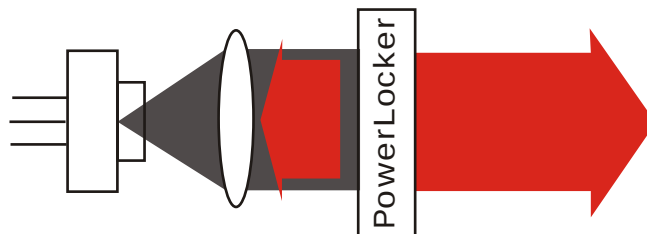
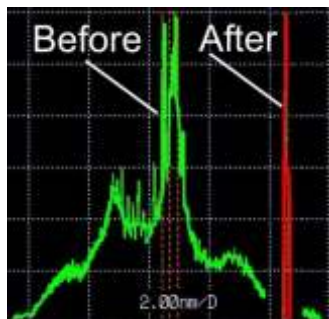


Description:

ONDAX's PowerLocker™ increases the spectral brightness of high power laser diodes and locks their emission wavelength. The short external cavity enabled by the PowerLocker™ provides better mode selection than systems based on Littrow and Littman cavities.

The PowerLocker™ is a volume holographic glass grating which reflects a specified wavelength at a given reflectivity.



Visit our online store at
www.ondax.com
 for a list of our current inventory

Features:

- Reduces thermal dependence of lasers
- Increases spectral brightness of lasers
- Locks at one wavelength
- Improves diode yield
- Stable and reliable
- High damage threshold >170MW/cm²
- Standard wavelengths: 405, 658, 780.25, 785, 794.7, 808, 920, 938, 976, 981, 1064nm, and C band
- Custom wavelengths: 350nm to 3micron

Applications:

Diode pumped solid state lasers (DPSSL), Raman spectroscopy, RGB sources, Frequency doubling, Gas sensing, Rangefinding, Rb lasers, Bio instrumentation, Graphic arts (printing and digital imaging), Beam combining, Metrology, etc.

Parameter*	Units	Specification		
		Min.	Typ.	Max.
Wavelength tolerance**	nm	-0.5		+0.5
Wavelength variation	nm	-0.1		+0.5
Temperature dependence	nm/deg.C		0.01	
Reflectivity tolerance	%	-0.5		+0.5
Reflectivity variation	%	-0.5		+0.5
Bandwidth (FWHM)	nm		0.2	
Standard dimensions***				
Single emitter		2 x 1.5		
Bar		12 x 1.75		
Stack		12 x 15		

* Terms described on page 2

** Tolerance of +/- 0.1nm available

*** Custom dimensions available

PART NUMBERING SYSTEM:

PLR I I I I RR XX YY Y Z Z

I : Wavelength (nm)

R: Reflectivity (%)

X: Length (mm)

Y: Width (mm)

Z: Thickness (mm)

Wavelength (λ_{spec})

The specified filter wavelength, in nanometers.

Wavelength Tolerance (λ_{tol})

The allowed wavelength tolerance of the part, in nanometers, such that the following is true for all positions on the filter:

$$\begin{aligned}\lambda_{\text{max}} &< \lambda_{\text{spec}} + \lambda_{\text{tol}} \\ \lambda_{\text{min}} &> \lambda_{\text{spec}} - \lambda_{\text{tol}}\end{aligned}$$

Maximum Wavelength Variation ($\Delta\lambda$)

The maximum allowed spatial variation of wavelength, in nanometers, within a single filter defined as .

$$\Delta\lambda = \lambda_{\text{max}} - \lambda_{\text{min}}$$

Reflectivity (R_{spec})

The reflectivity of the Bragg mirror, in percent.

Reflectivity Tolerance (R_{tol})

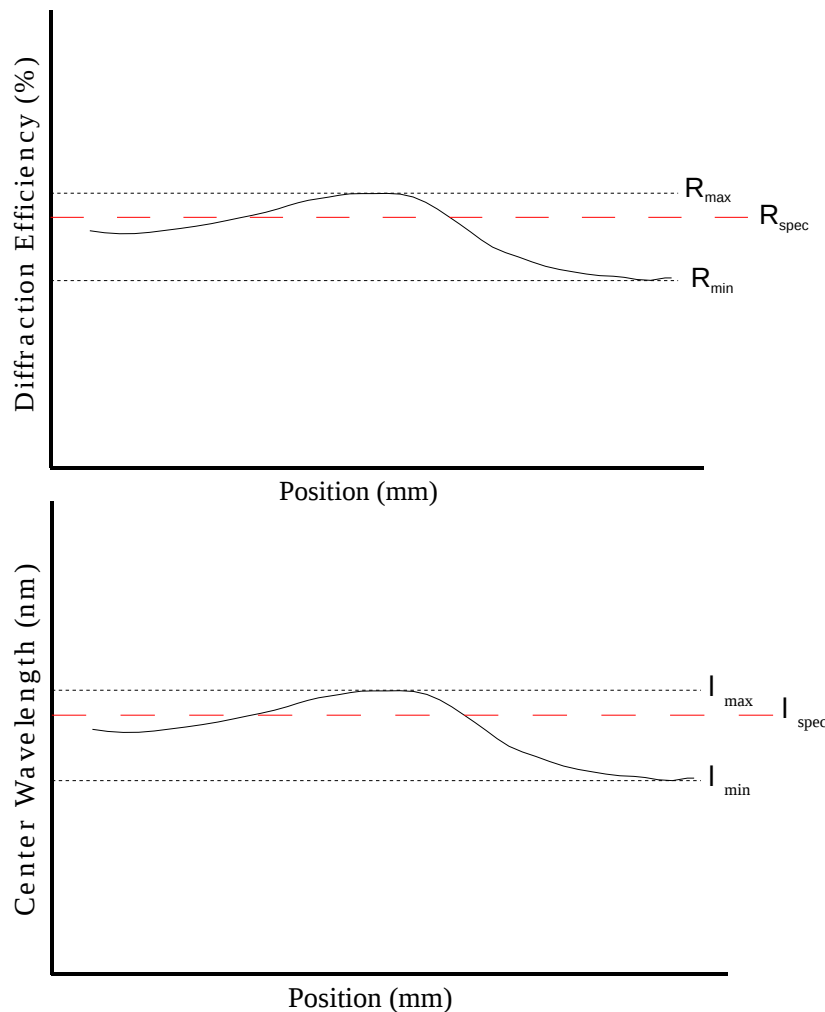
The allowed reflectivity tolerance of the Bragg mirror, in percent, such that the following is true for all positions on the filter:

$$\begin{aligned}R_{\text{max}} &< R_{\text{spec}} + R_{\text{tol}} \\ R_{\text{min}} &> R_{\text{spec}} - R_{\text{tol}}\end{aligned}$$

Maximum Reflectivity Variation (ΔR)

The maximum allowed spatial variation of reflectivity within a single filter, in percent, defined as:

$$\Delta R = R_{\text{max}} - R_{\text{min}}$$



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