

# INPHENIX

## Super-Luminescent Light Emitting Diode Device

### IPSDD1401 (1410nm)

#### Features

- Wide Optical Bandwidth
- Very Low Spectral Ripple
- High Output Power in SM/or PM Fiber

#### Applications

- Broadband Light Source for Insertion Loss Test
- Distributed Fiber Optic Sensor (FOS)
- Biomedical Imaging Device
- OCT Diagnostic System



#### Device Specifications

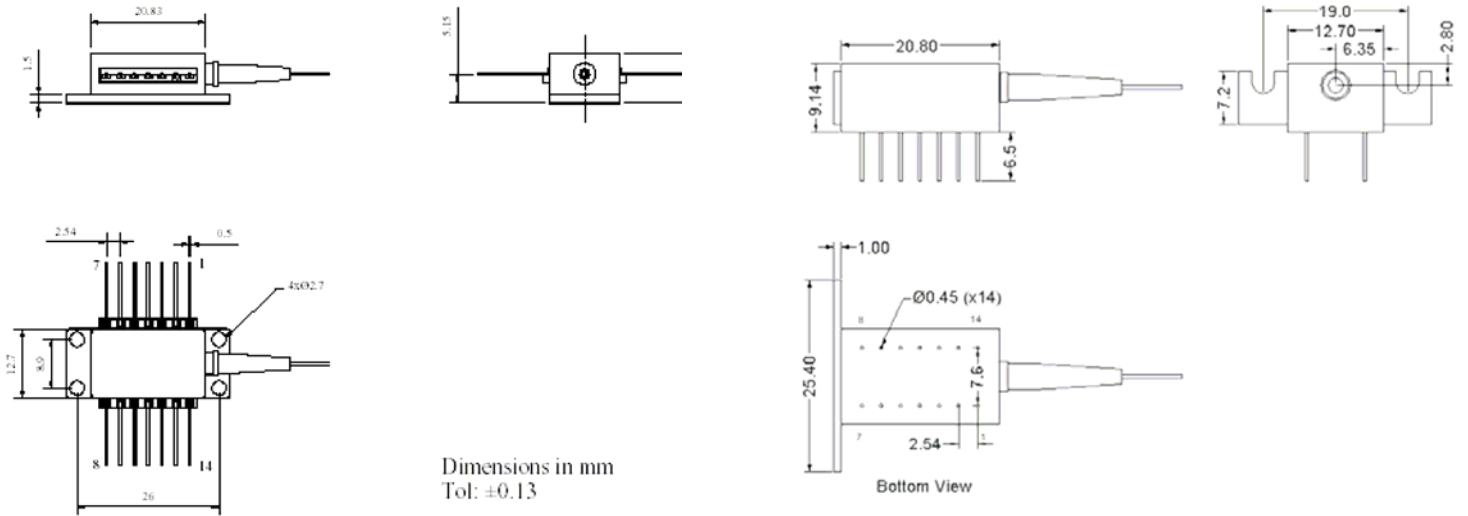
| Parameter                                | Symbol                 | Min. | Typ. | Max. | Unit |
|--|------------------------|------|------|------|------|
| Central Wavelength                       | $\lambda_c$            | 1390 | 1410 | 1430 | nm   |
| 3dB Bandwidth                            | $\Delta\lambda_{3dB}$  | 45   | 50   | -    | nm   |
| Output Power in SM Fiber                 | $P_o$                  | 8    | 10   | -    | mW   |
| Spectral Modulation Depth <sub>p-p</sub> | $\Delta$               | -    | 0.15 | 0.2  | dB   |
| Operating Current                        | $I_F$                  | -    | 300  | 400  | mA   |
| Back Facet Monitor                       | Available upon request |      |      |      |      |

#### Absolute Maximum Ratings

| Parameter                    | Min.   | Max. | Unit |
|------------------------------|--|------|------|
| Operating Temperature        | - 20   | 70   | °C   |
| Storage Temperature          | - 40   | 85   | °C   |
| TEC Drive Current            | -  | 1.5  | A    |
| TEC Drive Voltage            | -  | 3.6  | V    |
| Maximum Current              | 500  |      | mA   |
| Thermistor Resistance        | 10k $\Omega$ @ 25°C                                  |      |      |
| SLD Chip Temperature Setting | 25°C   |      |      |
| Fiber Type                   | SMF/PMF/MMF  |      |      |
| Fiber Jacket                 | 250 $\mu$ m tight buffer with 900 $\mu$ m loose tube |      |      |
| Package                      | 14-pin DIL/14-pin BUT/8-pin BUT                      |      |      |
| Lead Solder Temperature      | 260°C for 10 Seconds                                 |      |      |

