

High optical power of 1W under CW operation

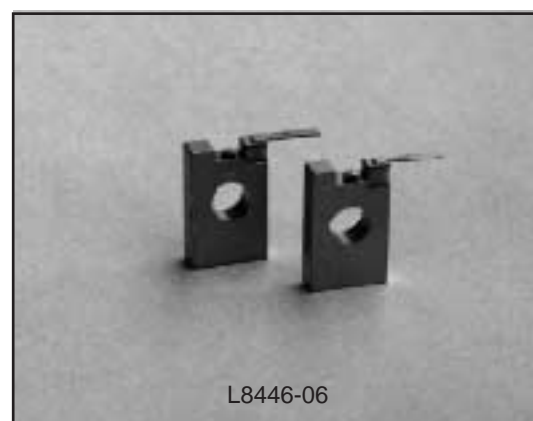
■ FEATURES

- High optical power : 1W
- High radiant flux density (emitting area 100 μ m X 1 μ m)
- High stability
- Long life
- Compact

■ APPLICATIONS

- Pumping source for solid state lasers
- Printing
- Medical systems

Our Infrared CW laser diode, L8446, features high optical power of 1W under CW operation. As this is single chip and single element type, emitting area is small (100 μ m X 1 μ m). Therefore it is easy to focus on to a small spot with optics. It can be used for various applications such as pumping of solid state laser, printer and medical systems.



■ ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Radiant Output Power	ϕ_e	1.2	W
Forward Current	I _F	1.4	A
Reverse Voltage	V _R	2	V
Operating Temperature	T _c	0 to +30	°C
Storage Temperature	T _{stg}	-30 to +80	°C

■ CHARACTERISTICS (T_c=25°C)

Parameter	Symbol	Condition	Value			Unit
			Min.	Typ.	Max.	
Radiant Output Power	ϕ_e	I _F =1.2A	-	1	-	W
Peak Emission Wavelength	λ_p	I _F =1.2A	805	808	811	nm
Spectral Radiation Half Bandwidth	$\Delta\lambda$	I _F =1.2A	-	2	-	nm
Forward Voltage	V _F	I _F =1.2A	-	2	-	V
Beam Spread Angle : Parallel	$\theta_{//}$	FWHM	-	8	-	° (degree)
: Vertical	θ_{\perp}		-	32	-	° (degree)
Lasing Threshold Current	I _{lth}		-	0.35	-	A
Package L8446-04	-		ϕ 9.0 CD			-
L8446-06			Open heatsink (O Type Header)			-

INFRARED CW LASER DIODE L8446 SERIES

Figure1 Radiant Output Power vs. Forward Current (Typ.)

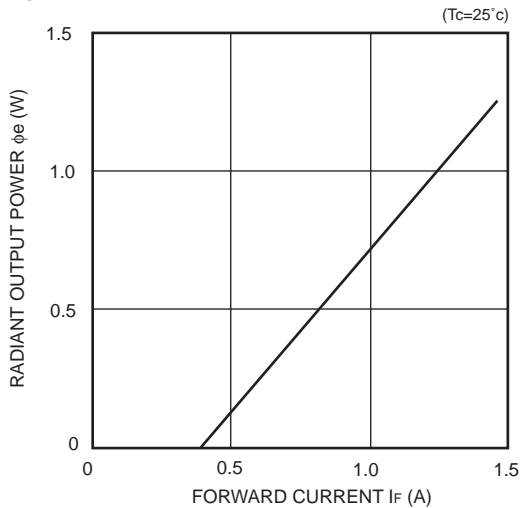


Figure2 Typical Emission Spectrum (Typ.)

