

# INPHENIX

## SLD Light Source Module

Part Number: IPSDS1203-xxxx

### 1. Configuration

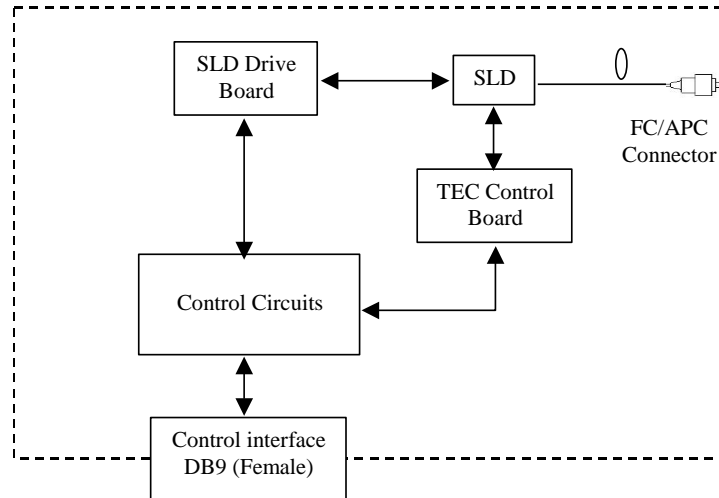


Figure 1 Configuration of IPSDS1203-xxxx SLD light source module

### 2. Absolute Maximum Ratings

| Parameter            | Min. | Max. | Unit |
|----------------------|------|------|------|
| Power Supply Voltage | 4.5  | 5.5  | V    |
| Storage Temperature  | -40  | +85  | °C   |
| Humidity             | 10   | 95   | %    |

### 3. Recommended Operational Condition

| Parameter                                  | Min. | Typ. | Max. | Unit              |
|--|------|------|------|-------------------|
| Power Supply Voltage                       | 4.75 | 5.00 | 5.25 | V                 |
| Ripple/spike noise of Power Supply Voltage | -    | 50   | 120  | mV <sub>p-p</sub> |
| Operating Temperature                      | 15   | 25   | 50   | °C                |
| Operating Humidity                         | 30   | 60   | 90   | %                 |



#### 4. Optical characteristics

| Items                            | Specifications                     |      |      | Unit | Notes  |
|----------------------------------|------------------------------------|------|------|------|--|
|                                  | Min.                               | Typ. | Max. |      |  |
| Center Wavelength<br>@ -3dB      | 1260                               | 1280 | 1300 | nm   | @ 25°C and CW.<br>Connectors are included.                           |
| 3dB Optical Bandwidth            | 90                                 | 95   | -    | nm   |  |
| Optical Output Power             | 10                                 | -    | -    | mW   |  |
| ASE Ripple @ 0.1nm               | -                                  | 0.5  | -    | dB   |  |
| Optical Power Stability<br>(8hr) | -                                  | -    | ±0.1 | dB   | Stability test of P <sub>max</sub> after<br>0.5 hour warm up at 25°C |
| Optical Output Type              | FC adaptor or pigtail fiber<br>out |      |      | -    | As shown in Figure 2 of<br>Section 7 in detail                       |
| Fiber Connector                  | FC or SC type                      |      |      | -    |  |
| Fiber Type                       | Corning SM-28 or<br>equivalent     |      |      | -    |  |
| Fiber Jacket                     | 900µm loose tube                   |      |      | -    |  |
| Fiber Length                     | 0.5                                | -    | -    | m    | If pigtail fiber out is<br>selected.                                 |

#### 5. Electrical characteristics

| Item                                 | Specifications  |      |      | Units | Notes   |
|--------------------------------------|---|------|------|-------|---|
|                                      | Min.  | Typ. | Max. |       |   |
| Power supply current                 | -   | 1.0  | 2.0  | A     | P <sub>max</sub> CW optical output            |
| Power consumption                    | -   | 5.0  | 10.0 | W     |   |
| Range of V <sub>SET</sub>            | 0.0   | -    | 2.5  | V     |   |
| Input impedance for V <sub>SET</sub> | > 20k   |      |      | Ω     |   |
| V <sub>H</sub> for TTL input/output  | 3.80  | -    | -    | V     | For SLD Enable and Alarm                      |
| V <sub>L</sub> for TTL input/output  | -   | -    | 1.02 | V     |   |
| Optical Power Control                | SLD Current Adjustment<br>via V <sub>SET</sub> as shown in<br>Section 6 in detail |      |      | -     |   |
| Connector Type                       | DB9 Connector, Female   |      |      | -     | See section 6 for Pin<br>Allocation in detail |



## 6. Pin Assignment Specifications

### DB9 Connector Pin Allocation

| Pin # | Function         | In/Out | Type            | Description   |
|-------|------------------|--------|-----------------|---|
| 1     | +5VDC            | IN     | Analog (5.0V)   | Power Supply, $\leq 2A$ .   |
| 2     | NC               | NA     | NA              | Reserved  |
| 3     | SLD Enable       | IN     | TTL             | SLD turn on control. TTL high turns on SLD and TTL low turns off SLD. See Figure 3 in detail.   |
| 4     | Alarm            | OUT    | TTL             | TEC operation status. TTL high indicates that TEC failure has activated and TTL low indicates that TEC operation is normal. See Figure 3 in detail. |
| 5     | V <sub>SET</sub> | IN     | Analog (0~2.5V) | Input voltage to set SLD current. The range of 0.0-2.5V for V <sub>SET</sub> corresponds to 0~I <sub>max</sub> mA of SLD operation current.         |
| 6     | GND              | IN     | GND             | Power supply and signals GND.   |
| 7     | NC               | NA     | NA              | Reserved  |
| 8     | NC               | NA     | NA              | Reserved  |
| 9     | NC               | NA     | NA              | Reserved  |

