



# SLD Light Source Module

Part Number: IPSPDS0813-xxxx

## 1. Configuration

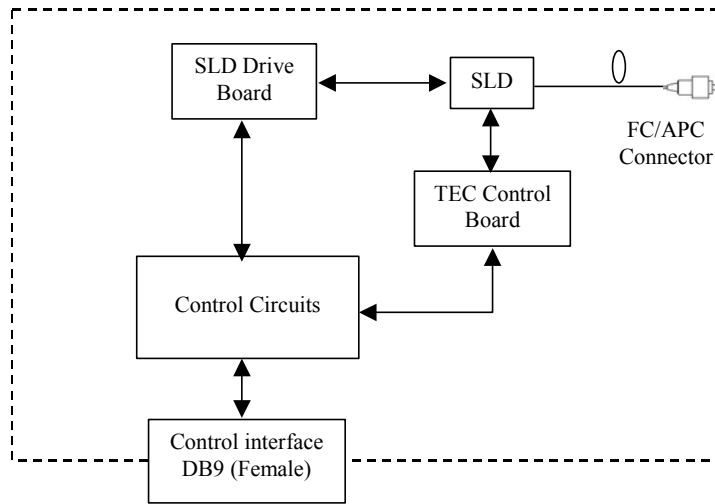


Figure 1 Configuration of IPSPDS0813-xxxx SLD light source module

## 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   | %                 |

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#### 4. Optical characteristics

| Items                            | Specifications                     |      |           | Unit | Notes   |
|----------------------------------|------------------------------------|------|-----------|------|---|
|                                  | Min.                               | Typ. | Max.      |      |   |
| Center Wavelength<br>@ -3dB      | 820                                | 830  | 840       | nm   | @ 25°C and CW.<br>Connectors are included.                    |
| 3dB Optical Bandwidth            | 45                                 | 50   | -         | nm   |   |
| Optical Output Power             | 3                                  | 5    | -         | mW   |   |
| ASE Ripple @ 0.1nm               | -                                  | 0.1  | 0.2       | dB   |   |
| Optical Power Stability<br>(8hr) | -                                  | -    | $\pm 0.1$ | dB   | Stability test of $P_{max}$ 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 HI780 or equivalent        |      |           | -    |   |
| Fiber Jacket                     | 900 $\mu$ m 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        | Pmax CW optical output                        |
| Power consumption             | -  | 5.0  | 10.0 | W        |   |
| Range of $V_{SET}$            | 0.0  | -    | 2.5  | V        |   |
| Input impedance for $V_{SET}$ | > 20k  |      |      | $\Omega$ |   |
| VH for TTL input/output       | 3.80   | -    | -    | V        | For SLD Enable and Alarm                      |
| VL for TTL input/output       | -  | -    | 1.02 | V        |   |
| Optical Power Control         | SLD Current Adjustment<br>via $V_{SET}$ 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, ≤ 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

21. Drawing and dimensions (unit: mm): 100mm(L) $\times$ 80mm(W) $\times$ 26mm(H)

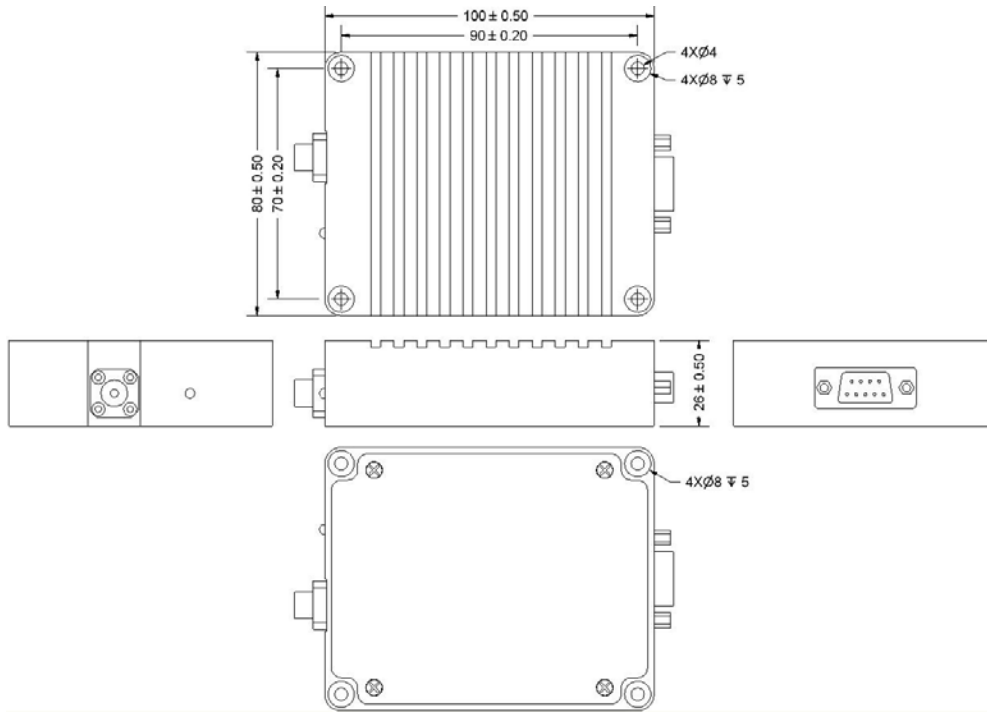


Figure 2 Mechanical drawing of module box (FC/APC connector with FC adaptor)

2. Module case is isolated from any electrical connection.

## 8. Signals Characteristics

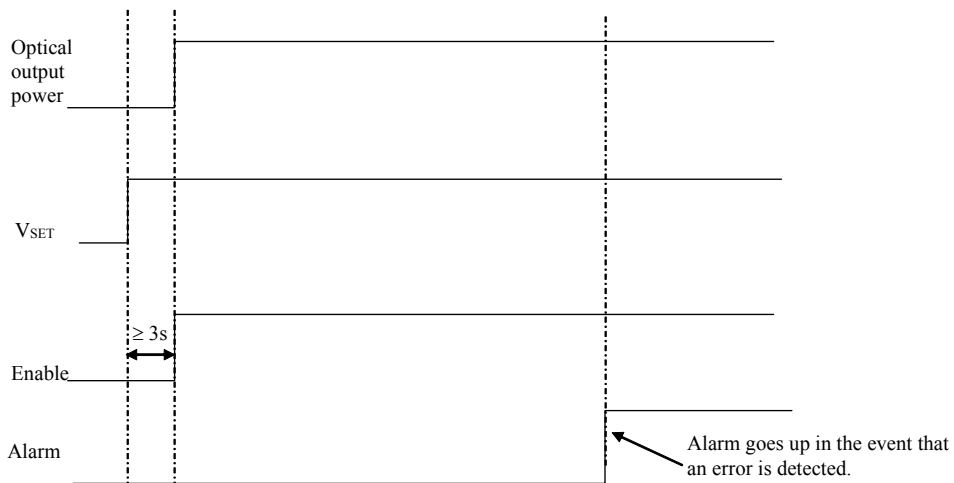
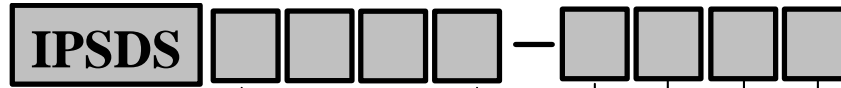


Figure 3 Startup and operational timing of the module



### 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:** IP S D S 0701-1011: 700nm-type SLD light source module in 100×80×26mm case with pigtail fiber output, 900μm SM fiber without connector

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