

■ FEATURES

- CW Radiant Power 40 W
- Peak Emission Wavelength : 808 nm $\pm$ 3 nm
- High Stability
- Long Life
- Compact
- Heatsink for Funryu cooling
(Patent pending : Japan 8-139479, WO 00/11717)

■ APPLICATIONS

- Pumping source for solid state lasers
- Material processing
- Medical instruments



■ ABSOLUTE MAXIMUM RATINGS (Top(c) = 20 °C except temperature characteristics)

Parameter	Symbol	Value	Unit
Radiant Output Power	Φ_e	45	W
Reverse Voltage	V_r	2	V
Operating Temperature	$T_{op(c)}$	+5 to +35	°C
Storage Temperature	T_{stg}	-20 to +40	°C

■ ELECTRICAL AND OPTICAL CHARACTERISTICS (Top(c) = 20 °C)

Parameter		Symbol	Conditions	Typ.	Unit
Radiant Output Power		Φ_e	$I_f = 45$ A	40	W
Peak Emission Wavelength		λ_p	$\Phi_e = 40$ W	808 $\pm$ 3	nm
Spectral Radiation Half Bandwidth		$\Delta\lambda$	$\Phi_e = 40$ W FWHM	3	nm
Forward Voltage		V_f	$\Phi_e = 40$ W	1.9	V
Beam Spread Angle	Parallel	$\theta_{//}$	FWHM	10	degree
	Vertical	$\theta_{\perp}$		35	degree
Lasing Threshold Current		I_{th}	—	13	A
Emitting Area Size		—	W x H	10 x 0.001	mm

808 nm 40 W CW LASER DIODES L9376

Figure 1: Radiant Output Power vs. Forward Current (Typ.)

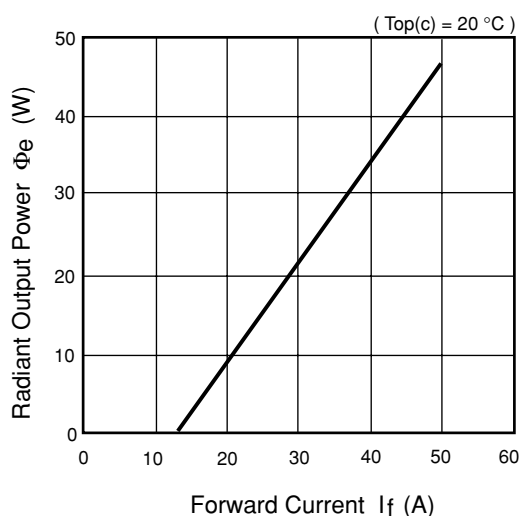


Figure 2: Emission Spectrum (Typ.)

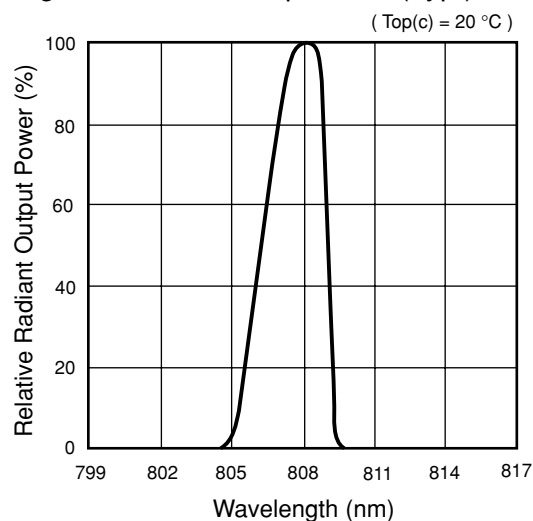
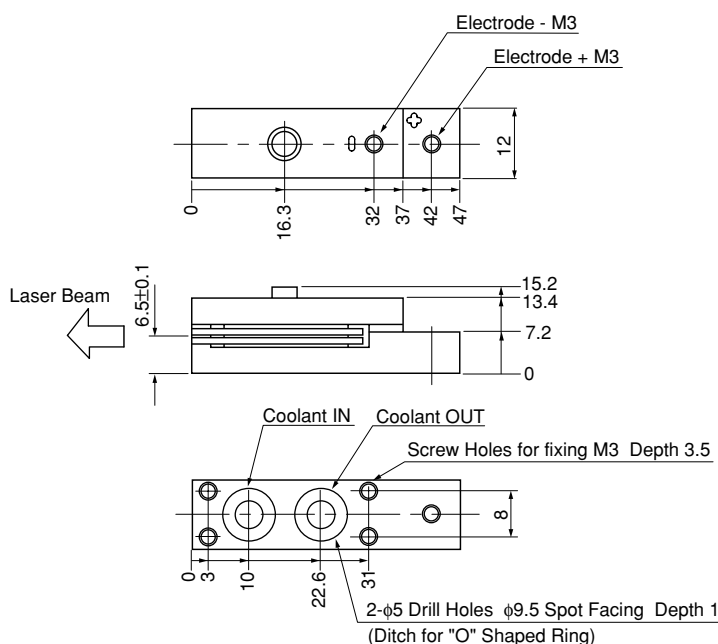


Figure 3: Dimensional Outline (Unit : mm)



■ Necessary conditions for Funryu Cooling Water

Type of water	: Deionized water
Cubage Resistance Ratio	: > 1 MΩ·cm
Permissible Particle Size	: < 30 μm
Water Temperature	: 20 °C ± 5 °C
Flow Rate	: 0.66 ± 0.06 liter / minute
Water Pressure	: < 0.4 Mpa

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