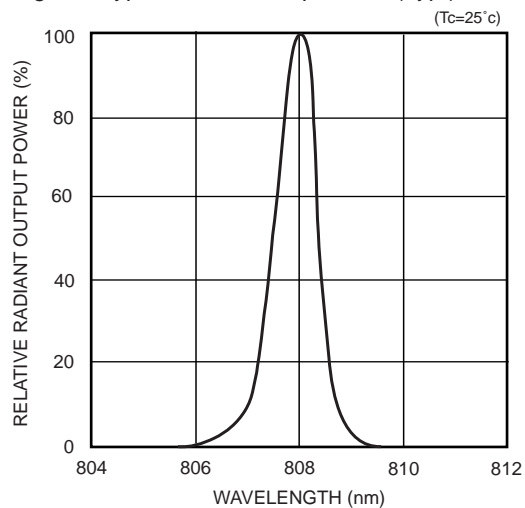


Figure3 Typical Emission Spectrum (Typ.)

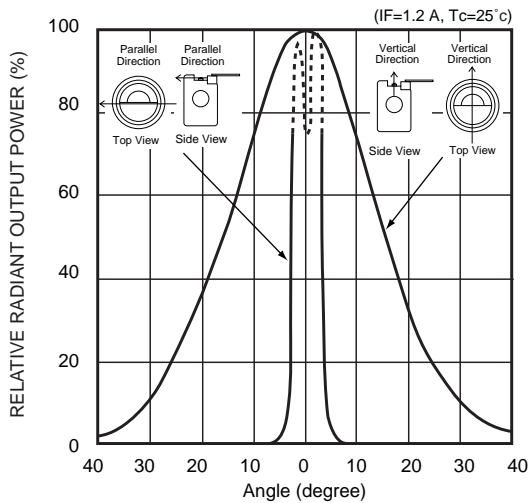
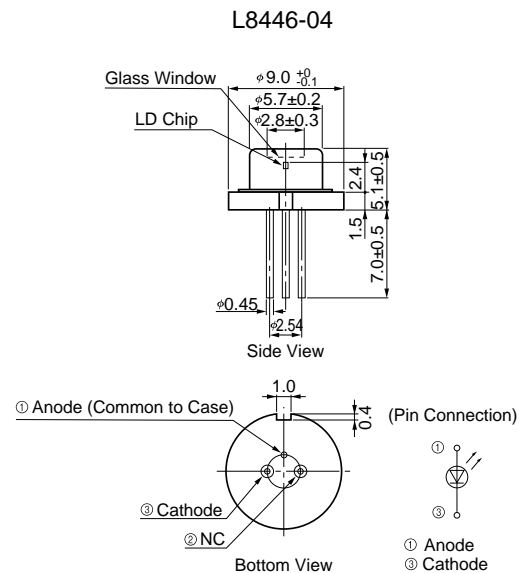
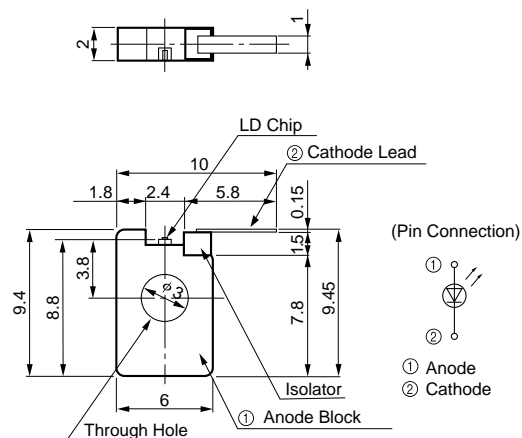


Figure4 Dimensional Outline (Unit : mm)



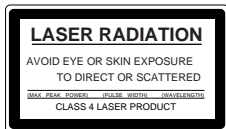
L8446-06



Safety precautions of laser products

When you manufacture a product using this laser, you must follow the manufacture safety measure IEC 60825-1 (safety standards of Laser products). You are requested to classify your product and label it under the measure's suggestion.

And we also strongly recommend you to follow the safety measure IEC 60825-1 (safety standards of Laser products) when you use it as a user.



Description Label

CLASS 4 LASER PRODUCT

HAMAMATSU

<http://www.hamamatsu.com>

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