

# 1550nm DFB SM coaxial laser diode

Version: 3.1 17-03-01

Model: LSDLD155

## Features:

- MQW-DFB, High reliable
- Single mode
- Good high temperature characteristic
- High side-mode-suppression ratio (typical>35dB)
- Built-in monitor PD
- Low threshold/operate current
- Metal can type hermetic



## Applications:

- Optical Sensing
- Optical communication
- Industrial automatic control
- Science analysis and experiment
- Test and Measurement Equipment

## Absolute maximum ratings:

| parameter                   | symbol         | value    | unit |
|-----------------------------|----------------|----------|------|
| Operating temperature       | Top            | -40~+85  | °C   |
| Storage temperature         | Tstg           | -40~+100 | °C   |
| Laser diode Reverse voltage | V <sub>r</sub> | 2        | V    |
| Soldering temperature/time  |                | 260/10   | °C/S |

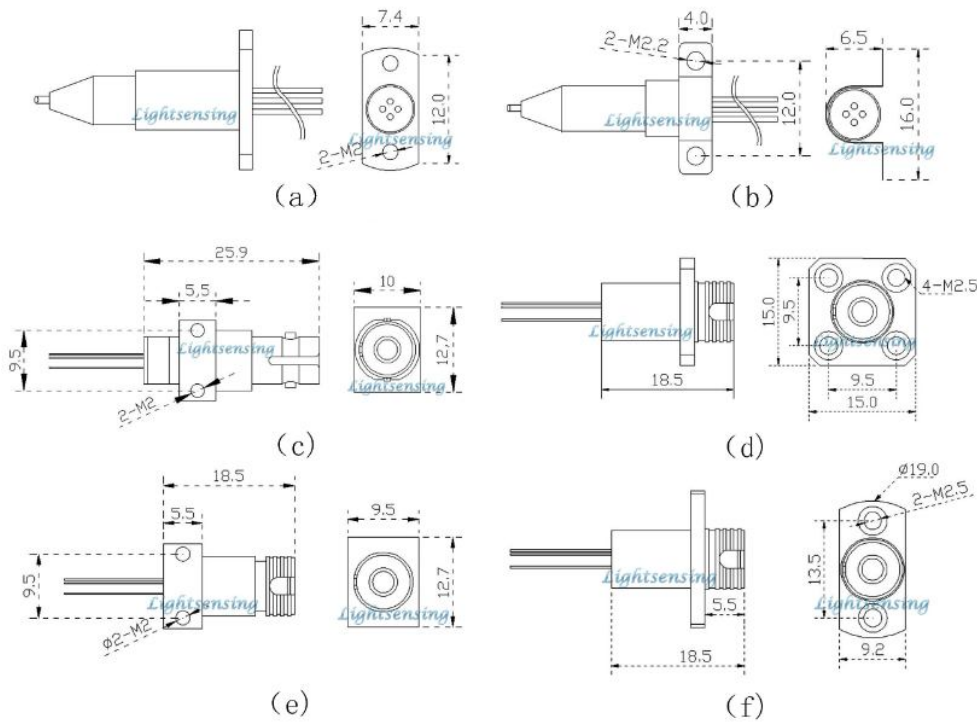
## Electrical and optical characteristics:(T=25°C)

| parameter                    | symbol  | Min. | Typ. | Max. | unit      |
|------------------------------|---|------|------|------|-----------|
| Center wavelength            | $\lambda$                                     | 1530 | 1550 | 1570 | nm        |
| Threshold Current            | I <sub>th</sub>                               |      | 10   | 15   | mA        |
| Operating Current            | I <sub>op</sub>                               |      | 35   | 40   | mA        |
| Operating Voltage            | V <sub>op</sub>                               |      | 1.2  | 1.5  | V         |
| Output power(from fiber)     | P   | 0.5  | 2    | 4    | mW        |
| Spectral width               | $\Delta\lambda$                               |      | 0.3  | 1    | nm        |
| Side mode suppression ratio  | SMSR  | 35   | 40   |      | dB        |
| Wavelength/Temp. Coefficient | $\Delta\lambda/\Delta T$                      |      | 0.1  |      | nm/°C     |
| Rise/ Fall time              | Tr/Tf(I <sub>th</sub> +20mA)                  |      | 0.3  | 0.7  | ns        |
| Monitoring Output Current    | I <sub>m</sub> (I <sub>th</sub> +20mA)        | 0.1  | 0.7  |      | mA        |
| Monitor Dark current         | I <sub>d</sub> (V <sub>r</sub> =5V)           |      |      | 100  | nA        |
| Monitor Capacitance          | C (V <sub>r</sub> =5V)                        |      | 10   |      | pF        |
| Optical Isolation(note1)     | Iso   | 30   |      |      | dB Single |
|                              |   | 50   |      |      | dB Double |
| package                      | TO56 Can with SM fiber coupling or receptacle |      |      |      |           |

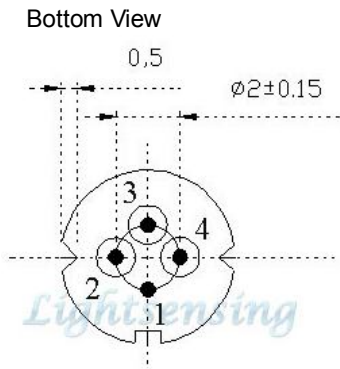
Note1: temperature range:-20~70°C

NOTICE: The above product specifications are subject to change without notice.

## The package Dimensions



## PIN description



## PIN OUT

|   | F type     | S type      |
|---|------------|-------------|
| 1 | LD(+)/case | case        |
| 2 | LD(-)      | LD(-)       |
| 3 | PD(-)      | PD(+)       |
| 4 | PD(+)      | LD(+)/PD(-) |

## Order information

LSDL155-X-X-X-X-X

| mW    | Pin out    | Isolator   | Rate         | X=a   | X=b   | X=cJKST                      | X=dJKFC                      | X=e JKFC                     | X=f JKFC                     | X=Other               |
|-------|------------|------------|--------------|---|---|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------|
| X=0.5 | X=S S Type | X=0 NO     | X=1 1.25Gbps | a package with SM Fiber with FC/UPC or FC/APC | b package with SM Fiber with FC/UPC or FC/APC | c package with ST receptacle | d package with FC receptacle | e package with FC receptacle | f package with FC receptacle | By customer's request |
| X=2   | X=F F Type | X=1 Single | X=2 2.5Gbps  |   |   |                              |                              |                              |                              |                       |
| X=4   |            | X=2 Double | Other        |   |   |                              |                              |                              |                              |                       |
| Other |            |            |              |   |   |                              |                              |                              |                              |                       |

## The cautions

1: The suitable ESD protection is required in storage, tran

2: The fiber bending radius no less than 20mm for avoiding fiber damaged ,Be sure the fiber coupling facet is clean before connecting it to opto-circuit.