### Super-Luminescent Light Emitting Diode Device

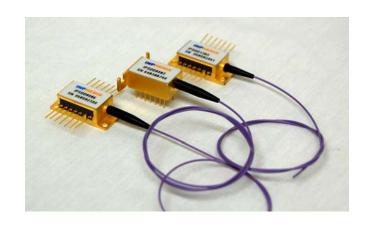
#### IPSDD0903 (900nm)

#### **Features**

- Non-Coherent Light Source
- Very Low Spectral Ripple
- Very High Output Power in SM/or PM Fiber

#### **Applications**

- Non-Coherent Light Source
- Fiber Optic Sensor (FOS) System
- Biomedical Imaging Device
- OCT Diagnostic System



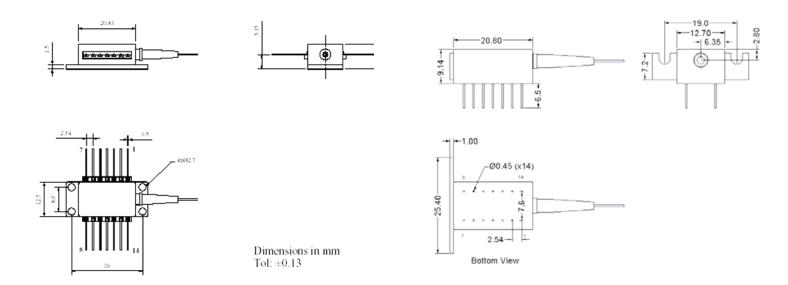
#### **Device Specifications**

| Parameter                                | Symbol                    | Min. | Тур. | Max. | Unit |
|--|---------------------------|------|------|------|------|
| Central Wavelength                       | $\lambda_{\mathrm{c}}$    | 890  | 900  | 920  | nm   |
| 3dB Bandwidth                            | $\Delta \lambda_{ m 3dB}$ | 42   | 45   | -    | nm   |
| Output Power in SM Fiber                 | Po                        | 6    | 7    | -    | mW   |
| Spectral Modulation Depth <sub>p-p</sub> | Δ                         | -    | 0.1  | 0.2  | dB   |
| Operating Current                        | $I_{\mathrm{F}}$          | -    | 200  | 300  | mA   |
| Back Facet Monitor                       | Available upon request    |      |      |      |      |

### **Absolute Maximum Ratings**

| Parameter                    | Min.                                     | Min. Max. |    |  |  |  |
|------------------------------|--|-----------|----|--|--|--|
| Operating Temperature        | - 20                                     | 70        | °C |  |  |  |
| Storage Temperature          | - 40                                     | 85        | °C |  |  |  |
| TEC Drive Current            | -  | 1.5       | A  |  |  |  |
| TEC Drive Voltage            | -  | 3.6       | V  |  |  |  |
| Maximum Current              | 350 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                     |           |    |  |  |  |

#### **Package Dimensions**



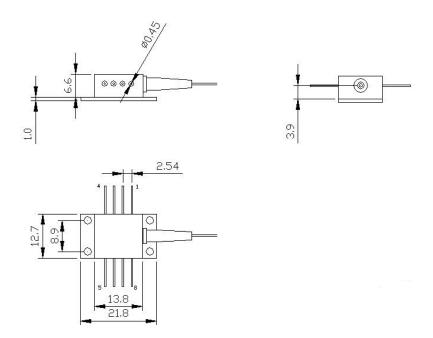
14-Pin BUT Package

14-Pin DIL Package

#### **Pin Definition**

| 14-pin BUT package |            |     |          | 14-pin DIL package |          |          |            |  |
|--------------------|------------|-----|----------|--------------------|----------|----------|------------|--|
| Pin                | Function   | Pin | Function | Pin                | Function | 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



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 (-)    |  |  |  |

#### **Part Numbering System**

|   |            | IPS     | DDXX | XXX | $\vdash$ |  |  |
|---|------------|---------|------|-----|----------|--|--|
| Model:<br>IPSDDXXXX: SLD I                                    | <br>Device |         |      |     |          |  |  |
| Package: 1: 14-pin DIL 2: 8-pin Butterfly 3: 14-pin Butterfly |            |         |      |     |          |  |  |
| Fiber Type: 1: SM Fiber 2: PM Fiber                           | 3: MN      | 1 Fiber |      |     |          |  |  |
| Jacket Type: 1: 900μm 2: 250μm tight buffer                   |            |         |      |     |          |  |  |
| Connector Type: 0: No Connector 3: FC/APC                     | 7: SC      | /APC    |      |     |          |  |  |

#### **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

8: SC/UPC

#### **Corporate Office**

4: FC/UPC

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