

PRODUCT FAMILY DATASHEET

High Power LED Modules

Lens modules rated 1.5 W to 4 W per piece, for large-format channel letters and deep light boxes where a standard module cannot reach the face without hot spots showing through it.



What This Family Is For

Where a sign is tall, deep or read from across a car park, the module has to throw more lumens per piece so the pitch can stay wide enough to wire and service. These six models cover 0.36 W up to 4 W per module.

Products In This Family

Product	Group	Summary
JDS-3828D	Bezel-Free Series 3828D	Double-sided 1.5 W module at 93 lm/W, IP67, 8 pieces per metre, for signs deeper than 60 mm.
JDS-3828B	Bezel-Free Series 3828B	1.5 W backlit module at 93 lm/W, IP67, rated -40 to +60 C, for signs deeper than 60 mm.
JDS-7618B	Bezel-Free Series 7618B	Three-lens 76 mm module, 360 lm per piece at up to 170 lm/W, IP67, for signs 40 to 70 mm deep.
JDS-5118B	Bezel-Free Series 5118B	Two-lens 51 mm module, 240 lm per piece at up to 170 lm/W, IP67, for signs 30 to 60 mm deep.
JDS-4543B	Bezel-Free Series 4543B	Four-lens square module, 480 lm per piece at up to 4 W, IP67, the brightest single module published here.
JDS-2618B	Bezel-Free Series 2618B	Single-lens 26 mm module at 170 lm/W, IP67, rated for signs 25 to 50 mm deep - the shallowest depth in the high power family.

Published Specification

Property	Value
Model	JDS-3828D
Series	Bezel-Free Series 3828D
Module density	Module density 3 pcs/ft, 8 pcs/m
Input voltage	DC 12 V / 24 V
Power	1.5 W per piece
Luminous efficacy	93 lm/W
Luminous flux	140 +/-3 lm per piece at 10000K, 6500K and 3000K
Beam angle	170 deg
Ingress protection	IP67
Colour binning	3 SDCM
Mounting	3M back tape

Property	Value
Cascade limit	20 modules single-ended, 50 modules double-ended power feed
Colour options	Warm white, white, cool white, red, green, blue, yellow
Sign depth designed for	more than 60 mm / 2.4 in
Operating temperature	-40 to +60 C / -13 to +140 F
Storage temperature	-40 to -70 C / -13 to +158 F
Warranty	5 years
Packing	Packed per the published cascade table
Carton weight	Not published
Carton dimensions	Not published

Figures are reproduced from the manufacturer's published specification and may be revised. Rows reading 'not published' are figures the source specification does not publish; they are confirmed in writing rather than estimated. Confirm the current revision with your quotation.

Why Buyers Choose This Range

- Published efficacy up to 170 lm/W across the 7 mm-thin models
- 480 lm per piece at the top of the family, from the 4543B
- Depth bands published from 25 mm up to 70 mm
- IP67 across the family with a five year warranty

Problems It Solves

- A large-format letter lit with standard modules, which needs so many pieces that the wiring becomes the job.
- Hot spots on a deep face because the module throws a narrow cone.
- A pitch so tight that there is no room to service a failed module.
- Power supplies sized against nameplate wattage rather than the per-module range these models actually draw.

Who It Is For

- Fabricators building large-format fascia lettering
- Manufacturers of deep double-sided light boxes
- Contractors lighting monument and pylon signs
- Distributors supplying high-output modules for reader boards

Application Scenarios

- Large-format retail fascia read from a car park
- Pylon and monument signage
- Deep double-sided projecting signs
- Illuminated building identity lettering

Materials

- Injection-moulded housing with the optic moulded in, rather than a lens glued on afterwards.
- Potting compound filling the cavity around the board, which is what carries the IP rating.
- Pre-tinned lead wires on both ends for cascading, cut to the published module pitch.
- 3M backing tape on the models where the specification lists it, for direct mounting to the inside of a return.

Manufacturing Process

1. Patch - SMT placement of the emitters onto the module board, photographed as stage one on the factory's own process board.
2. Solder wire - Lead wires are soldered and strain-relieved before the housing is closed.
3. Injection moulding - The housing and the optic are moulded together, then the cavity is potted.
4. Testing - Electrical test under load before the module leaves the line.
5. Back glue - 3M backing tape is applied to a cleaned housing on the models specified with it.
6. Aging - Finished modules are run on the aging rack before packing.

Customisation Options

- Colour temperature selected per order from the published options rather than held as one stock colour.

- Lead wire length and module pitch cut to the sign layout instead of a default spacing.
- OEM and ODM work: the source site states that OEM and ODM are supported for customers in all markets.
- Packing quantity per bag and per carton adjusted to how the modules will be issued on the fabrication floor.

Certification Standards

Production follows CE, RoHS, LVD, IP68 test report, UL. Certificates are sent per model and destination market on request.

Questions Buyers Ask

Why does the power show as a range, for example 1.44-4 W?

Those models are built in more than one drive current. The specification publishes the band; which point in it you get is confirmed per order.

Does higher power mean a wider pitch?

Usually yes, but the depth band decides it. A 480 lm module in a 40 mm cavity still has to sit close enough that the cones overlap before they reach the face.

Is the 170 lm/W figure the same for every colour temperature?

No. The published sheets give 160 lm/W at 10000K and 170 lm/W at 6500K and 3000K on these models.

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