

# Somerville Laser Technology

## Preliminary data sheet

High-power, fiber-coupled laser-diode

Model: WL-450-225-976

	Symbol	Units	Min.	Typical	Max.
<b>Optical data</b>					
CW-optical power	Pop	W	450		
Center wavelength	$\lambda_c$	nm	973	976	979
Spectral width	$\Delta\lambda$	nm		4	
Temperature dependence of center wavelength	$\Delta\lambda_c/\Delta T$	nm/°C		0.3	
<b>Fiber data</b>					
Fiber core/clad diameter		$\mu\text{m}$		225/270	
Fiber numerical aperture	NA			0.22	
Fiber connector				Optoskand SMAQ with mode stripper	
<b>Electrical data</b>					
Operating current	Iop	A		145	
Threshold current	Ith	A		10	
Operating voltage	Vop	V		6.3	
Slope efficiency	$\eta$	W/A		3.4	
Power conversion efficiency	PCE	%	50		
Reverse voltage		V			0
<b>Thermal conditions</b>					
Inlet water temperature		°C		20	
Differential water pressure		psi		60	
Inlet water flow rate		l/min		5	
Water quality (1)				Distilled water	
Storage temperature		°C	-51		+60
<b>(NON CONDENSING CONDITIONS)</b>					
<b>Other specifications</b>					
Expected lifetime		hrs		>10k	
P(EOL) = 80%P(BOL)					
Water connections				female quick connect male Radlock quick connect	
Electrical connections					
<b>Notes</b>					
RoHS 2002/95/EC compliant				SLT_121515-v4.0	
1) Coolant: distilled-water filtered to 5 microns					