

MITSUBISHI LASER DIODES
ML7XX35 SERIES
 InGaAsP - MQW - FP LASER DIODES

**TYPE
NAME**

**ML720J35S , ML720K35S
ML725B35F , ML725C35F**

DESCRIPTION

ML7XX35 series are InGaAsP laser diodes which provides a stable, single transverse mode oscillation with emission wavelength of 1310nm and standard continuous light output of 5mW.

ML7XX35 are hermetically sealed devices having the photo diode for optical output monitoring. This is suitable for such applications as FTTH(Fiber to the Home) systems.

FEATURES

- 1310nm typical emission wavelength, FP-LDs
- Low threshold current, low operating current
- Wide temperature range operation
(Tc=-20 to +85deg.C)
- Have a lens-cap (ML725C35F, ML720K35S)
- MQW* active layer
* Multiple Quantum Well

APPLICATION

FTTH(Fiber to the Home) system

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings[Note 1]	Unit
Po	Light output power	CW	10[7]	mW
VRL	Reverse voltage (laser diode)	-	2	V
VRD	Reverse voltage (Photodiode)	-	20	V
IFD	Forward current (Photodiode)	-	2	mA
Tc	Case temperature	-	-20 ~ +85	deg.C
Tstg	Storage temperature	-	- 40 ~ +100	deg.C

ELECTRICAL/OPTICAL CHARACTERISTICS(Tc=25deg.C) [Note 1]

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
I _{th}	Threshold current	CW	-	5	15	mA
I _{op}	Operating current	CW, Po=5mW	-	20	35	mA
V _{op}	Operating voltage	CW, Po=5mW	-	1.1	1.5	V
η	Slope efficiency	CW, Po=5mW	0.3[0.2]	0.4[0.3]	-	mW/mA
λ _p	Peak wavelength	CW, Po=5mW	1290	1310	1330	nm
Δλ	Spectral width (RMS)	CW, Po=5mW	-	1	2	nm
θ _{//}	Beam divergence angle (parallel)	CW, Po=5mW	-	25[11]	-	deg.
θ _⊥	Beam divergence angle (perpendicular)	CW, Po=5mW	-	30[11]	-	deg.
τ _{r,f}	Rise and Fall time	If=I _{th} , Po=5mW, 10 - 90%	-	0.3	0.7	ns
I _m	Monitoring output current	CW, Po=5mW, V _{RD} =1V	0.1	0.5	-	mA
I _D	Dark current (Photodiode)	V _{RD} =10V	-	0.01	0.1	μA
C _t	Capacitance (Photodiode)	V _{RD} =10V, f=1MHz	-	10	20	pF

Note 1 : [] applied to the lens cap type

