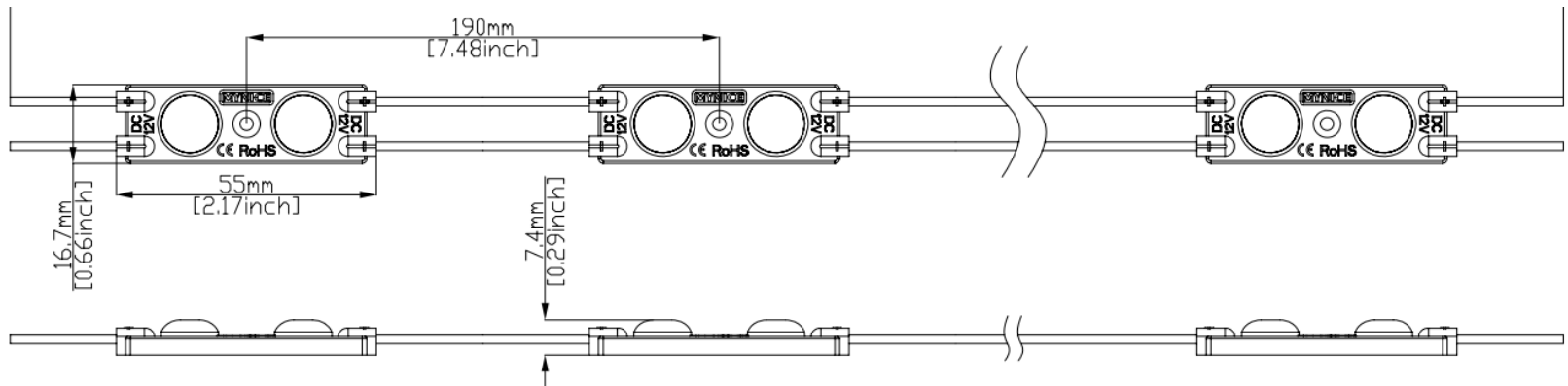


Product line drawing

BWH05



BWH10

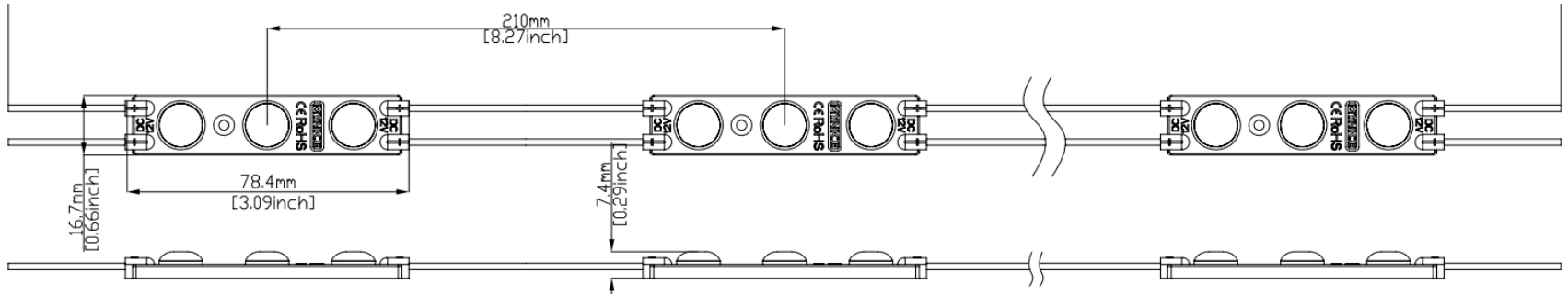


* Client can customize the modules distance (center to center) based on requirements.

