

MITSUBISHI (OPTICAL DEVICES)
FU-116SLD-F1

SC-CONNECTORIZED MODULE

DESCRIPTION

FU-116SLD-F1 is SC-connectorized devices designed to be used with singlemode optical fiber. This module is the optimum light source for medium haul digital optical communication systems.

FEATURES

- SC connectorized package
 - High optical output
 - Low threshold current
 - Built-in photodiode for output monitoring
 - Wide operating temperature range (-40°C to +85°C)
 - MQW* active layer
 - FSBH** structure fabricated by all MOCVD process
- *Multiple quantum well
 **Facet selective-growth buried heterostructure



APPLICATION

FitL,LAN

ABSOLUTE MAXIMUM RATINGS (Tc=25°C)

| Parameter | | Symbol | Conditions | Rating | Unit |
|----------------------------|---|--------|------------|---------|------|
| Laser diode | Optical output power from fiber end (Note1) | Pf | CW | 2.5 | mW |
| | Reverse voltage | Vrl | - | 2 | V |
| Photodiode for monitoring | Reverse voltage | Vrd | - | 15 | V |
| | Forward current | lfd | - | 2 | mA |
| Operating case temperature | | Tc | - | -40~+85 | °C |
| Storage temperature | | Tstg | - | -40~+85 | °C |

Note 1. Singlemode fiber master plug with mode field diameter 9.5µm

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ELECTRICAL/OPTICAL CHARACTERISTICS (Tc=25°C, unless otherwise noted)

| Parameter | Symbol | Test Conditions | Limits | | | Unit |
|---|---------------------------------|---|--------|------|------|-----------|
| | | | Min. | Typ. | Max. | |
| Threshold current | I _{th} | CW | 3 | 7 | 15 | mA |
| Operating current | I _{mod} | CW | 8 | - | 28 | mA |
| Operating Voltage | V _{op} | CW, I _f =I _{th} +I _{mod} (Note 2) | - | 1.2 | 1.6 | V |
| Optical output power from fiber end (Note 3) | P _f | CW, I _f =I _{th} +I _{mod} | 1 | - | - | mW |
| Center wavelength | λ _c | CW, I _f =I _{th} +I _{mod} | 1285 | 1300 | 1330 | nm |
| Rise and fall time(LD) | t _r , t _f | I _b =I _{th} , 10~90% (Note4) | - | 0.3 | 0.5 | ns |
| Tracking error (Note 5) | E _r | T _c =-40~85°C, CW,APC | - | 0.5 | - | dB |
| Differential efficiency (Note 3) | η | - | - | 0.07 | - | mW/m A |
| Monitor current | I _{mon} | CW, I _f =I _{th} +I _{mod} , V _{rd} =5V | 0.2 | 0.9 | 1.5 | mA |
| Dark current (Photodiode) | I _d | V _{rd} =5V | - | 0.1 | 0.5 | μA |
| Capacitance (Photodiode) | C _t | V _{rd} =5V, f=1MHz | - | - | 20 | pF |

Note 2. I_f : Forward current (LD)

3. Singlemode fiber master plug with mode field diameter 10μm

4. I_b : Bias current (LD)

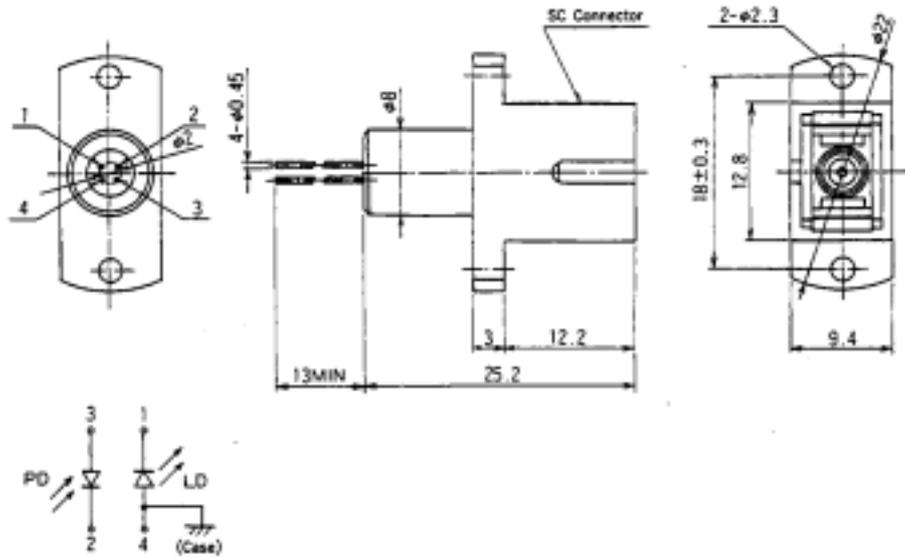
5. E_r=MAX|10×log(P_f(T_c)/P_f(25°C))|

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OUTLINE DIAGRAM

(Unit : mm)



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