

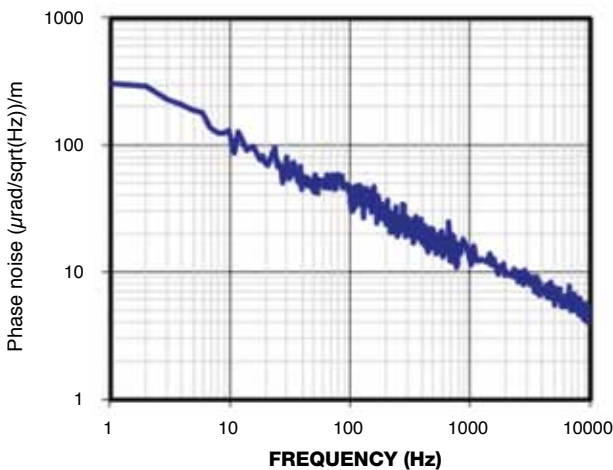
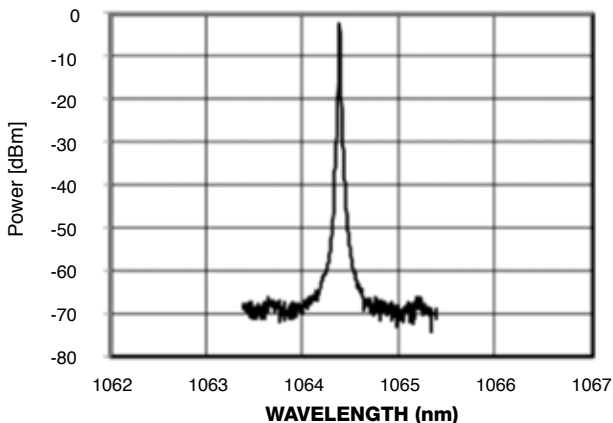
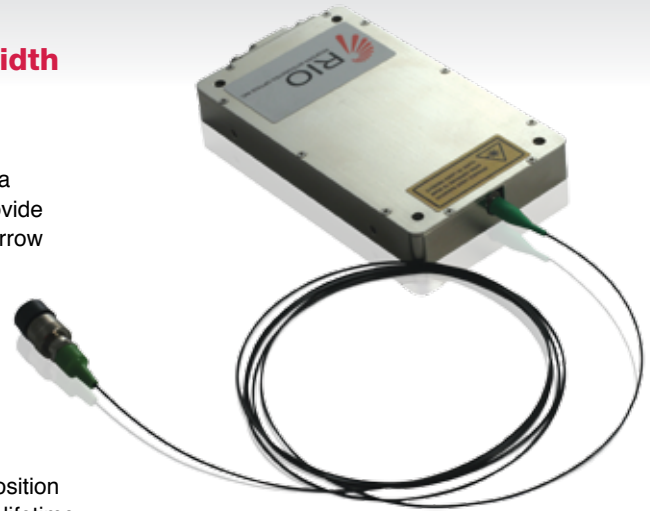
## 1064 nm RIO ORION™ Laser Module

### A compact high performance proven OEM narrow linewidth single frequency laser source for OEM applications

The 1064 nm ORION™ laser module builds upon the proven performance of RIO's game-changing PLANEX™ product series. In addition to unrivaled reliability (Telcordia GR-486 qualified technology platform) and robustness, the ORION laser modules provide superior value with up to 20 mW output power, very low RIN, low phase noise and narrow linewidth, exceptional wavelength stability.

The ORION's packaging was designed with the customer's need in mind: highly integrated, small form factor and self-contained module. This optical solution is positioned for reducing the development cycle time and allow for simple integration into advanced fiber optic systems. External monitoring and control can be achieved via SPI, RS-232 or RS-485 standard interfaces.

The 1064 nm ORION's higher output power, low noise and narrow linewidth ideally position this semiconductor optical solution for multiple applications where absolute accuracy, lifetime reliability over demanding field conditions, and high resolution are vital, such as seeding of fiber and solid state lasers, Second Harmonic Generation (SHG), Optical Parametric Oscillators (OPO), laser spectroscopy, LIDAR and other precision metrology applications.



