

PRODUCT FAMILY DATASHEET

Side-Emitting LED Modules

Side-firing modules with asymmetric 65x10 or 45x20 degree optics, mounted on the inside wall of a light box so the light travels across the face instead of straight at it.



What This Family Is For

A shallow light box lit from the back always shows the module pattern. Lit from the edge, it does not. These three models are built for that, with beam angles published for both orientations.

Products In This Family

Product	Group	Summary
JDS-7420V	Bezel-Free Series 7420V	3 W side-emitting module, 300 lm per piece, IP67, for single-sided boxes 50 to 100 mm and double-sided boxes 60 to 200 mm deep.
JDS-4035V	Bezel-Free Series 4035V	120 lm/W side-emitting module at 3 W and 360 lm per piece, IP67, eight pieces per metre.
JDS-3828V	Bezel-Free Series 3828V	1.5 W side-emitting module, 140 lm per piece, IP67, for light boxes where 3 W per piece would over-light the face.

Published Specification

Property	Value
Model	JDS-7420V
Series	Bezel-Free Series 7420V
Module density	Module density 2 pcs/ft, 7 pcs/m
Input voltage	DC 12 V
Power	3 W per piece
Luminous efficacy	100 lm/W
Luminous flux	300 +/-3 lm per piece at 10000K, 6500K and 3000K
Beam angle	45x20 deg / 65x10 deg
Ingress protection	IP67
Colour binning	3 SDCM
Mounting	3M back tape
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	50-100 mm single-sided light box, 60-200 mm double-sided light box
Operating temperature	-40 to +60 C / -13 to +140 F
Storage temperature	-40 to -70 C / -13 to +158 F

Property	Value
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

- Asymmetric optics published for both orientations, 65x10 and 45x20 degrees
- Depth bands published for single-sided and double-sided boxes separately
- Up to 360 lm per piece at 120 lm/W on the 4035V
- IP67 with 3M backing tape for mounting inside the return

Problems It Solves

- A shallow light box lit from behind, where every module shows through the face as a bright dot.
- Two edges wired and powered where one would have done.
- A side-lit box specified without knowing the beam is asymmetric and has an orientation.
- Light spilling out of the edge of the box instead of across the face.

Who It Is For

- Light box manufacturers working in shallow depths
- Fabricators of double-sided projecting signs
- Shop fitters building illuminated panels into joinery
- Distributors supplying edge-lit sign components

Application Scenarios

- Shallow single-sided light boxes 50 to 100 mm deep
- Double-sided projecting boxes 60 to 200 mm deep
- Illuminated panels built into shop joinery
- Edge-lit fascia panels where the face must stay unbroken

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

What is the difference between the two beam angles quoted?

The module can be mounted in either of two orientations and the optic is asymmetric, so the published sheet gives both: 65x10 degrees and 45x20 degrees.

How deep a box can be lit from one edge?

The published bands are 50 to 100 mm for a single-sided box and 60 to 200 mm for a double-sided one.

Do I still need a module behind the face?

Not within those depth bands. That is the point of a side-emitter: the face stays unbroken and the light crosses it from the return.

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