

MITSUBISHI LASER DIODES
ML7XX19 SERIES
 1310nm InGaAsP FP LASER DIODES

**TYPE
NAME**

ML720J19S,ML720K19S
ML725B19F,ML725C19F

DESCRIPTION

ML7xx19 are InGaAsP laser diode which provides a stable, single transverse mode oscillation with emission wavelength of 1310nm and standard continuous light output power of 5mW.

ML7xx19 are hermetically sealed devices having the photodiode for optical output monitoring. This high-performance, high reliability, and long-life laser diode is suitable for such applications as the light sources for optical communication systems up to 2.5Gbps transmission applications.

FEATURES

- 1310nm, fabry-perot LDs
- High reliability, long operation life
- Have a lens-cap (ML720K19S,ML725C19F)
- Wide tem. range operation (Tc= - 40 ~ + 85° C)
- MQW* active layer

* Multiple Quantum Well

APPLICATION

- Optical communication system

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings[Note1]	Unit
P _o	Light output power	CW	10[7]	mW
V _{RL}	Reverse voltage(LD)	-	2	V
V _{RD}	Reverse voltage(PD)	-	20	V
I _F	Forward current(PD)	-	2	mA
T _c	Case temperature	-	- 40 ~ +85	°C
T _{stg}	Storage temperature	-	- 40 ~ +100	°C

ELECTRICAL/OPTICAL CHARACTERISTICS

(T_c=25 °C) [Note 1]

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
I _{th}	Threshold current	CW	-	5	15	mA
I _{op}	Operation current	CW,P _o =5mW[3mW]	-	20	30	mA
V _{op}	Operating voltage	CW,P _o =5mW[3mW]	-	1.1	1.5	V
η	Slope efficiency	CW,P _o =5mW[3mW]	0.3[0.2]	0.45[0.35]	-	mW/mA
λ _c	Center wavelength	CW,P _o =5mW[3mW]	1290	1310	1330	nm
Δλ	Spectral width(RMS , -20dB)	CW,P _o =5mW[3mW], RMS	-	1.0	2.0	nm
θ _∥	Beam divergence angle (parallel)	CW,P _o =5mW[3mW]	-	25[11]	-	°
θ _⊥	Beam divergence angle (perpendicular)	CW,P _o =5mW[3mW]	-	30[11]	-	°
t _r ,t _f	Rise and fall times	I _b =I _{th} ,P _o =5mW[3mW],20%-80%	-	0.08	0.15	ns
I _m	Monitoring current	CW,P _o =5mW[3mW],VRD=1V	0.1	0.5	0.9	mA

Note 1 : [] applied to the lens cap type

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TYPICAL CHARACTERISTICS

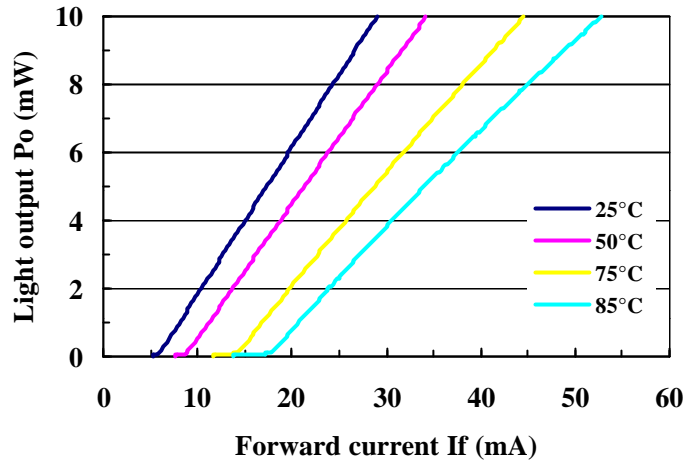


Fig. 1 Light output v.s. forward current

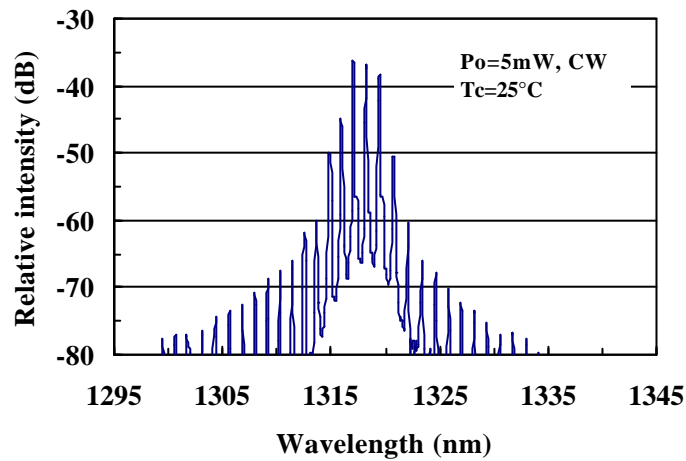


Fig. 2 Spectrum

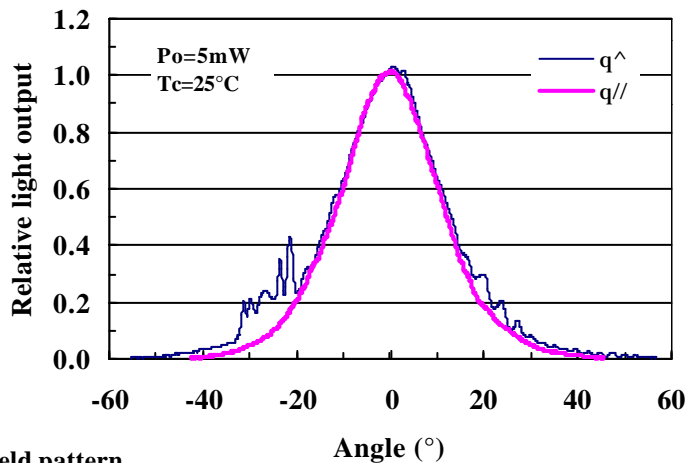


Fig. 3 Far field pattern