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## Package Dimensions



14-Pin BUT Package

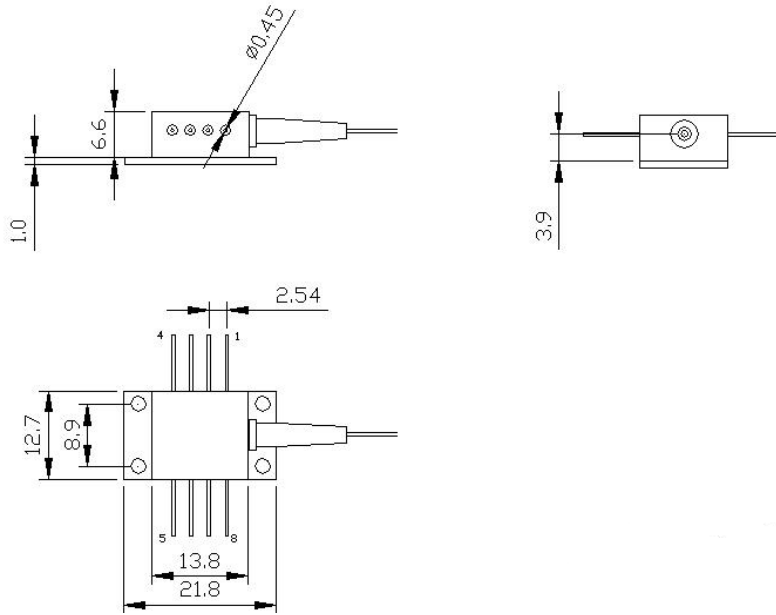
14-Pin DIL Package

### Pin Definition

| 14-pin BUT package |            |     |          | 14-pin DIL package |          |     |            |
|--------------------|------------|-----|----------|--------------------|----------|-----|------------|
| Pin                | Function   | Pin | Function | Pin                | Function | Pin | Function   |
| 1                  | TEC (+)    | 8   | NC       | 1                  | TEC (+)  | 8   | NC         |
| 2                  | Thermistor | 9   | NC       | 2                  | NC       | 9   | SLD (-)    |
| 3                  | NC         | 10  | SLD (+)  | 3                  | NC       | 10  | Case       |
| 4                  | NC         | 11  | SLD (-)  | 4                  | NC       | 11  | Thermistor |
| 5                  | Thermistor | 12  | NC       | 5                  | SLD (+)  | 12  | Thermistor |
| 6                  | NC         | 13  | Case     | 6                  | NC       | 13  | NC         |
| 7                  | NC         | 14  | TEC (-)  | 7                  | NC       | 14  | TEC (-)    |

- If the SLD is ordered with a Back Facet Monitor, Pin 7 is PD-Cathode and Pin 8 is PD+Anode

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**8-Pin BUT Package**

## Pin Definition

| 8-pin BUT package |            |
|-------------------|------------|
| Pin               | Function   |
| 1                 | TEC (+)    |
| 2                 | NC         |
| 3                 | NC         |
| 4                 | SLED (+)   |
| 5                 | SLED (-)   |
| 6                 | Thermistor |
| 7                 | Thermistor |
| 8                 | TEC (-)    |

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## Part Numbering System



**Model:**

IPSDDXXXX: SLD Device

**Package:**

- 1: 14-pin DIL
- 2: 8-pin Butterfly
- 3: 14-pin Butterfly

**Fiber Type:**

- 1: SM Fiber
- 2: PM Fiber
- 3: MM Fiber

**Jacket Type:**

- 1: 900µm
- 2: 250µm tight buffer

**Connector Type:**

- 0: No Connector
- 3: FC/APC
- 4: FC/UPC
- 7: SC/APC
- 8: SC/UPC

**Back Facet Monitor:**

Available upon request

**Example:** IPSDD0805-1224: 850nm SLD in 14-pin DIL with 250µm tight buffered PM Fiber with FC/UPC connectors

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