

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

Revision 0.92

10.06.2020

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

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		

Characteristics at 25° C at Begin Of Life

Parameter	Symbol	Unit	min	typ	max
Center Wavelength	λ_c	nm	1054	1064	1074
Spectral Width (FWHM)	$\Delta\lambda$	nm		0.3	3
Temperature Coefficient of Wavelength	$d\lambda / dT$	nm / K		0.3	
Output Power @ I_F : mW	P_{opt}	mW	650		
Slope Efficiency	η_d	W / A		0.9	
Threshold Current	I_{th}	mA		90	
Cavity Length	L	µm		4400	
Polarization	L	µm		TE	
Beam Propagation Factor	M^2			1.2	
Divergence parallel	$\Theta_{ }$	°		5	
Divergence perpendicular	Θ_{\perp}	°		20	



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.

Measurement Conditions / Comments

measured with integrating sphere

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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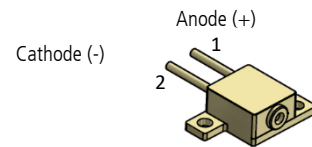
Package Dimensions

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

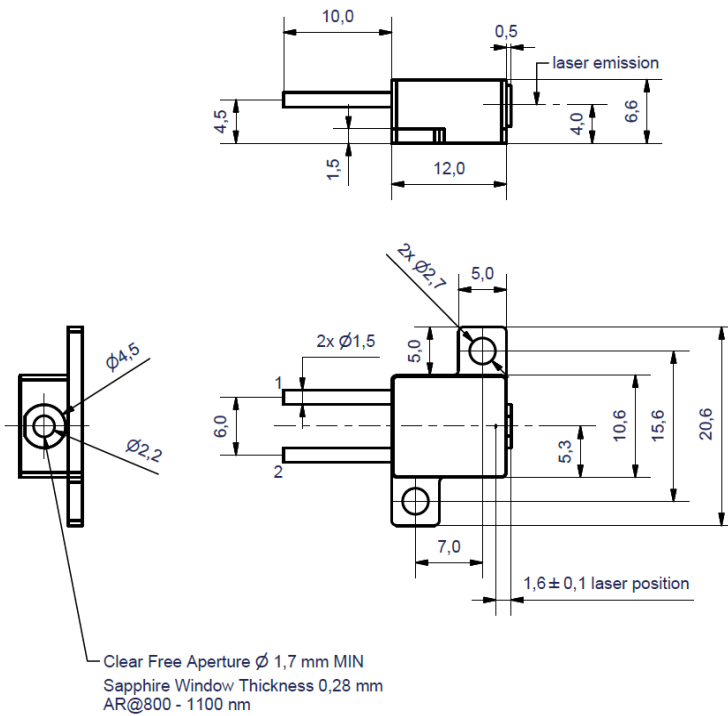
Measurement Conditions / Comments

Package Pinout

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



Package Drawings



AIZ-18-0108-1400

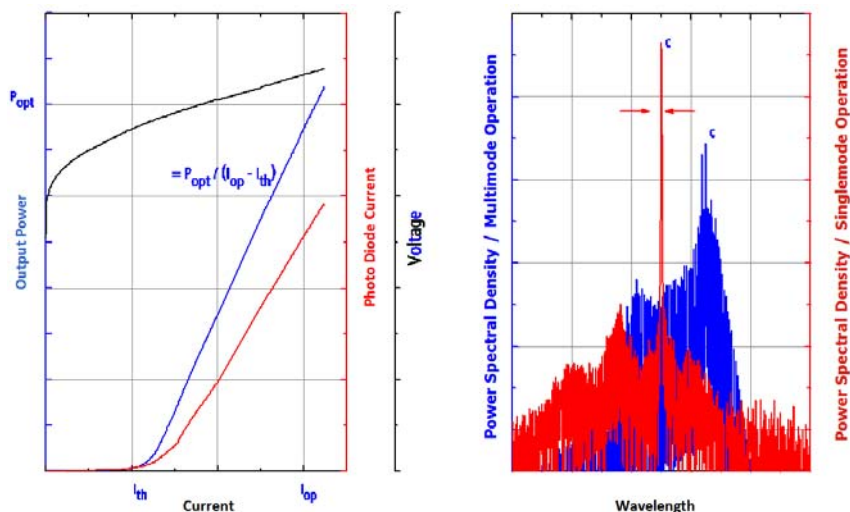
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Typical Measurement Results



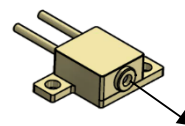
Unpacking, Installation and Laser Safety

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

