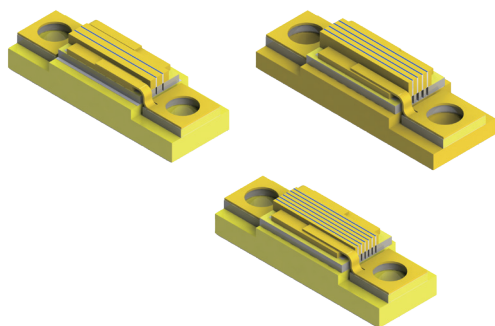


# GS12 Conduction-cooled Vertical Stacked Diode Laser Array



GS12 series conduction-cooled vertical stacked diode laser array is Real-Light's self-developed laser component for wide-temperature applications. It is high-peak-power, compact and easy-to-integrate.

## Key Features

- ♦ AuSn solder for packaging
- ♦ High peak power
- ♦ High reliability
- ♦ Multi wavelength integration

## Applications

Pumping source  
Scientific research

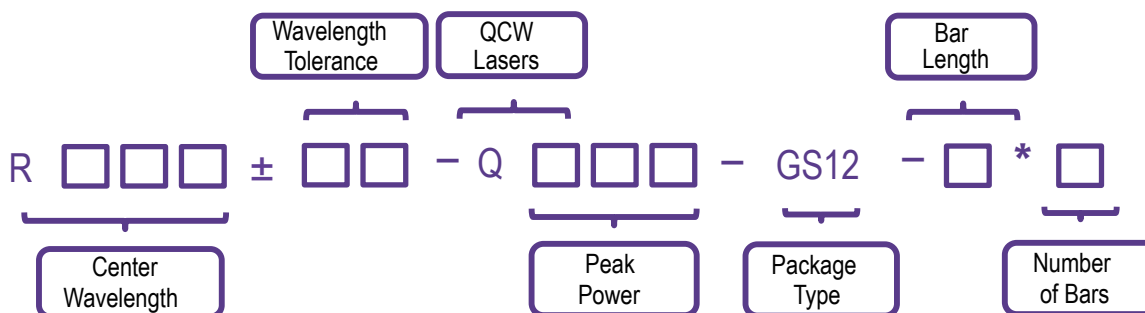
## Technical Specifications

| Optical Parameters                                    |                   |                     |                     |
|-------------------------------------------------------|-------------------|---------------------|---------------------|
| Center Wavelength $\lambda_c$ (nm)                    | 940               | 790~812             |                     |
| Wavelength Tolerance $\delta\lambda_c$ (nm)           | $\pm 5$           | $\pm 3$             |                     |
| Output Power per Bar (W)                              | 100               | 100                 | 200                 |
| Number of Bars                                        | 1~2               | 3~6                 | 2~4                 |
| Bar Length (mm)                                       | 10                | 10                  |                     |
| Bar-to-Bar Pitch (mm)                                 | 0.8               | 0.43                | 0.55                |
| Spectral Width (FWHM) (nm)                            | $\leq 5$          |                     |                     |
| Fast Axis Divergence Angle (FWHM) (typ., $^{\circ}$ ) | 40                |                     |                     |
| Slow Axis Divergence Angle (FWHM) (typ., $^{\circ}$ ) | 10                |                     |                     |
| Wavelength Temperature Coefficient (nm/ $^{\circ}$ C) | $\sim 0.3$        |                     |                     |
| Electrical Parameters                                 |                   |                     |                     |
| EO Conversion Efficiency (%)                          | $\geq 50$         |                     |                     |
| Threshold Current $I_{th}$ (A)                        | $\leq 20$         | $\leq 20$           | $\leq 30$           |
| Operating Current $I_{op}$ (A)                        | 100               | 100                 | 220                 |
| Operating Voltage $V_{op}$ of each Bar (V)            | $\leq 2.1$        |                     |                     |
| Duty Cycle (%)                                        | $\leq 3\% @ 200W$ | $\leq 0.8\% @ 600W$ | $\leq 0.6\% @ 800W$ |
| Pulse Width ( $\mu s$ )                               | $\leq 3000$       | $\leq 300$          |                     |
| Repetition Rate (Hz)                                  | 1~10              | 1~25                | 1~20                |
| Environment Parameters                                |                   |                     |                     |
| Operating Temperature ( $^{\circ}$ C)                 | -40~65            |                     |                     |
| Storage Temperature ( $^{\circ}$ C)                   | -45~85            |                     |                     |

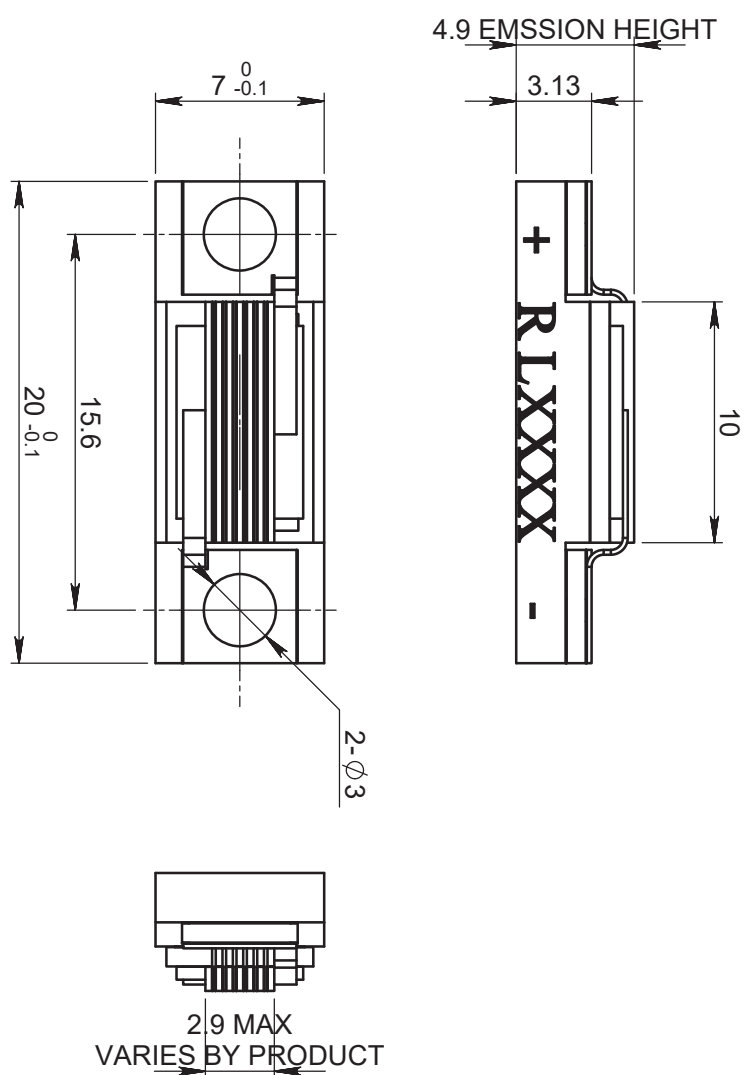
Notes:

1. Different wavelengths, numbers of bars, bar pitches and other specifications are available upon request.
2. All the data in the above table are the typical values obtained from the tests at room temperature of 25°C, and the final data is subject to the final test report.

## Part Numbering Schema



## Mechanical Drawings (in mm)



GS12-808-6bar×100W\_pitch 0.43