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## 7. Mechanical Specifications

43. Drawing and dimensions (unit: mm): 100mm(L)×80mm(W)×26mm(H)

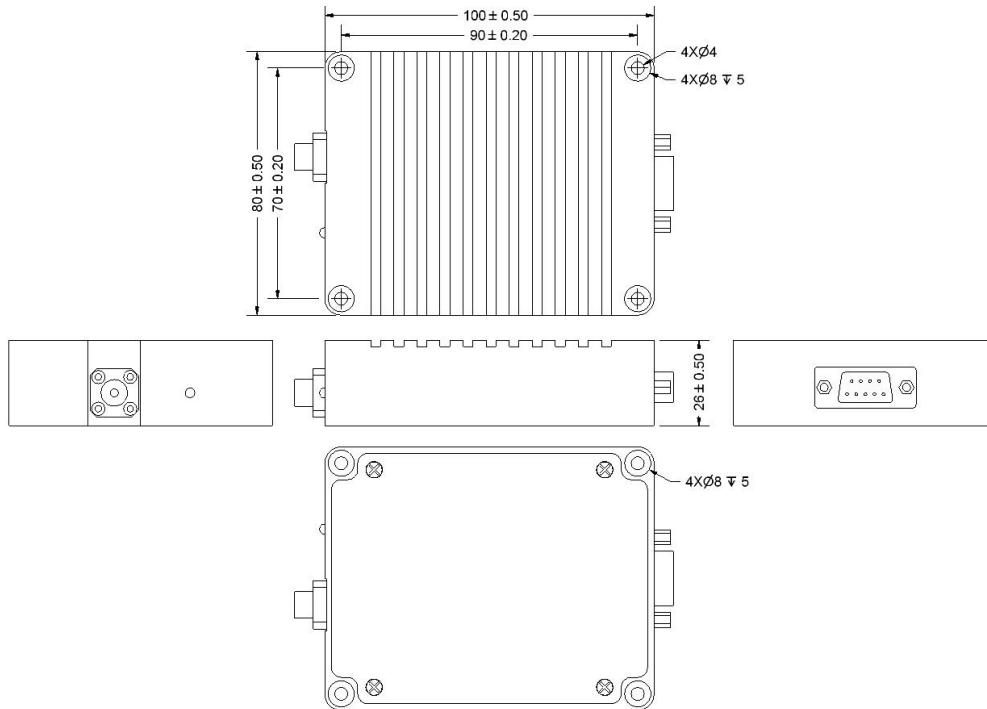


Figure 2 Mechanical drawing of module box (FC/APC connector with FC adaptor)

2. Module case is isolated from any electrical connection.

## 8. Signals Characteristics

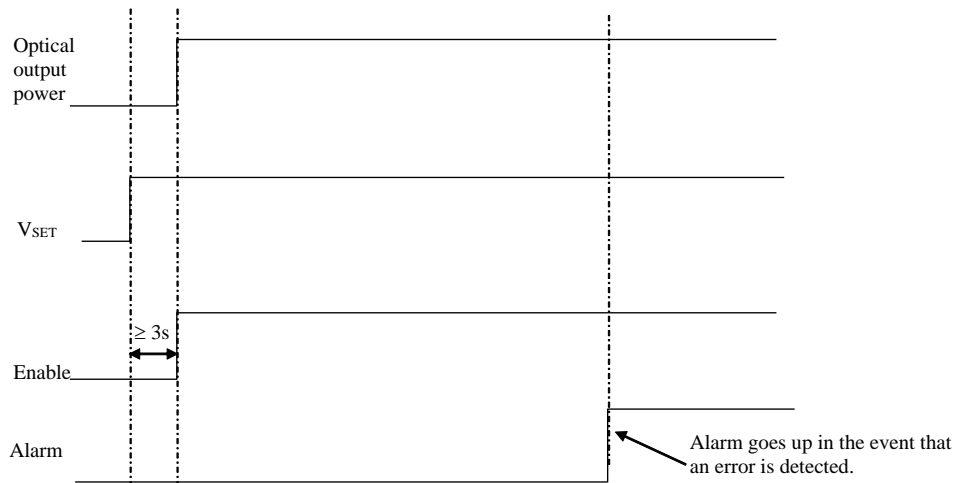
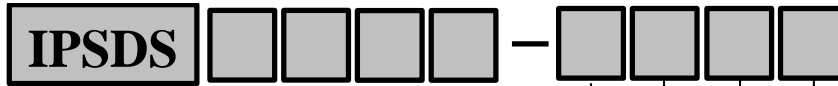


Figure 3 Startup and operational timing of the module



### 9. Part Numbering Structure of SLD light source module



**Model Number**

- 07\*\*: 700~790nm SLD
- 08\*\*: 800~890nm SLD
- 09\*\*: 900~990nm SLD
- 10\*\*: 1010~1090nm SLD
- 13\*\*: 1300~1390nm SLD
- 14\*\*: 1400~1490nm SLD
- 15\*\*: 1500~1590nm SLD

**Output Type**

- 0: FC Adaptor
- 1: Pigtail fiber

**Connector Type**

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

**Fiber Type**

- 1: 900µm SM Fiber
- 2: 900µm PM Fiber

**Case Size**

- 1: 100×80×26mm case
- 2: 130×100×26mm case
- 3: 130×115×36mm case

**Example:** IPSPDS0701-1011: 700nm-type SLD light source module in 100×80×26mm case with pigtail fiber output, 900µm SM fiber without connector

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