

# EYP-RWL-1060-00750-4000-FLW01-0006

Revision 0.90

19.09.2018

## SINGLE MODE LASER DIODES Fabry-Perot Laser

### General Product Information

Product	Application
1060 nm Fabry-Perot Laser	Sensing
mini FlatPack Package with Window	



### Absolute Maximum Ratings

Parameter	Symbol	Unit	min	typ	max
Storage Temperature	$T_S$	°C	-40		85
Operational Temperature at Case	$T_C$	°C	-20		60
Forward Current	$I_F$	mA			950
Reverse Voltage	$V_R$	V			2
Output Power	$P_{opt}$	mW			680

#### Measurement Conditions / Comments

Stress in excess of one of the Absolute Maximum Ratings may damage the laser. Please note that a damaging optical power level may occur although the maximum current is not reached. These are stress ratings only, and functional operation at conditions beyond those indicated under Recommended Operational Conditions is not implied.

### Recommended Operational Conditions

Parameter	Symbol	Unit	min	typ	max
Operational Temperature at Case	$T_C$	°C	0		50
Forward Current	$I_F$	mA			940
Output Power	$P_{opt}$	mW	650		

#### Measurement Conditions / Comments

measured with integrating sphere

### Characteristics at 25° C at Begin Of Life

Parameter	Symbol	Unit	min	typ	max
Center Wavelength	$\lambda_C$	nm	1050	1060	1070
Spectral Width (FWHM)	$\Delta\lambda$	nm		0.3	3
Temperature Coefficient of Wavelength	$d\lambda / dT$	nm / K		0.3	
Output Power @ $I_F = 940$ mA	$P_{opt}$	mW	650		
Slope Efficiency	$\eta_d$	W / A		0.9	
Threshold Current	$I_{th}$	mA		65	
Cavity Length	L	$\mu\text{m}$		4400	
Polarization	L	$\mu\text{m}$		TE	
Beam Propagation Factor	$M^2$			1.2	
Divergence parallel	$\Theta_{  }$	°		8	
Divergence perpendicular	$\Theta_{\perp}$	°		28	

#### Measurement Conditions / Comments

total output measured with integrating sphere

E field parallel to the base plate of the package

FWHM

FWHM

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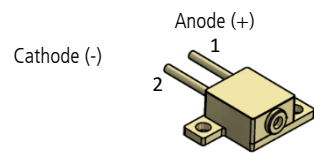
### Package Dimensions

Parameter	Symbol	Unit	min	typ	max
Height of Emission Plane	$h_{EP}$	mm		4	

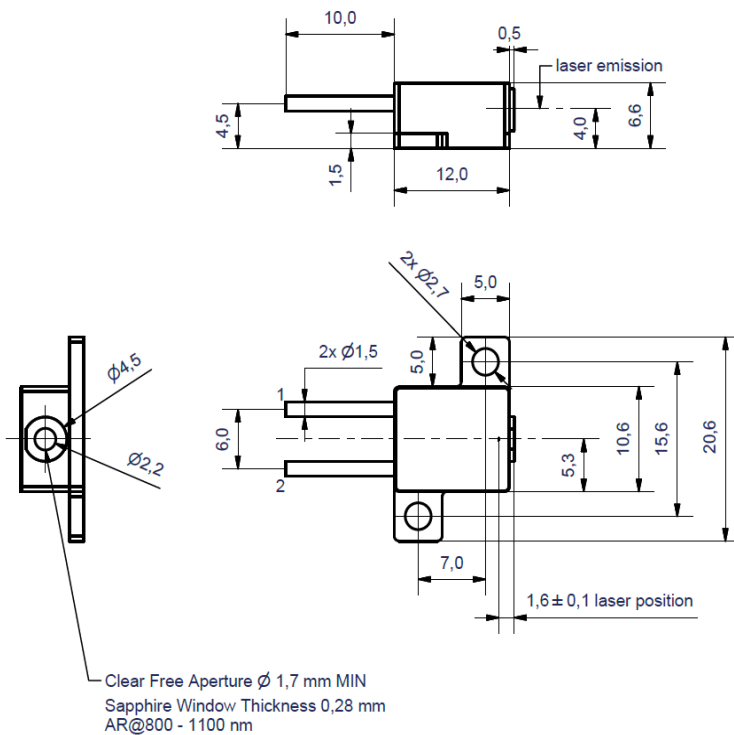
Measurement Conditions / Comments

### Package Pinout

Pin 1 (isolated from case)	Anode (+)
Pin 2 (isolated from case)	Cathode (-)



### Package Drawings



AIZ-18-0108-1400



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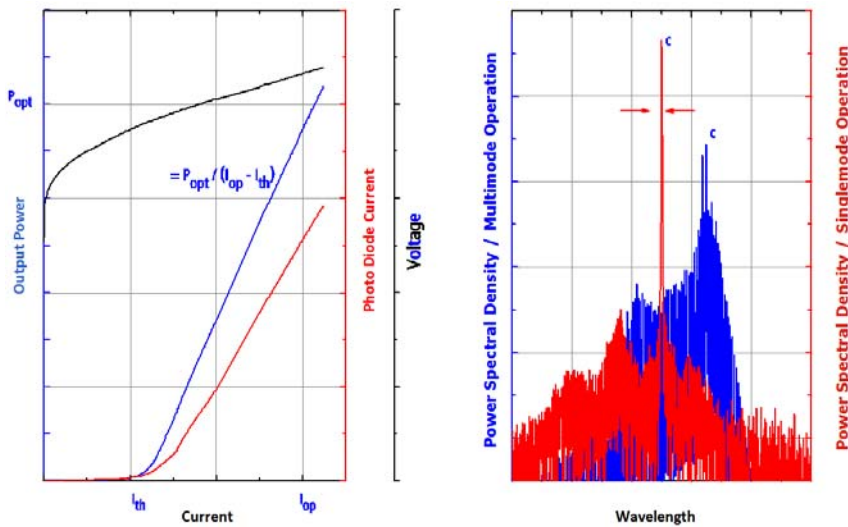
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### Typical Measurement Results



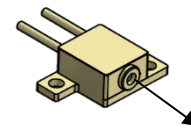
### Unpacking, Installation and Laser Safety

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. It should not be operated without appropriate injection from a seed laser. 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