#### KEY FEATURES

- Single longitudinal mode
- Center wavelength: 1064 nm
- Narrow linewidth, long coherence length
- Low phase noise
- Wavelength tunability
- Excellent SMSR
- Excellent wavelength stability over life and temperature
- Small form factor
- Low power dissipation
- SMF and PM fiber pigtail options
- RoHS compliant

For ordering or technical information contact  
REDFERN INTEGRATED OPTICS INC.  
3350 Scott Blvd Bldg 62 | Santa Clara CA 95054 | USA

[www.rio-inc.com](http://www.rio-inc.com)



光貿易株式会社

〒113-0034  
東京都文京区湯島 3-13-8 湯島不二ビル 301号  
TEL : 03-3832-3117 FAX : 03-3832-3118  
e-mail : [contact@hikari-trading.com](mailto:contact@hikari-trading.com)  
<http://www.hikari-trading.com/>

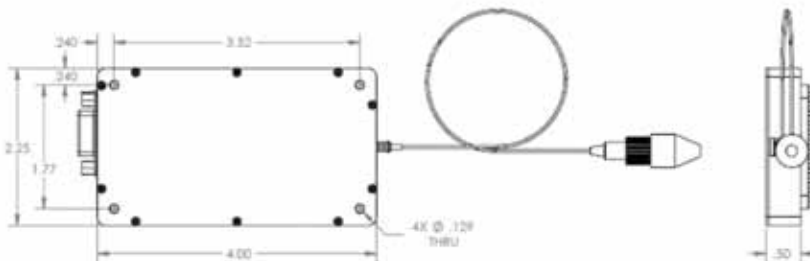


## Performance Highlights

PARAMETER	MIN	MAX	UNIT
Output Power	10		mW
Center Wavelength	1062	1066	nm
Thermal wavelength tuning range	20		pm
Linewidth		15	kHz
Side Mode Suppression Ratio	50		dB
RIN		-135	dB/Hz
Polarization Extinction Ratio	20		dB
Optical Isolation	23		dB
Operating temperature range	5	60	°C

## Mechanical Diagram

Units: Inch



## Ordering Information

R I O 0 X X X - X - X X - 1

Modulation	
0	CW
1	Modulation

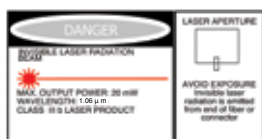
Controller Interface	
8	SPI
7	RS-232
6	RS-485

Fiber/Connector	
4	SMF/FC-APC
5	PMF/FC-APC

Output Power (min.)	
3	10 mW
5	20 mW

Phase Noise / Linewidth	
1	Grade 1, Linewidth < 15 kHz

Wavelength	
07	1064±3 nm
08	1064±1 nm
09	custom



### Laser Safety Information

The 1064 nm ORION Laser Module is classified as FDA/CDRH Class IIIb laser products per CDRH, 21 CFR 1040 laser safety requirements.

## APPLICATIONS

- Seeding of fiber and solid state lasers
- Second Harmonic Generation (SHG)
- Optical Parametric Oscillators (OPOs)
  - Laser spectroscopy
    - LIDAR
  - Metrology

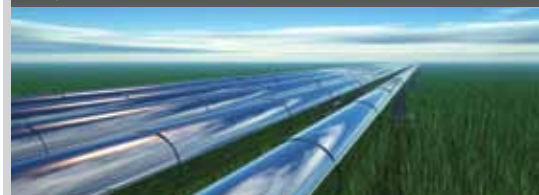
## Oil & Gas



## Wind



## Security



## Infrastructure



## Metrology



For ordering or technical information contact  
 REDFERN INTEGRATED OPTICS INC.  
 3350 Scott Blvd Bldg 62 | Santa Clara CA 95054 | USA

[www.rio-inc.com](http://www.rio-inc.com)



光貿易株式会社

〒113-0034  
 東京都文京区湯島 3-13-8 湯島不二ビル 301号  
 TEL : 03-3832-3117 FAX : 03-3832-3118  
 e-mail : [contact@hikari-trading.com](mailto:contact@hikari-trading.com)  
<http://www.hikari-trading.com/>

