



DESCRIPTION

The FPMR3 series module incorporates a linear multi-quantum well (MQW) Fabry-Perot (FP) laser emitting at 1310 nm, hermetically sealed in an industry standard coaxial package with a single mode fiber pigtail. This laser is especially suited as an uncooled, low cost light source for analog CATV return path.

FEATURES

- High reliability linear MQW laser
- Internal monitor photodiode
- Wide operating temperature range
- RoHS compliant

APPLICATIONS

- CATV return path
- RF over fiber

MODEL OPTIONS

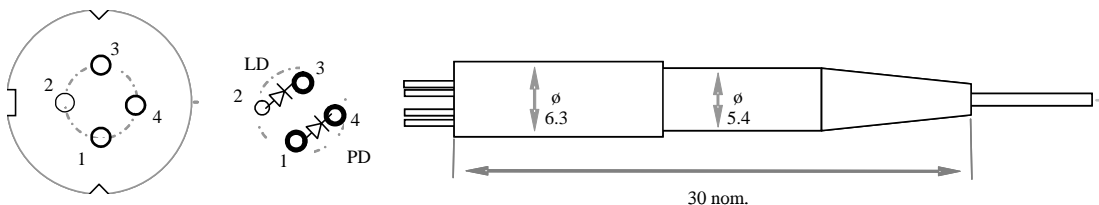
FPMR3 - A - 0 - y - z

| y : | Output Power |
|-----|--------------|
| 1 : | ≥ 1mW |
| 2 : | ≥ 2mW |

| z : | Connector |
|-----|-----------|
| S : | SC/APC |
| F : | FC/APC |

MECHANICAL SPECIFICATIONS AND PINOUT CONFIGURATION

(in mm unless otherwise noted)



- SMF-28 optical fiber, flame retardant Hytrel coating, 0.9 mm diameter
- Fiber Length: 1-meter minimum with connector termination
- Custom pin configurations available. Mounting bracket optional.

| PIN | Type A |
|-----|------------------------|
| 1 | PD Anode |
| 2 | LD Anode (Case Ground) |
| 3 | LD Cathode |
| 4 | PD Cathode |

| ELECTRO-OPTICAL CHARACTERISTICS | | | | | |
|--|-----------------|--|------------|------------|------------------|
| PARAMETER | SYMBOL | CONDITIONS | MIN | MAX | UNIT |
| Operating Temperature | T_{OP} | $I_F = I_{OP}$ | -20 | 85 | °C |
| Threshold Current | I_{TH} | $T = 25\text{ °C}$ $T = 85\text{ °C}$ | -- | 15 50 | mA |
| Operating Voltage | V_{OP} | | -- | 2.1 | V |
| Operating Output Power | P_O | See model #s | - | | mW |
| Monitor PD Responsivity | r_{MPD} | -- | 10 | 200 | $\mu\text{A/mW}$ |
| Monitor PD Dark Current | I_D | $I_{OP} = 0\text{ mA}$ | -- | 0.2 | μA |
| Operating Wavelength | λ_{OP} | $I_F = I_{OP}, T = 25\text{ °C}$ | 1290 | 1330 | nm |
| Spectral Width | $\Delta\lambda$ | $I_F = I_{OP}$ | | 3 | nm |
| Tracking Error | E_R | | -1 | +1 | dB |
| Bandwidth | | | 2 | | GHz |
| 2 nd Order Intermodulation | IMD2 | See Note (1) Below | -- | -53 | dBc |
| 3 rd Order Intermodulation | IMD3 | | -- | -55 | dBc |
| Relative Intensity Noise | RIN | $I_F = I_{OP}$ | -- | -140 | dB |

⁽¹⁾ Test conditions: P_O at rated power, 25 °C, OMI = 10%, 10 dB link loss, 2-tone, 13 MHz and 19 MHz

| MAXIMUM RATINGS | | | | | |
|------------------------------------|---------------|-------------------|------------|------------|-------------|
| PARAMETER | SYMBOL | CONDITIONS | MIN | MAX | UNIT |
| Storage Temperature | - | Continuous | -40 | 85 | °C |
| Monitor Photodiode Reverse Voltage | - | 60 seconds | - | 15 | V |
| | | Continuous | - | 10 | V |
| Forward DC Laser Current | - | Continuous | - | 100 | mA |
| Reverse DC Laser Voltage | - | Continuous | - | 1 | V |