

Optical Fly-eye Lens Matrix Module

MATGOBO190

The MATGOBO190 Series LED Matrix Modules feature a groundbreaking condenser optics design, utilizing a patented multi-layer optical fly-eye lens matrix, which focuses the rays from the LED matrix into a smaller area in space, offering high luminous density and brightness. The LED matrix supports the usage of up to 19 high-power LED chips. Through a simple way of installation, the condenser optics of the MATGOBO190 Series can be quickly assembled with the corresponding LED matrix to form an LED matrix module that is high-power and equipped with dust protection. This module boasts ease of use, maintenance, and upgradability.

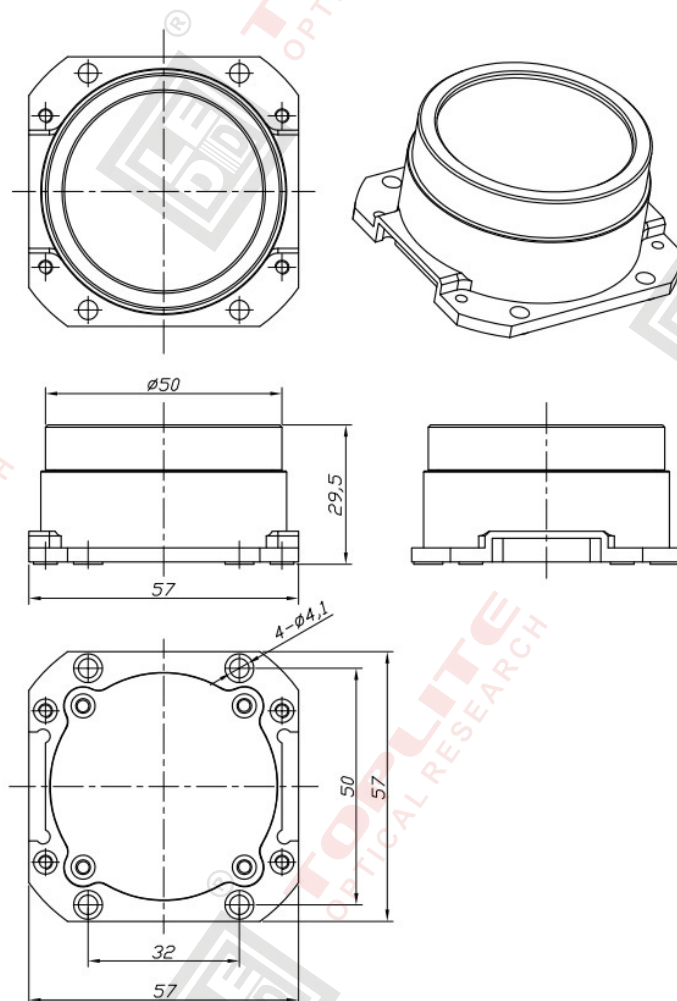
The MATGOBO190 Series LED Matrix Modules are ideal for a wide range of lighting applications, including LED beam lights, outdoor searchlights, LED moving head hybrid lights, follow spotlights, gobo projection lights, and other speciality lighting needs. Additionally, optical customizations can be made to fit infrared or ultraviolet light sources to meet related industrial applications.

MATGOBO190 Series, Condenser Lens Assembly

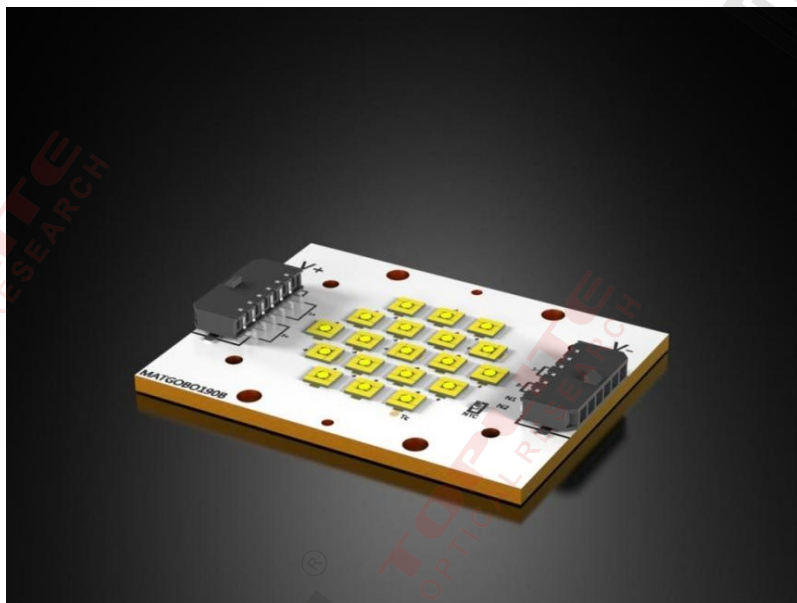


- LED required: the quantity is 19, outer packaging size ≤ 5050
- Light emission size: $\Phi 42\text{mm}$
- Focal length(F): $29\sim 44\text{mm}$, refer to model selection list for details
- Focal spot diameter (G): $\Phi 4\sim 24\text{mm}$, depending on the LES of LED in use, refer to model selection list for details
- Beam angle of light pattern: $38^\circ\sim 64^\circ$, optional

