

## Super-Luminescent Light Emitting Diode Device

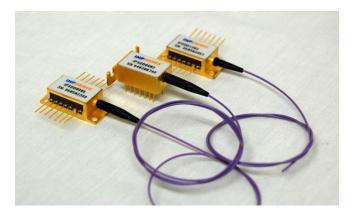
## IPSDD1511 (1580nm)

### Features

- · Very 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
- · L Band Seed Light Source



#### **Device Specifications**

| Parameter                                | Symbol                 | Min. | Тур. | Max. | Unit |
|--|------------------------|------|------|------|------|
| Central Wavelength                       | $\lambda_{c}$          | 1570 | 1580 | 1590 | nm   |
| 3dB Bandwidth                            | $\Delta\lambda_{3dB}$  | 65   | 75   | -    | nm   |
| Output Power in SM Fiber                 | Po                     | 5    | -    | -    | mW   |
| Spectral Modulation Depth <sub>p-p</sub> | Δ                      | -    | 0.40 | 0.50 | dB   |
| Operating Current                        | I <sub>F</sub>         | -    | 300  | 400  | mA   |
| Back Facet Monitor                       | Available upon request |      |      |      |      |

## **Absolute Maximum Ratings**

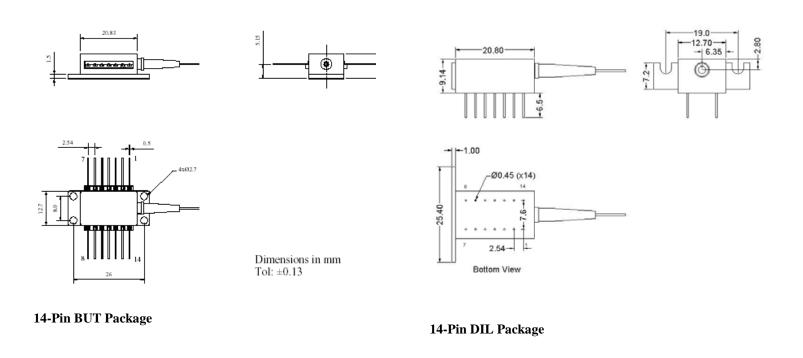
| Parameter                    | Min.                                     | Max. | Unit |
|------------------------------|--|------|------|
| Operating Temperature        | - 20                                     | 70   | °C   |
| Storage Temperature          | - 40                                 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

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## **Product Specification, Revision 1.51**

## **Package Dimensions**

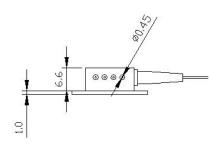


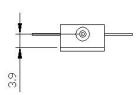
|                    | Pin Defini | i <b>tion</b> |                    |     |          |     |            |
|--------------------|------------|---------------|--------------------|-----|----------|-----|------------|
| 14-pin BUT package |            |               | 14-pin DIL package |     |          |     |            |
| 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 (-)    |

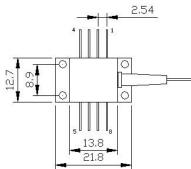
• If the SLD is ordered with a Back Facet Monitor, Pin 7 is PD-Cathode and Pin 8 is PD+Anode

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## **Product Specification, Revision 1.51**









## **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

|  | IPSDDXXXX - |
|--|-------------|
| <b>Model:</b><br>IPSDDXXXX: SLD  | ) Device    |
| Package:<br>1: 14-pin DIL<br>2: 8-pin Butterfly<br>3: 14-pin Butterfly |             |
| Fiber Type:<br>1: SM Fiber<br>2: PM Fiber                              | 3: MM Fiber |
| <b>Jacket Type:</b><br>1: 900µm<br>2: 250µm tight buffe                | er          |
| Connector Type:<br>0: No Connector                                     |             |
| 3: FC/APC  | 7: SC/APC   |

4: FC/UPC 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

#### **Corporate Office**

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