

PRODUCT FAMILY DATASHEET

RGB and RGBW Modules

Colour-changing modules in RGB and RGB+W, including a built-in-IC version for addressable effects, for signage and facade work that has to change colour rather than stay one temperature.



What This Family Is For

Three models that put red, green and blue - and on the RGBW versions a separate white die - inside one sealed module, so a sign can run white on a weekday and colour for an event without a second installation.

Products In This Family

Product	Group	Summary
JDS-6515RGB/W	Bezel-Free Series 6515RGB/RGBW+IC	Addressable RGB/RGBW module with a built-in IC, 65 x 15 x 10 mm, IP68, for medium-sized signs 80 to 120 mm deep.
JDS-6615RGB/RGBW	JDS-6615RGBW	6.5 mm-thin RGB/RGBW module with a bat-wing lens, 60 lm, IP67, 50 modules per chain.
JDS-3636RGB/RGBW	Bezel-Free Series 3636RGBW	1.44 W RGB/RGBW module at 100 lm/W, IP67, nine pieces per metre, for signs deeper than 150 mm.

Published Specification

Property	Value
Model	JDS-6515RGB/W
Series	Bezel-Free Series 6515RGB/RGBW+IC
Module size	65 x 15 x 10 mm
Input voltage	DC 12 V
Power	0.96 W per piece (RGBW), 0.72 W (RGB)
Luminous efficacy	83 lm/W
Luminous flux	RGB 60 +/-3 lm per piece; RGBW 80 +/-3 lm per piece
Beam angle	175 deg
Ingress protection	IP68
Cascade limit	50 modules, single-ended power feed
Colour options	RGB or RGBW
Sign depth designed for	80-120 mm
Operating temperature	-20 to +50 C
Storage temperature	-30 to +80 C
Warranty	5 years
Packing	50 pcs per bag, 100 pcs per box, 1500 pcs per carton
Carton weight	19 kg

Property	Value
Carton dimensions	50 x 35 x 30 cm

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

- RGB and RGBW versions, so true white is a separate die rather than a mix
- A built-in-IC model for addressable per-module control
- IP67 and IP68 depending on model, both published per product
- Five year warranty across all three models

Problems It Solves

- A colour-changing scheme built from single-colour modules and a coloured face, which can never change.
- RGB modules with no white die, so 'white' comes out as a tinted mix.
- A run addressed as one colour when the design needed per-module control.
- A colour sign specified without checking the depth band, which shows the individual red, green and blue dies through the face.

Who It Is For

- Fabricators building colour-changing retail and hospitality signage
- Contractors on facade and architectural lighting schemes
- Event and venue signage suppliers
- Distributors covering colour-changing sign components

Application Scenarios

- Retail signage that runs white on weekdays and colour for an event
- Hospitality and venue facade lettering
- Architectural feature lighting behind a diffusing face
- Signage with seasonal colour schemes

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 RGB and RGBW here?

RGBW adds a dedicated white die. On the 6515 model that is the difference between 0.72 W and 0.96 W per piece, and between 60 and 80 lm per piece.

Which model can be addressed per module?

The 6515RGB/W carries the control IC inside the module. The other two are driven as a run.

How deep does a colour sign need to be?

Deeper than a single-colour one, because the separate dies have to blend before they reach the face. The 3636RGBW publishes a 150 mm minimum for exactly this reason.

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