- Mechanical dimension: L57mm × W57mm × H29.5mm

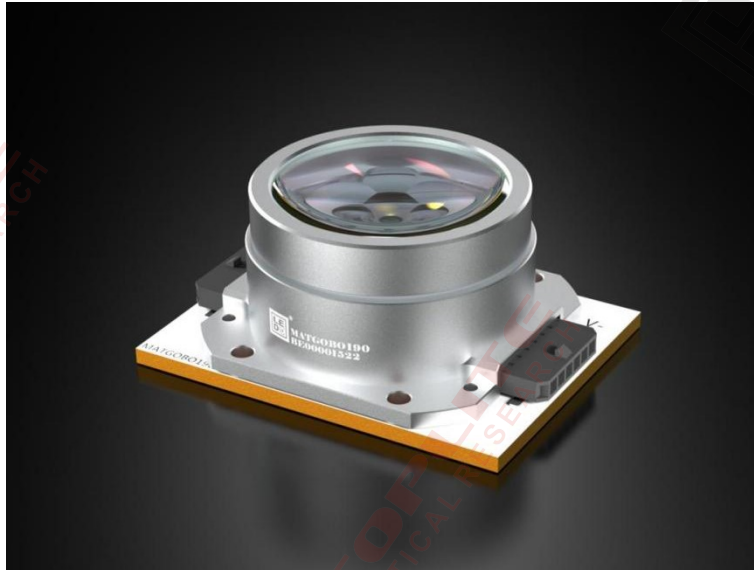


LED Matrix

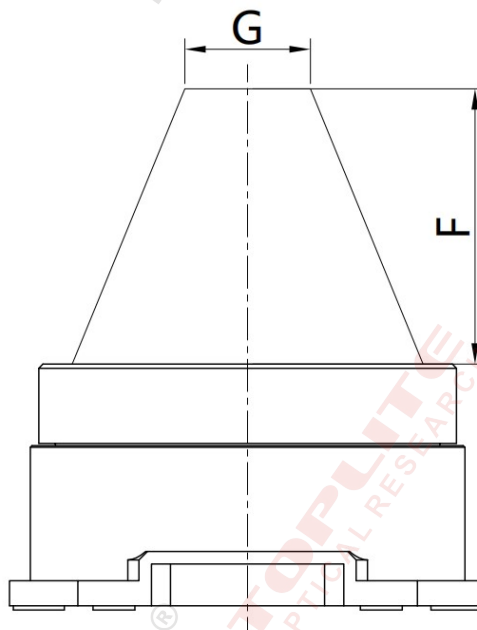


- LED quantity: 19
- LED lamp bead outer package size: 3030 / 3535 / 5050
- Total power: 190~760W, depending on the LED in use, single LED power x quantity
- LED matrix PCB layout: available

MATGOBO190 Series LED Matrix Module



- Light pattern: different MATGOBO190 models have their own G and F values, please refer to the model selection list



- Models and Tests: When testing, only the same LED is used as a benchmark reference.

Different LED test data may vary, please refer to the actual situation.

Model No.	LED	LED Qty	Driving Current	Power	Luminous flux	G (mm)	F (mm)	Beam angle of light pattern (°)
MATGOBO190PH-D10	5050-20W	19	6A×2 road	400W	31000 lm	10 mm	29±2 mm	64°
MATGOBO190PH-D10RY								
MATGOBO190PH-D13						13 mm	35±2mm	48°
MATGOBO190PH-D13RY								
MATGOBO190PH-D15						15 mm	37±2mm	44°
MATGOBO190PH-D15RY								
MATGOBO190PH-D18						18 mm	44±2 mm	38°
MATGOBO190PH-D18RY								
MATGOBO190-D10	5050-20W	19	6A×2 road	400W	28000 lm	10 mm	29±2 mm	64°
MATGOBO190-D10RY								
MATGOBO190-D13						13 mm	35±2mm	48°
MATGOBO190-D13RY								
MATGOBO190-D15						15 mm	37±2mm	44°
MATGOBO190-D15RY								
MATGOBO190-D18						18 mm	44±2 mm	38°
MATGOBO190-D18RY								

Illumination test①:

MATGOBO190PH-D13 Test dedicated collimation optical system: IMMBEAM224230, road
Throw distance: 10m, Illumination: 90000 lx, Beam angle: 2.7° ;

Illumination test②:

MATGOBO190PH-D13 Test dedicated collimation optical system: D-BEAM320,
Throw distance: 10 m, Illumination: 125000 lx, Beam angle: 2.1° ;

In the same optical system, if you aim to achieve a higher luminous flux output, you can try increasing the diameter size of G recommended in the above selection lists, for example, by adding 20% (20×1.2=24 mm). This will enhance the system's light output but may result in a slight reduction in uniformity.

Special Note:

The test data provided in the aforementioned lists are for reference only. Specific performance data may vary depending on factors such as the chosen LED specifications, the manufacturing process of the LED matrix board, the cooling system, and the overall assembly precision. Therefore, please refer to actual conditions for accurate performance figures.