

# EYP-RWL-0808-00800-4000-CMT04-0000

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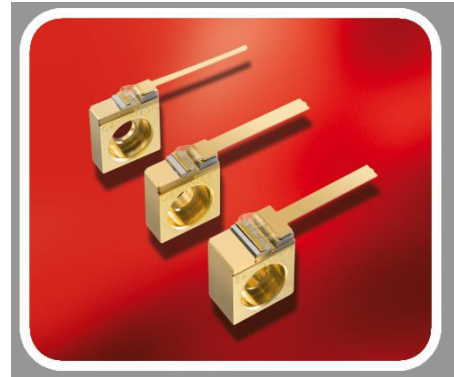
## RIDGE WAVEGUIDE LASER

GaAs Semiconductor Laser Diode  
Fabry-Perot Laser



### General Product Information

Product	Application
808 nm Fabry-Perot Laser	
C-Mount Package	



### Absolute Maximum Ratings

	Symbol	Unit	min	typ	max
Storage Temperature	$T_S$	°C	-40		85
Operational Temperature at Case	$T_C$	°C	5		35
Forward Current	$I_F$	A			1.5
Reverse Voltage	$V_R$	V			0
Output Power	$P_{opt}$	W			0.9

non condensing  
non condensing  
Stress in excess of the Absolute Maximum Ratings can cause permanent damage to the device.

### Recommended Operational Conditions

	Symbol	Unit	min	typ	max
Operational Temperature at Case	$T_C$	°C	0		30
Forward Current	$I_F$	A		1.0	1.3
Output Power	$P_{opt}$	W	0.8		

Measurement Conditions / Comments  
non condensing

### Characteristics at $T_{LD} = 25\text{ °C}$

Parameter	Symbol	Unit	min	typ	max
Center Wavelength	$\lambda_c$	nm	796	806	816
Spectral Width (FWHM)	$\Delta\lambda$	nm		1	3
Temperature Coefficient of Wavelength	$d\lambda / dT$	nm / K		0.28	
Threshold Current	$I_{th}$	A			0.25
Slope Efficiency	$\eta_d$	W / A		0.8	
Output Power @ 1.3 A	$P_{opt}$	W / A	0.8		
Forward Voltage	$V_F$	V	2.0		3.0
Cavity Length	L	$\mu\text{m}$		3900	

Measurement Conditions / Comments  
 $P_{opt} = 0.8\text{ W}$   
 $P_{opt} = 0.8\text{ W}$

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### Characteristics at T<sub>amb</sub> 25 °C cont'd

Parameter	Symbol	Unit	min	typ	max
Beam propagation factor	$M^2$			1.2	
Divergence parallel	$\Theta_{  }$	°		8	12
Divergence perpendicular	$\Theta_{\perp}$	°	10	12	14

Measurement Conditions / Comments
FWHM
FWHM

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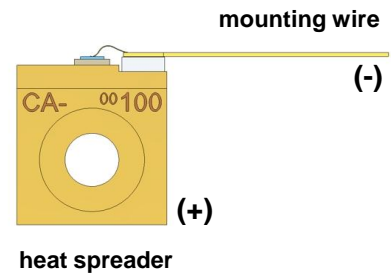
### Package Dimensions

Parameter	Symbol	Unit	min	typ	max
Height of Emission Plane	h	mm	7.05	7.20	7.35
C-Mount Thickness	t	mm		4.15	

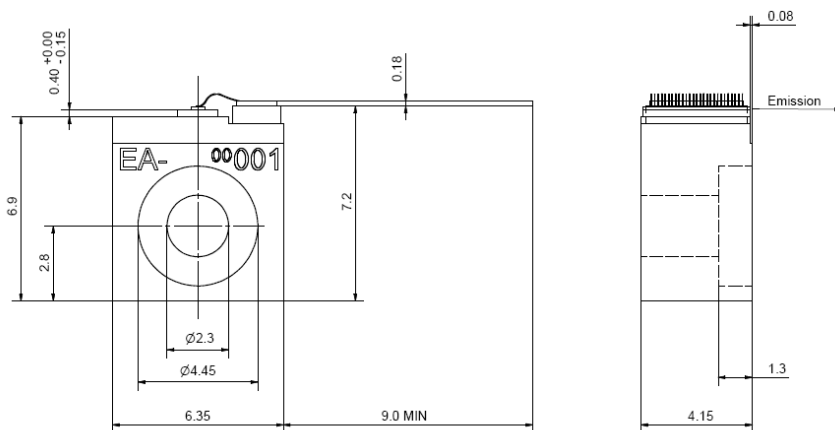
Measurement Conditions / Comments

### Package Pinout

Cathode (-)	Mounting Wire
Anode (+)	Housing



### Package Drawings



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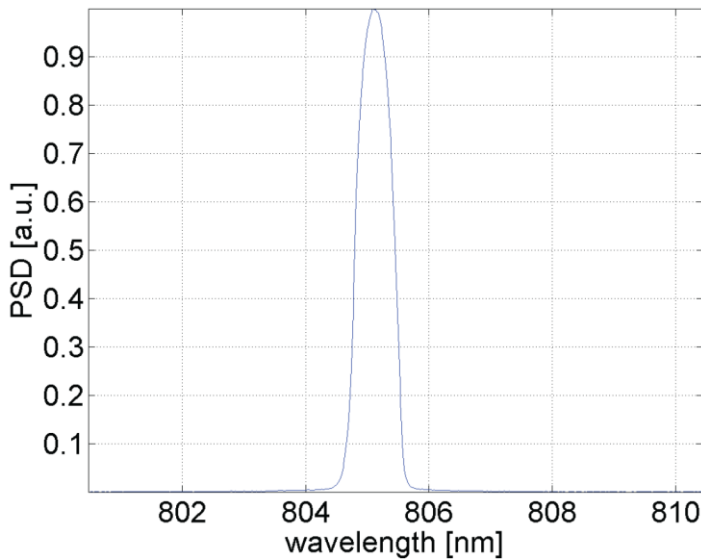
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### Typical Measurement Results

Spectrum



Performance figures, data and any illustrative material provided in this specification are typical and must be specifically confirmed in writing by eagleyard Photonics before they become applicable to any particular order or contract. In accordance with the eagleyard Photonics policy of continuous improvement specifications may change without notice.

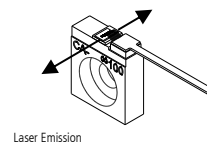
### Unpacking, Installation and Laser Safety

Unpacking the laser diodes should only be done at electrostatic safe workstations (EPA). Though protection against electro static discharge (ESD) is implemented in the laser package, charges may occur at surfaces. Please store this product in its original package at a dry, clean place until final use. During device installation, ESD protection has to be maintained.

The RWL diode type is known to be sensitive against thermal stress. Operating at moderate temperatures on proper heat sinks will contribute to a long lifetime of the diode. The chip should be protected against moisture. A water vapor content below 5000 ppm is recommended for applications with high reliability requirements.

The laser emission from this diode is close to the invisible infrared region of the electromagnetic spectrum. Avoid direct and/or indirect exposure to the free running beam. Collimating the free running beam with optics as common in optical instruments will increase threat to the human eye.

Each laser diode will come with an individual test protocol verifying the parameters given in this document.



Laser Emission

