

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

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OUTLINE DRAWINGS

