

MITSUBISHI LASER DIODES
ML9XX35 SERIES
 InGaAsP - MQW - FP LASER DIODES

**TYPE
NAME**

**ML920J35S , ML920K35S
ML925B35F , ML925C35F**

DESCRIPTION

ML9XX35 series are InGaAsP laser diodes which provides a stable, single transverse mode oscillation with emission wavelength of 1550nm and standard continuous light output of 5mW.

ML9XX35 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

- 1550nm typical emission wavelength, FP-LDs
- Low threshold current, low operating current
- Wide temperature range operation
(Tc=-20 to +85deg.C)
- Have a lens-cap (ML925C35F, ML920K35S)
- MQW* active layer
* Multiple Quantum Well

APPLICATION

FTTH(Fiber to the Home) system

ABSOLUTE MAXIMUM RATINGS

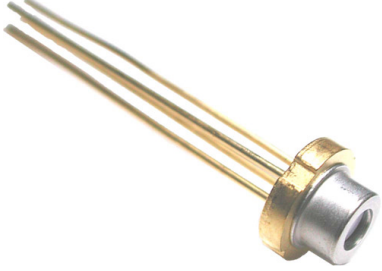
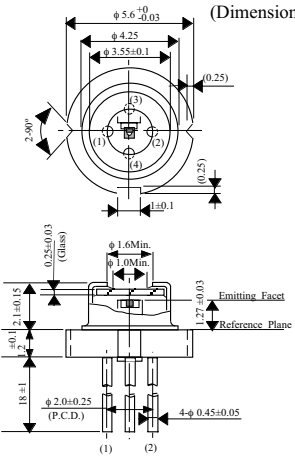
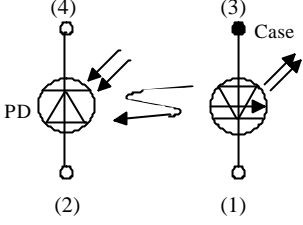
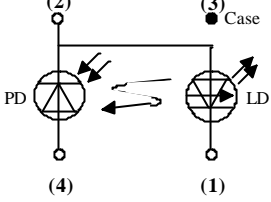
Symbol	Parameter	Conditions	Ratings[Note 1]	Unit
Po	Light output power	CW	6[4]	mW
VRL	Reverse voltage (laser diode)	-	2	V
VRD	Reverse voltage (Photodiode)	-	20	V
IFD	Forward current (Photodiode)	-	2	mA
Tc	Case temperature	-	-20 ~ +85	deg.C
Tstg	Storage temperature	-	- 40 ~ +100	deg.C

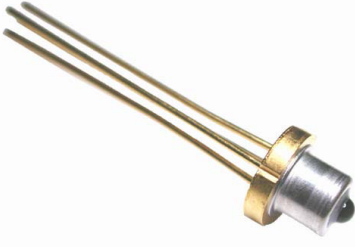
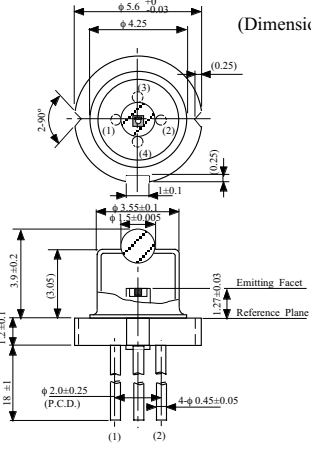
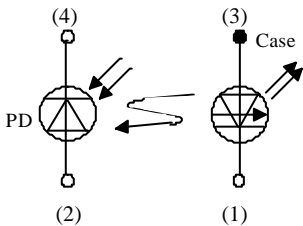
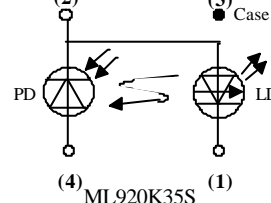
ELECTRICAL/OPTICAL CHARACTERISTICS(Tc=25deg.C) [Note 1]

Symbol	Parameter	Test conditions	Min.	Typ.	Max	Unit
Ith	Thereshold current	CW	-	10	30	mA
Iop	Operating current	CW,Po=5mW[3mW]	-	30	50	mA
Vop	Operating voltage	CW,Po=5mW[3mW]	-	1.1	1.5	V
η	Slope efficiency	CW,Po=5mW[3mW]	0.15[0.1]	0.25[0.2]	-	mW/mA
λp	Peak wavelength	CW,Po=5mW[3mW]	1520	1550	1580	nm
Δλ	Spectral width (RMS)	CW,Po=5mW[3mW]	-	1.5	3	nm
θ //	Beam divergence angle (parallel)	CW,Po=5mW[3mW]	-	25[11]	-	deg.
θ ⊥	Beam divergence angle (perpendicular)	CW,Po=5mW[3mW]	-	30[11]	-	deg.
tr,tf	Rise and Fall time	If=Ith,Po=5mW[3mW],10 - 90%	-	0.3	0.7	ns
Im	Monitoring output current	CW,Po=5mW[3mW], VRD=1V	0.1	0.5	-	mA
Id	Dark current (Photodiode)	VRD=10V	-	0.01	0.1	μA
Ci	Capacitance (Photodiode)	VRD=10V, f=1MHz	-	10	20	pF

Note 1 : [] applied to the lens cap type

OUTLINE DRAWINGS

<p>ML920J35S ML925B35F</p> 	<p>(Dimension:mm)</p> 	 <p>ML925B35F</p>  <p>ML920J35S</p>
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<p>ML920K35S ML925C35F</p> 	<p>(Dimension:mm)</p> 	 <p>ML925C35F</p>  <p>ML920K35S</p>
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