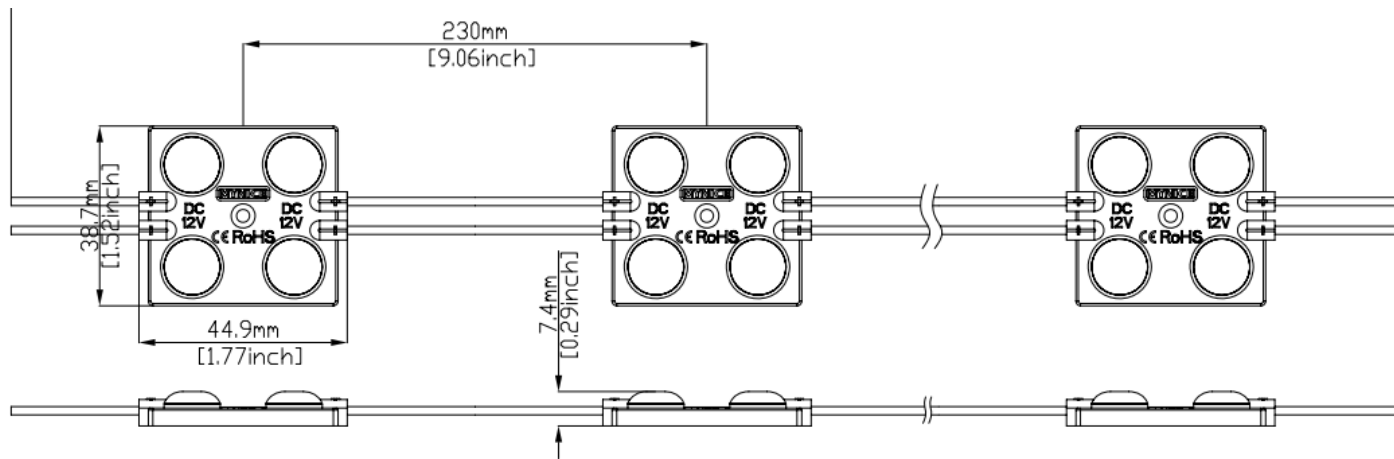


Product line drawing

BWH15



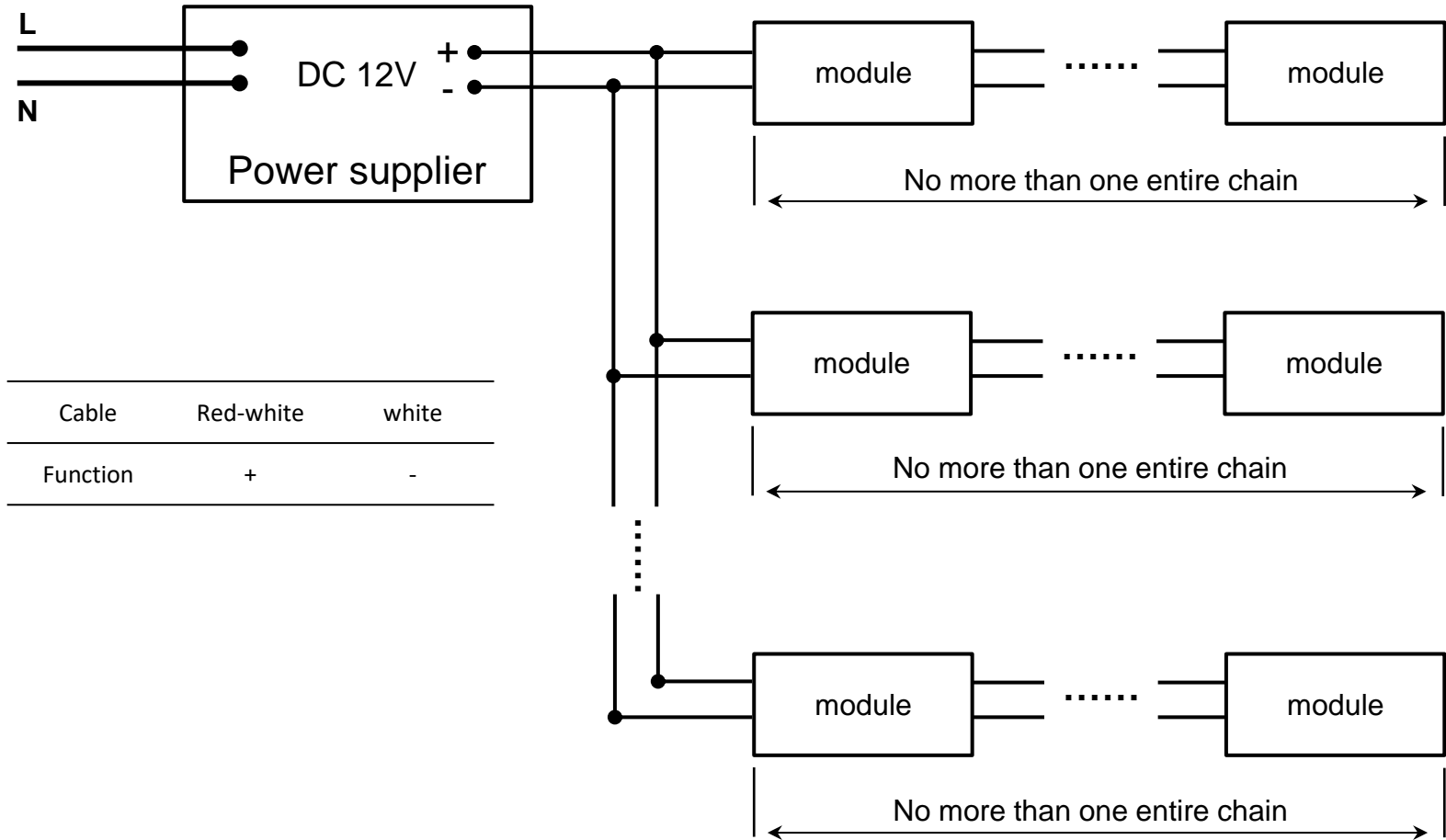
BWH20



* Client can customize the modules distance (center to center) based on requirements.



Wiring method



* The secondary cable recommend > AGW18, < 1 meter



Package

Product description	Package unit (modules/carton box)	Package unit (chains/carton box)	Carton box Dimensions (length x width x height)	Volume	Gross weight

Additional product information

- Installation of LED modules (with power supplies) needs to be made under consideration of all valid regulations and norms.
- Installation by qualified electrician only.
- Parallel connection is mandatory for safe electrical operation. Serial connection of LED modules is discouraged. Unbalanced voltage drop in serial connection can cause hazardous overload
- Electrical contact is achieved with the contact cables or the terminals of the module. Please refer to the technical data for maximum number of LED modules that can be operated on one control gear.
- To avoid mechanical damage, the LED modules have to be attached securely to the intended mounting surface. It is recommended to avoid heavy vibration.
- LED modules are dimmable by means of PWM (pulse width modulation).